Participants’ Sourcebook:

USAID Environmental Procedures & Integrating Environmental Considerations into the Implementation of Development Programs

A training workshop for USAID Staff

Bagamoyo, TANZANIA
2–6 June 2008

Host
USAID/Tanzania

Sponsors
USAID/EA and USAID/AFR/SD

Technical Assistance provided by
ENCAP, an Environmental Capacity-Building and Compliance Support Program of USAID/AFR/SD
(International Resources Group, Ltd., prime contractor; The Cadmus Group., Inc., technical lead)

and the
Tanzania Coastal Management Partnership

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# Agenda & Table of Contents

*Note: Session numbers correspond to tabs in this sourcebook.*

## Monday 2 June:  
Motivation, LOP Compliance Requirements & Key ESDM skills

**M Stoughton:** session introductions throughout (transition and context)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Lead Facilitation</th>
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<tbody>
<tr>
<td>8.30–9.15</td>
<td>1  Introductions, overview &amp; expectations</td>
<td>C Dege/D Kinyua</td>
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</table>
*Arriving at a common understanding of environment and motivating ESDM as a necessary and explicit objective for effective development.* | B Hirsch/ C Dege: Part 1—Env. & Development: the "big picture"  
J Jatko: Part 2: What is ESDM & examples  
M Stoughton: Part 3: How do you get to ESDM? |
| 10:30–10:45   | **TEA BREAK**                                                            |                                                                                  |
| 10:45–11:15   | 3  Environmental Impact Assessment (EIA) and ESDM  
*Overview of the EIA process; why EIA is the internationally accepted standard framework for achieving ESDM in project-based development* | M Stoughton                                                                      |
| 11:15–11:45   | 4  USAID’S Environmental Procedures : The Big Picture  
*Key LOP environmental compliance requirements created by Reg. 216 and the ADS. Collectively, these EIA-based procedures are intended to assure that ESDM receives explicit and systematic attention over LOP.* | B Hirsch                                                                          |
| 11:45–12:30   | 5  Simple Tools for Identifying Environmental Impacts                    | D Kinyua                                                                         |
| 12:30–13:30   | LUNCH                                                                   |                                                                                  |
| 13:30–14:15   | 6  Principles of Env. Mitigation & Monitoring                            | C St-Cyr                                                                         |
| 14:15–15:00   | 7  Using the Small-Scale Guidelines  
*Intro to this key ESDM resource with exercise based on local cases* | Briefing & Team assignments: M Stoughton  
(participant health experts distributed among teams as key resources.) |
| 15:00–15:15   | **TEA BREAK**                                                            |                                                                                  |
| 15:15–16.30   | 8  Transect Walk  
*Undertaken close to the venue to practice baseline observation skills* | Briefing/ Debrief: S Diallo                                                      |
### Tuesday 3 June:
#### Field Skills for Impact Identification and Mitigation Design

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<th>Facilitation</th>
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<tbody>
<tr>
<td>8:30–9:45</td>
<td>10 Local context</td>
<td>MC/Moderator: M Stoughton + Invited experts</td>
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<tr>
<td></td>
<td><strong>Critical information about environmental, social and economic context for effective field review in Bagamoyo. (Invited experts)</strong></td>
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<tr>
<td>9:45–10:45</td>
<td>Biofuels and SEKAB Bioenergy Tanzania project presentation (sugar plantation/bio-ethanol scheme)</td>
<td>MC/Moderator: R Chekenya + SEKAB representatives</td>
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<tr>
<td>10:45–11:00</td>
<td>TEA BREAK + preview of site visits (on laptops)</td>
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<tr>
<td>11:00–16:00</td>
<td>11b FIELD VISITS (include box lunch)</td>
<td>Each team to be assigned a lead facilitator</td>
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<td><strong>Begins with “baseline survey” of Bagamoyo, all participants, narrated by invited experts. The three groups then divide and travel to their individual sites for baseline situation assessment, identification of potential/ongoing impacts</strong></td>
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<td>(Tea will be available upon return)</td>
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<tr>
<td>16:00–17:30</td>
<td>11c Classroom follow-up</td>
<td>Facilitation continues from 11b.</td>
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<td></td>
<td><strong>(In field visit groups) Evaluation of impacts observed in the field, design of mitigation measures.</strong></td>
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### Wednesday 4 June: Reg. 216 and Effective IEEs

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<tr>
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<tbody>
<tr>
<td>8:30–8:45</td>
<td>Review of Day 2 &amp; Orientation to Day 3</td>
<td>M Stoughton</td>
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<tr>
<td>8:45–9:30</td>
<td><strong>Intro to Reg. 216</strong></td>
<td>D Kinyua</td>
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<td></td>
<td><strong>Reg 216 sets out USAID’s mandatory pre-obligation EIA process. Environmental mitigation and monitoring conditions established by this process become required elements of activity design and implementation.</strong></td>
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<tr>
<td>9:30–10:30</td>
<td>12b Reg 216 screening exercise</td>
<td><strong>Briefing: C Dege</strong></td>
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<td>Time</td>
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<td>Facilitation</td>
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<tr>
<td>10:30–10:45</td>
<td><strong>TEA BREAK</strong></td>
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<tr>
<td>10:45–11:30</td>
<td>13a What makes an effective IEE, Part 1</td>
<td>B Hirsch /C St-Cyr</td>
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<td></td>
<td><em>Exercise + discussion on what constitutes a well-considered, well-written IEE</em></td>
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<tr>
<td>11:30–12:00</td>
<td>13b What makes an effective IEE, Part 2</td>
<td>J Jatko</td>
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<td><em>Effective IEEs are implemented. This requires that a complete EMMP exists, budgets and workplans implement the EMMP, and that PMPs measure EMMP implementation.</em></td>
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<tr>
<td>12:00–12:30</td>
<td>14a Field visit briefing &amp; prep</td>
<td>M Stoughton/ R Chekenya</td>
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<tr>
<td>12:30–13:30</td>
<td><strong>LUNCH</strong></td>
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<tr>
<td>13:30–16:30</td>
<td>14b FIELD VISIT: IEE Review</td>
<td>Each team to be assigned a lead facilitator</td>
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<td></td>
<td><em>Field visit to evaluate the adequacy of a provided &quot;draft IEE&quot; with respect to key elements of an effective IEE. (2 Groups)</em></td>
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<td><em>(Tea will be available upon return)</em></td>
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<tr>
<td>16:30–17:45</td>
<td>14c Field visit: Classroom follow-up</td>
<td>Facilitation continues from 14b.</td>
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<tr>
<td></td>
<td><em>Working groups articulate a critique of the draft IEE provided</em></td>
<td>Plenary moderator: TBD</td>
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<td></td>
<td><em>Plenary discussion focuses on IEE implementation</em></td>
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**Thursday 5 June:**

**Development & Field Audit of EMMPs, Special Topics**

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<tr>
<th>Time</th>
<th>Session No. &amp; Name.</th>
<th>Facilitation</th>
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<tbody>
<tr>
<td>08:30–8:45</td>
<td>Review of Day 3 &amp; Orientation to Day 4</td>
<td>M Stoughton</td>
</tr>
<tr>
<td>8:45–10:30</td>
<td><strong>ST</strong> Tech &amp; Special Topics: PMI/IVM/IRS issues &amp; RTI's EA activities</td>
<td>A Tembo (RTI)</td>
</tr>
<tr>
<td>10:30–10:45</td>
<td><strong>TEA BREAK</strong></td>
<td></td>
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<tr>
<td>10:45–12:00</td>
<td><strong>ST</strong> Tech &amp; Special Topics: PMI/IVM/IRS/RTI Session, cont’d (mock spray demo)</td>
<td>A Tembo (RTI)</td>
</tr>
<tr>
<td>12:00–12:30</td>
<td>15a Field visit briefing</td>
<td>M Stoughton/ R Chekenya</td>
</tr>
<tr>
<td>12:30–13:30</td>
<td><strong>LUNCH</strong></td>
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<tr>
<td>13:30–16:30</td>
<td>15b FIELD VISIT: EMMP development to correct non-compliance</td>
<td>Each team to be assigned a lead facilitator</td>
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<td></td>
<td><em>Being able to critique, design and audit against EMMPs is a core skill ESDM/LOP Compliance for CTOs, MEOs, Activity Managers. The field visit builds &amp; practices these skills. (3 Groups)</em></td>
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<td><em>(Tea will be available upon return)</em></td>
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<tr>
<td>16:30–</td>
<td>15c Field Visit: Classroom Follow-up</td>
<td>Facilitation continues from</td>
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17:45

Informed by their field observations, working groups develop an EMMP responsive to the IEE conditions.

Plenary discussions focus on issues of EMMP implementation and monitoring. Includes intro to EMMTS (Environ. Mitigation and Monitoring Tracking System), a mission monitoring tool being developed in Southern Africa for IRS/PMI countries.

15b.

EMMTS:
C St-Cyr
Plenary moderator:
TBD

Friday 6 June:
Special Topics, Compliance & Procurement, Ways Forward

<table>
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<tr>
<th>Time</th>
<th>Session No. &amp; Name.</th>
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<tr>
<td>08:15– 8:30</td>
<td>Review of Day 4 &amp; Orientation to Day 5</td>
<td>M Stoughton</td>
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<tr>
<td>8:30– 10:15</td>
<td>S T Tech &amp; Special Topics:</td>
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<td></td>
<td>Wat &amp; Sanitation—Madagascar WASH</td>
<td>WatSan: T. Razafimahatrata (USAID/Madagascar)</td>
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<td></td>
<td>Mission Env. Compliance Best Practice Review (BPR)</td>
<td>BPR: B Hirsch (BPR)</td>
</tr>
<tr>
<td>10:15– 10:45</td>
<td>16 Operationalizing partner responsibility for compliance:</td>
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<tr>
<td></td>
<td>Incorporating Environmental Conditions into Procurement Instruments</td>
<td>J Jatko</td>
</tr>
<tr>
<td>10:45– 11:00</td>
<td>TEA BREAK</td>
<td></td>
</tr>
<tr>
<td>11:00– 11:15</td>
<td>17 Resources for ESDM and Compliance</td>
<td>M Stoughton</td>
</tr>
<tr>
<td>11:15– 11:50</td>
<td>18 Taking stock, effecting change</td>
<td>B Hirsch</td>
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<tr>
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<td>Taking stock of gaps and shortfalls in current mission processes, identifying ways forward &amp; priorities for REA, BEO support,</td>
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<tr>
<td>11:50– 12:00</td>
<td>19 Evaluation</td>
<td>M Stoughton</td>
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<tr>
<td>12.00– 12.30</td>
<td>Certificates &amp; Closing</td>
<td>Remarks: W Knausenberger</td>
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<td>Certificates: C Dege, D Kinyua</td>
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(Departure)
Session 1:
Course Objectives,
Participant Introductions & Expectations

Summary
This session introduces the course objectives and approach, surveys the agenda, introduces us to each other, and highlights expectations. Specific elements of the session are:

- Overview of Course Objectives, Approach, Agenda and Materials (Facilitators)
- Participant & Facilitator Introductions: Please be prepared to describe yourself briefly in one minute or less, noting professional background, institutional affiliation, and current responsibilities. (All)
- Expectations of participants (see below)
- Logistical Details (Course Organizers)

Course Objectives and Approach:
This workshop is an intensive training in the implementation of USAID’s mandatory environmental compliance procedures and in the objectives of these procedures: environmentally sound design and implementation of USAID’s activities.

The workshop has two key foci:

- Applying environmental principles and environmental compliance throughout the life of the project
- Environmental compliance and management aspects of current, complex and emerging issues in the USAID portfolio and operating environment, including those encountered in the implementation of PEPFAR and PMI programs.

The workshop is built around a participatory, field-based approach. Skills briefed in the classroom will be practiced in the field (3 of the 4.5 days feature major field exercises), and in exercises and working groups.

Lecture sessions are intended to be interactive; participants are encouraged not simply to ask questions of facilitators but, in response to the topic at hand, to share and discuss their experience and perspectives.

*Everyone’s active participation is not just expected, but required to make this workshop a success!*

Presentations on special topics by guest experts feature prominently.

Expectations of participants
So that everyone can benefit as much as possible from the training, each of us should:¹

1. Participate actively.

¹ adapted from Jawara Lumumba and John Petit, REDSO/WCA, 1995
2. Ask questions.
3. Respect different points of view.
4. Share many thoughts & ideas.
5. Build upon the ideas presented by others.
7. Make "I" statements.
8. Have fun!

**A note about Teamwork**

Working groups (in the field and in the classroom) are where we will practice and apply the key skills and ideas of the course. Working groups provide the opportunity for detailed discussions, and for learning from experiences and views of fellow development professionals. Working groups are also appropriate because environmental compliance and environmentally sound design and management are intrinsically team efforts.

Successful working groups require effective teamwork:

**Twelve Essentials of Teamwork**

<table>
<thead>
<tr>
<th>Valuing Diversity</th>
<th>Comfortable Atmosphere</th>
<th>Active Participation of All Members</th>
<th>Shared Goals and Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balanced Approach to Process and Content</td>
<td><strong>What Effective Teams Need</strong></td>
<td></td>
<td>Effective Communication</td>
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<td>Shared Leadership</td>
<td></td>
<td>Mutual Trust</td>
<td>Constructive Conflict Management</td>
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<tr>
<td>Action Accountability Responsibility</td>
<td>CRITICAL ANALYSIS AND PROBLEM-SOLVING</td>
<td>A PREFERENCE FOR CONSENSUS</td>
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(Adapted from Rees, "How to lead work teams in facilitation skills"

**Notes for Working Group Chairs**

The chair can be a course facilitator or participant.

**The chair is neutral:** she or he should not evaluate the ideas or contributions of others, but try to focus the group’s energy on the common task.
The chair should encourage participation by all working group members, but prevent any one member from dominating. The chair should assist the group to function creatively, energetically, democratically and productively.

The chair must ensure that the group’s tasks are accomplished in the time allotted.

When appropriate, the chair should try to achieve agreement or consensus on recommendations, although consensus is not required. If the group is unable to reach consensus, areas of agreement and disagreement may be reported.

**Notes for Rapporteurs**

The rapporteur is responsible for accurately and succinctly reporting the results of group discussions. The rapporteur can make the plenary presentation, or another member of the group can be appointed.

Specific responsibilities include:

- Assuring flip chart paper, markers, and tape are available in the group meeting room and that chairs are arranged. Check to assure this is done with enough advance time to find an administrative staff person to assist, if necessary.

- **On a flip chart**, capturing all key points related to the specific theme, and noting comments on cross-cutting themes, as appropriate.

- Make sure that notes and charts are legible, understandable, and after reporting out, turned in to a facilitator.
Session 2.  
What is Environment? & 
Why Environmentally Sound Design & Management?

Summary  
This session will:

- Develop a common understanding of the term “environment.”
- Highlight some of the “big picture” environmental trends affecting human health and livelihoods in Africa (e.g. global change, population growth, urbanization); and show that much of USAID’s Africa portfolio 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 and Management (ESDM).

- Highlight the most common root causes of ESDM failures or lapses.
- Set out the basic rules or principles for achieving ESDM.
- Establish that ESDM is a necessary and explicit objective for effective development, and that ESDM requires systematic and explicit attention over life-of-project.

Format  
The session features a presentation and a newly produced ESDM video.
What is “Environment”?

- 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.
2. Population growth

- UN estimate: African population expected to double to 1.69 billion by 2050.
- Except for high-AIDS countries, 2-3% population growth is the norm.

3. Global climate change: Africa

- Arid & semi-arid lands ↑5-8% by 2080s
- Sea-level ↑0.3-0.4m by 2100
- Precipitation patterns change
- More climate variability & extreme events
- Median temperature change: ↑3-4°C (end of century)
- 100% of observed data series in Africa for physical, biological systems consistent with global change

Global change impacts

- Crop & disease zones shift
- Rain-fed agriculture yields ↓50% in some countries
- Sea level rise impacts coastal cities: adaptation costs 5-10% of GDP.

Global change + population growth = 

INCREASED WATER STRESS
Greatest impacts on poor, subsistence agriculture.
Urbanization + poor municipal sanitation & waste management capacity . . .

- INCREASED URBAN ENVIRONMENTAL HEALTH HAZARDS

Population growth + soil types + cultivation practices . . .

- SOIL FERTILITY LOSS:
  - 80% of SSA cropland significantly degraded
  - 2002-04:
    - 85% of SSA cropland had nutrient loss > 30kg/ha/yr
    - 40% had > 60 kg/ha/yr.

Terraces in East Africa show fertility gradients—yellow at the top, green at the bottom.

The bottom line:

- “Environment” and “development” are not separable
- Much of USAID’s Africa portfolio is already a direct response to—or directly affected by—these environmental trends.
- But good development does not simply respond to external environmental challenges . . .

USAID Regional Environmental Training Workshop, Bagamooy, Tanzania, 2-6 June 2008
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...

Example: Health care facilities

Goal: Improve public health
Risk: Endanger the health of patients and the community with poor facilities design & improper waste management

Example: Water & Sanitation Activities

Goal: Improve/preserve public health & quality of life
Risks: Endanger public health, degrade water supply, with poor design and operation
Example: Community Reforestation

**Goals:**
- Conserve soil & prevent erosion, provide building materials & fuel, reduce risk/impacts of flooding

**Risks:**
- Deplete water table,
- Displace local plants and vegetation,
- Intensify use of pesticides
- Increase community vulnerability

Why are “environmental mistakes” made?

- Sometimes obvious (previous examples).
- But often difficult to foresee, predict

Most 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

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)

Unfortunately not.

Progressive blight (80% mortality) in the shade trees, an aging monoculture

High-quality organic shade-grown coffee

An activity intended to improve the environment!
Common root causes #2

Designing for average conditions, not expected variability

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

Strong winds ripped the aluminum sheet roofing off the 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?

Global change will affect both average conditions & expected variability

Common root causes #3

Ignoring economic-environmental linkages

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!

Is ESDM only about limiting adverse impacts?

To be aware of potential adverse impacts, to proactively seek to limit them, to design robustly for expected conditions and variability is to practice...

Environmentally Sound Design & Management (ESDM)

No.

ESDM is proactive.

It seeks to preserve and improve the resource base upon which future economic activity and subsistence depends.

ESDM means seeking opportunities to maximize environmental benefits.
How do we achieve ESDM?

3 basic rules:

1. Be prevention-oriented
2. Apply best development practices to environmental aspects of the activity
3. Be systematic

ESDM is prevention-oriented

- Prevention starts early in the DESIGN phase
- DESIGN starts with the choice of means.

Possible means

- Change use of agricultural inputs?
- Introduce improved crop varieties?
- Change cultivation practices?

How do we choose?

Objective

- Improve agricultural productivity

ESDM is prevention-oriented

In ESDM, the choice of MEANS considers the environmental impacts of each alternative.

USAID Regional Environmental Training Workshop, Bagamoyo, Tanzania, 2-6 June 2008
How do we achieve ESDM?

1. Be prevention-oriented
2. Apply best development practices to environmental aspects of the activity
3. Be systematic

What are best development practices?

“For a successful project, we need...”

- 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

“Development professionals say...”

General BP #1:
The design is technically sound

- Environmental application: the design must be appropriate for local environmental conditions

- Environmental conditions include... Rainfall, temperature, soils, flood, drought and earthquake potential. What else?

Each of these general best practices has particular application to ESDM.

For example...
- Appropriate choice of crops or trees?
- Appropriate choices of construction materials & methods?
Example: Design for local environmental conditions

Structure:
Schoolhouse

Local environment
Coastal West Africa; deforested area subject to heavy winds & rains. Moist tropical climate. Building sits on slight slope.

Construction
Long-span split-bamboo roof
Unplastered “landcrete” walls
No rock or concrete foundation

Appropriate choices of construction materials & methods?

General BP #2: Design for the policy & social context

- Environmental applications:
  1. Compliance
     - with national & local environmental laws and policies
  2. NRM and land tenure
     - Activities utilizing land & other natural resources must be compatible with local NRM and land tenure.
  3. Language, literacy
     - Environmental management measures must be matched to capabilities.
  4. What else?

General 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?

General BP #4: Practice adaptive management

Adaptive management means:
- adjusting implementation of our activity based on results from the field

Environmental applications:
- If our activity has unintended environmental consequences, we need to DO SOMETHING ABOUT IT!

Adaptive environmental management requires:
- A project budget that funds environmental monitoring
- The flexibility to adapt the project in response to unanticipated adverse impacts
General BP #4
Practice adaptive management

Adaptive management also means adjusting implementation of our project based on the experiences of others. Communicate, coordinate, share lessons on environmental impacts with colleagues!

Note:
ESDM requires community involvement

Two basic reasons for community involvement:

1. Ethics require it.
   - Local residents must live with the environmental impacts of activities!

2. Can’t apply BPs without it.

Why?

BPs require community involvement!

Technical soundness
Design for the policy & social context
Beneficiary commitment & capacity
Adaptive management

LOCAL KNOWLEDGE is critical!

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

LISTEN to the community. TALK to both men & women.

BPs require community involvement!

Technical soundness
Design for the policy & social context
Beneficiary commitment & capacity
Adaptive management

Building commitment & capacity is not possible without actively engaging the community.
Communities are often essential to monitoring
Now, rule 3 for achieving ESDM. . .

1. Be prevention-oriented
2. Apply best development practices to environmental aspects of the activity
3. Be systematic

ESDM is systematic

- ESDM requires 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.
Environmental Impact Assessment (EIA) and ESDM

Summary
This session will:

- Define Environmental Impact Assessment (EIA) as a formal process for identifying the:
  
  likely effects of activities or projects on the environment, and on human health and welfare.
  
  means and measures to monitor & mitigate these impacts

- Show that EIA process provides a systematic framework to achieve ESDM and establish that this process is the internationally accepted standard framework for achieving ESDM in project-based development

- Explain that EIA-based environmental “safeguard” processes are now standard requirements of nearly all donors and governments

Format
The session features a presentation and a multi-media dramatization on the importance of EIA to achieve ESDM.
EIA: A framework for ESDM

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

Defining EIA

Environmentally 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 monitor & mitigate these impacts

Origins of EIA

1960s & 70s:
Environmental crisis affects all industrialized economies
EIA is one response:

Other responses:
- regulation of industry, environmental treaties
- "Killer fog" kills 4,000 in London
- "Silent Spring" documents the effects of DDT

EIA today

- Most countries & almost all donors now have EIA requirements
- EIA now extends beyond government to
  - Infrastructure and economic development projects funded by the private sector & donors
  - Analysis of policies, not just projects
- In Africa, national environmental regulation is usually centered on EIA requirements.
Key EIA concept: 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.

More...

Characterizing the baseline situation...

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

The baseline situation is a key concept in EIA.

The baseline situation is not simply a “snapshot.”

This chart of groundwater levels shows both variability and a trend over time.

Both are part of the groundwater baseline situation.

Types of impacts & their attributes

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

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

But all impacts are NOT treated equally.

The environmental components of interest are those:

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

Water? Quantity, quality, reliability, accessibility
Soils? Erosion, crop productivity, fallow periods, salinity, nutrient concentrations
Fauna? Populations, habitat
Env Health? Disease vectors, pathogens
Flora? Composition and density of natural vegetation, productivity, key species
Special Key species ecosystems?
Focus on the most significant impacts is ESSENTIAL

Don’t waste effort & time analyzing and discussing less important ones.

What is an activity?

We are discussing the impacts of activities.

An activity is:
- a desired accomplishment or output
  E.g.: a road, seedling production, or river diversion to irrigate land

Accomplishing an activity requires a set of actions

ACTIVITY: market access road rehabilitation

A project or program may consist of many activities

The EIA process

Phase I: Initial inquiries
- Understand proposed activities
- Screen
- Conduct preliminary assessment (if needed)

Our focus!

Phase II: Full EIA study (if needed)
- Scope
- Evaluate baseline situation
- Identify & choose alternatives
- Identify and characterize potential impacts of proposed activity and each alternative
- Develop mitigation and monitoring
- Communicate and document

Phase 1 of the EIA Process

Understand proposed activity
- Why is the activity being proposed?
- What is being proposed?

Screen the activity
- Based on the nature of the activity what level of environmental review is indicated?

Conduct a Preliminary Assessment
- A rapid, simplified EIA study using simple tools (e.g. the USAID IEE)

ACTIVITY IS OF MODERATE OR UNKNOWN RISK

ACTIVITY IS LOW RISK (Of its nature, very unlikely to have significant adverse impacts)

ACTIVITY IS HIGH RISK (Of its nature, likely to have significant adverse impacts)

Phase I

BEGIN FULL EIA STUDY

Significant adverse impacts possible

Significant adverse impacts very unlikely

Phase II

STOP the EIA process
Phase 1 of the EIA process:
Screen the activity

SCREENING asks a very basic set of questions about the activity.

These questions do NOT:
• require analysis.
• require detailed knowledge of the proposed sites, techniques or methods

Example screening questions:
Does the activity involve:
• Penetration road building?
• Large-scale irrigation?
• Introduction of non-native crop or agroforestry species?

Each donor agency and national EIA law has its own set of screening criteria.

Phase 1 of the EIA process:
The Preliminary Assessment

Purpose: provide documentation and analysis that:
• Allows the preparer to determine whether or not significant adverse impacts are likely
• Allows the reviewer to agree or disagree these determinations
• Sets out mitigation and monitoring for adverse impacts

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)
We only proceed to Phase II of the EIA process if Phase I indicates that a FULL EIA STUDY is required.

**Phase 2 of the EIA process:**

**The 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 usually required.
- A professional EIA team is usually required.

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

**EIA: A framework for ESDM**

- EIA: the standard international process to achieve ESDM.

Why?
The EIA process requires a systematic treatment of all ESDM elements.

**EIA: A framework for ESDM**

1 Be prevention-oriented

- Prevention begins with choice of means. “Consider alternatives” is a key principle of EIA.
- EIA provides a formal process to consider environmental issues and make changes at early stages in project design. Early consideration is key to prevention.
EIA: A framework for ESDM

2. Apply best development practices to environmental aspects of the activity

- Technical soundness: EIA requires characterizing environmental conditions
- Stakeholder commitment: Stakeholder consultation is central to EIA
- Adaptive management: EIA requires a systematic approach to field monitoring

Summing up

- ESDM requires design and implementation of activities with an understanding of their environmental impacts, and active efforts to minimize these impacts.
- ESDM requires following 3 basic rules:
  - be prevention-oriented,
  - apply best development practices, and
  - be systematic.
- EIA is a tool to make ESDM a reality.

EIA: More than just a good idea

- EIA is:
  - REQUIRED BY LAW in most countries.
  - REQUIRED by almost all donors.
Session 4.
USAID’S Environmental Procedures: The Big Picture

Summary
The preceding sessions make the case that:

- ESDM is a key objective for the ethical and effective practice of development
- Achieving ESDM requires explicit and systematic attention to environmental issues in program development and implementation
- The EIA process is the internationally accepted standard for achieving ESDM in project-based development activities.

USAID’s Environmental Procedures are a mandatory, EIA-based process intended to assure that this ‘explicit and systematic attention’ actually occurs over life-of-project. USAID is required by US law to utilize an EIA-based process to “fully take into account” environmental sustainability in designing and carrying out its development programs.

In summary:

- The procedures specify an EIA process that must be applied to all activities before implementation.
- This process frequently results in environmental management conditions (mitigative measures).
- These measures must be implemented and monitored over the life of the activity (or life of project, LOP)

This session will introduce —but not go into detail regarding—the key LOP compliance requirements created by 22 CFR 216 (Reg 216) & the ADS—and who is responsible for them. (MEOs, CTOs, Activity Managers. Etc.).

Over the remainder of the course, we will revisit many of these LOP compliance requirements in detail and build skills for them.

Key resource
The new MEO Handbook is introduced as a key reference to LOP environmental compliance. This training course draws heavily from the Handbook.

Important note
Note that in this course, as in the MEO Handbook, the term “USAID Environmental Procedures” does not refer only to Reg. 216, but the collectively to Reg. 216, other FAA requirements, and to the required procedures and directives contained in the ADS.

Format
Short presentation.
USAID’s Environmental Procedures: The Big Picture

Why the procedures?

- ESDM: a key objective for the ethical and effective practice of development
- Achieving ESDM requires explicit and systematic attention to environmental issues in program development and implementation
- USAID’s Environmental Procedures:
  - an EIA-based process intended to assure that this ‘explicit and systematic attention’ actually occurs over LOP

USAID’s EIA & Sustainability Mandate

- §117 of the FAA requires that USAID:
  - utilize an EIA process to evaluate the potential impact of USAID’s activities on the environment prior to implementation
  - “fully take into account” environmental sustainability in designing and carrying out its development programs.
- Mandate is codified in 22CFR216 ( “Reg. 216”) and in the ADS, (especially 201.3.12.2.b and 204.)
  (Collectively, USAID’s Environmental Procedures)
- Compliance with the procedures is mandatory.
- Apply to every program, project, activity, and amendment supported with USAID funds.

USAID’s environmental procedures: overview

- The procedures specify an EIA process that must be applied to all activities before implementation.
- This process frequently results in environmental management conditions (mitigative measures).
- These measures must be implemented and monitored over the life of the activity.
Key LOP env. compliance requirements

1. **Environmental considerations must be taken into account in activity planning.**
2. **No activities may be implemented without approved Reg 216 environmental documentation.**
3. **Any resulting mitigation and monitoring conditions are:**
   - written into contract instruments.
   - implemented, and this implementation is monitored.

RCE, IEE or EA. This documentation is the result of an EIA process.

Monitoring via field inspections and review of routine project reports submitted by implementing partners.


---

Key LOP env. compliance requirements

4. **Environmental compliance is assessed in Annual Reports**
5. **Environmental compliance documentation is maintained.**

Who is responsible?

<table>
<thead>
<tr>
<th>Fundamental responsibility &amp; accountability:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO Team Leader</td>
</tr>
<tr>
<td>each CTO or Activity Manager</td>
</tr>
<tr>
<td>ultimately with the Mission Director.</td>
</tr>
</tbody>
</table>

MEO is generally a compliance advisor and coordinator.

For more information, see “LOP compliance tables” in the MEO Handbook (pg 2, pg 7)

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MEO Handbook:
A New Guide to LOP Compliance

The new MEO Handbook:

- Organized around LOP compliance.
- Targeted at MEOs, but a useful, concise reference for all
- Feedback solicited

This workshop draws heavily from the Handbook.

---

Looking ahead

- This session: the “big picture” only
- Future classroom & field sessions:
  - Reg 216 (the pre-implementation EIA process)
  - What makes a good IEE?
  - Implementing IEE conditions:
    - Writing IEE/EA conditions into procurement instruments
    - Environmental Mitigation and Monitoring Plans
USAID’s environmental procedures are not an exercise in paperwork. They should result in environmentally sound design.

At a minimum, this requires compliance.

(Especially implementation and monitoring of all conditions.)

GO BEYOND THE MINIMUM!
use the process to proactively address environmental issues & build capacity for environmentally sound design.
Session 5.
Simple tools for identifying environmental impacts

Summary
Core skills for the EIA process (and thus for ESDM) are: (1) characterizing the baseline situation and (2) identifying the potential adverse impacts of planned development activities.

(Both “baseline situation” and “impacts” were defined in Session 3, “EIA and ESDM.”)

This session introduces four simple tools useful for these purposes: checklists, impact matrices, networks, and map overlays. These tools are appropriate for use in preliminary assessments (IEEs).

While full EIA studies demand more sophisticated analytical approaches, most programs in USAID’s Africa portfolio require only preliminary assessments. These more sophisticated techniques are noted in passing.

Format
The session features a presentation and worked examples.
Information Requirements & Tools for Screening & Preliminary Assessment

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

Information Requirements & Tools

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

Review: Phase 1 of the EIA Process

Phase I

Understand proposed activity
Why is the activity being proposed?
What is being proposed?

Screen the activity
Based on the nature of the activity what level of environmental review is indicated?

ACTIVITY IS OF MODERATE OR UNKNOWN RISK

Conduct a Preliminary Assessment
A rapid, simplified EIA study using simple tools (e.g. the USAID IEE)

ACTIVITY IS LOW RISK (Of its nature, very unlikely to have significant adverse impacts)

ACTIVITY IS HIGH RISK (Of its nature, likely to have significant adverse impacts)

BEGIN FULL EIA STUDY

ACTIVITY IS VERY UNLIKELY

SIGNIFICANT ADVERSE IMPACTS POSSIBLE

SIGNIFICANT ADVERSE IMPACTS VERY UNLIKELY

STOP the EIA process

Phase II

Limited focus

Remember...!

Screening and preliminary assessment are straightforward processes requiring only basic analysis!

Therefore, we focus on the simpler tools and more limited information required by Phase 1.

Relationship between information and tools

What is a tool?

Tools are simply ways of organizing and analyzing information. The outputs of a tool are only as good as the information that goes in.

Tools don't provide automatic answers. Your critical judgment is always required.

Your Critical Judgment

Identification and evaluation of impacts

Analysis Tool

Information

USAID Regional Environmental Training Workshop, Bagamoyo, Tanzania, 2-6 June 2008
Types of information required

Screening & Preliminary Assessment requires three basic types of information:

1. Biophysical characteristics of site(s)
2. Economic and social data
3. Maps

Focus, please!

Only the most basic biophysical and economic/social data is required for screening. Before you gather more detailed information, research likely impacts of the proposed activities.

Focus information-gathering on these likely impacts!

Where do I obtain information?

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)!

3. UTILIZE OTHER LOCAL TALENT & KNOWLEDGE
communities, government, counterparts

Why direct observation?

Environmental review should not be a desk exercise:

We need to SEE

- Are latrines close to water supplies?
- Is there a drainage problem?
Visual inspection is the quickest and best way to check issues of location, scale and proximity that determine many impacts.

We need to LISTEN

- Is there a land tenure problem?
- How often does the river flood?
Stakeholders and local communities have local knowledge that you need.
And, impacts depend on what those affected value and need!

Talk to men AND women. Women’s perceptions on environmental matters are critical and distinct.

Wait!

What if I can’t travel to the sites?

If at all possible, DON’T make the preliminary assessment a desk exercise.

But if you can’t visit the sites/area, you need:

- MAPS and PHOTOS to help you visualize the environment.
- to TALK to people who have been there

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 to preliminary assessment.
Tools for Screening and Preliminary Assessments

Four basic tools:
1. Checklists
2. Matrices
3. Networks
4. Overlays

When many people hear “EIA” they think of these tools. All are useful in full EIAs, but they are rarely used for preliminary assessments.

Don’t panic!

Information Requirements & Tools. Visit www.encapafrica.org

1. Checklists

Checklists are simply lists of questions focused on “warning signs” of potential impacts & risks. Questions may concern:

- Proposed Activities
- Nature of proposed activities
- Cost-benefit analysis
- Multi-criteria analysis
- Risk assessment
- Simulation modeling

Checklist questions are:

- Usually easily answered from field inspection & basic information about the activity.
- Answered with yes/no (or simple quantitative) responses

- Many sector-specific checklists exist

Advantages:
- Easy to apply for non-experts
- Bring structure and consistency to:
  - gathering and classifying information
  - characterizing the basic nature of a project
  - identifying potential environmental impacts
  - designing mitigation measures
- Help to assure that key impacts or issues are not forgotten

Drawbacks:
- Flaws or omissions in the checklist often become flaws in your analysis.
- If an impact or issue is not on the checklist, it is usually forgotten

Checklists: Pros & Cons

2. Interaction Matrices

What are they?

They are tables containing:

- An interaction matrix matches each action to its associated impacts

Aspects of the environment:

- Spawning habitat (substrate)
- Fishing
- Water quality
- Water Flow

Proposed actions:

- Dredging
- Clearing
- Access

Qualitative or quantitative estimates of how a particular action affects a particular aspect of the environment

After Sadar, 1994

Information Requirements & Tools. Visit www.encapafrica.org

USAID Regional Environmental Training Workshop, Bagamoyo, Tanzania, 2-6 June 2008
Matrices pros & cons

**Advantages**
- Filling in the matrix requires systematic consideration of the possible impacts of each action.
- Because actions are matched to impacts, facilitates the identification of **preventive mitigation measures**
- Summarizes a lot of information compactly & indicates the most significant impacts at a glance
- Easily accommodates a mix of qualitative & quantitative impact estimates

**Drawbacks**
- Does not characterize the baseline situation
- Does not promote consideration of secondary impacts
- Hard to show change over time

3. Network Analyses

A diagram of the cause and effect linkages by which proposed actions affect environmental quality and resources

**Key indicator of environmental quality**

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>Salmonoid populations +</td>
</tr>
<tr>
<td>-</td>
<td>Spawning -</td>
</tr>
<tr>
<td>+</td>
<td>Fishing +</td>
</tr>
<tr>
<td>-</td>
<td>Temperature -</td>
</tr>
<tr>
<td>+</td>
<td>Flow +</td>
</tr>
<tr>
<td>-</td>
<td>Turbidity -</td>
</tr>
<tr>
<td>+</td>
<td>Access +</td>
</tr>
<tr>
<td>-</td>
<td>Dredging -</td>
</tr>
<tr>
<td>+</td>
<td>Clearing +</td>
</tr>
</tbody>
</table>

**What do the signs mean?**
- + cause and effect are directly related
- - cause and effect are inversely related

**Advantages**
- An excellent tool for identifying indirect impacts
- Provides a visual summary of cause and effect relationships that is easily understood & communicated to decision-makers
- Identifies intervention points for mitigation measures that may not be obvious

**Drawbacks**
- Can be hard to show adequate level of detail
- Static (cannot show change over time)
- Does not show relative significance of impacts

Network Pros & Cons

4. Map Overlays

Overlays are layered maps, in which each layer contains a particular type of information.

- Layers can be added or removed. **Why?**
- **GIS** is increasingly used to produce overlays. But handmade overlays on transparent plastic work well!

<table>
<thead>
<tr>
<th>Information</th>
<th>Overlay types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political boundaries</td>
<td>GIS</td>
</tr>
<tr>
<td>Land use</td>
<td>Topography</td>
</tr>
<tr>
<td>(and more)</td>
<td>Hold on...</td>
</tr>
</tbody>
</table>
Overlays: Pros & Cons

**Advantages**

- The significance of impacts often depends on location. Overlays make critical issues of location clear.
- Maps are well-understood (good for communication to reviewers and to local communities)
- Maps are a basic part of information gathering for EIA. You already have a map. Use it to help you analyze impacts

**Drawbacks**

- Unable to show timing, reversibility, and probability of impacts
- Sharp boundary definitions can be misleading

---

Choosing tools

Two key criteria for selecting tools

1. **Appropriateness:** will the tool produce the needed output?
2. **Cost, time & effort:** Remember, EA is generally <1% of project capital costs

In general, sophisticated and resource-intensive methods are not the most appropriate in practice
Session 6.
Principles of Environmental Mitigation & Monitoring

Summary
The purpose of the EIA process is not simply to assess potential environmental impacts, but to change project design and implementation so that these impacts are avoided, reduced or offset. The term for this latter portion of the process is environmental mitigation.

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

Detailed design and critique of mitigation and monitoring (M&M) measures is a core skill for ESDM and LOP compliance. This session:

- Defines mitigation and monitoring.
- Explains the principles behind good M&M design and practice.
- Provides examples of basic mitigation approaches and simple monitoring indicators.

Key resource
The Environmental Guidelines for Small-Scale Activities in Africa is introduced as USAID’s key regional resource for M&M.

Format:
The session features a presentation.
Principles of Environmental Mitigation and Monitoring

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

Definition of mitigation

Mitigation is. . .

- The implementation of measures designed to reduce the undesirable effects of a proposed action on the environment.

How does mitigation reduce adverse impacts?

<table>
<thead>
<tr>
<th>Type of mitig measure</th>
<th>How it works</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention &amp; Control measures</td>
<td>Fully or partially prevent an impact/reduce a risk by: • Changing means or technique • Changing the site • Specifying operating practices</td>
<td>PREVENT contamination of wells, by SITING wells a minimum distance from latrines. OPERATE wastewater treatment system for a coffee-washing station.</td>
</tr>
<tr>
<td>Compensatory measures</td>
<td>Offset adverse impacts impacts in one area with improvements elsewhere</td>
<td>Plant trees in a new location to COMPENSATE for clearing a construction site.</td>
</tr>
<tr>
<td>Remediation measures</td>
<td>Repair or restore the environment after damage is done.</td>
<td>Re-grade and replant a borrow pit after construction is finished</td>
</tr>
</tbody>
</table>

Example of Mitigation: Operating practices to prevent & control impacts

- Irrigation
  - Potential impact: salinization of soils
  - Mitigation: avoid water-logging by using improved on-farm water management, including placement of drainage structures.
Example of Mitigation: Change of site to prevent & control impacts

- Rural road construction
  - Potential impact: route traverses nesting area for a threatened species of bird
  - Mitigation: Re-route road to avoid nesting site. Also, minimize construction noise and other disturbance during nesting season

Prevention is best

- Where possible, PREVENT impacts by changes to site or technique.
- CONTROL of impacts with operating practices is more difficult to monitor, sustain.

Do I mitigate EVERY impact?

NOT NECESSARILY.

Mitigation is directed at two targets.

1. Serious impacts
   - First, the most serious impacts identified by the EIA process should ALWAYS be mitigated.

2. Easily mitigated impacts
   - After addressing the most serious impacts, there may be small impacts for which mitigation is easy and low-cost.

Definition: Environmental monitoring is BOTH...

1. Systematic measurement of key environmental indicators over time
   - (is the mitigation measure sufficient, effective?)

2. Systematic verification of mitigation
   - (are the prescribed measures being implemented?)

Environmental monitoring is a necessary complement to mitigation. It should be a normal part of monitoring project results.
**Explaining monitoring, part I**

**Monitoring, part 1:** Systematic measurement of key environmental indicators over time, over the potentially affected area.

**Indicators are:**
- Signals of or proxies for aspects of
  - Environmental health &
  - Ecosystem function

**Indicators are chosen to:**
- Measure the most serious/uncertain impacts of an activity
- And/or
- Show whether mitigation measures are effective

---

**Examples of indicators**

**Environmental components**

- **Water**
  - Quantity, quality, reliability, accessibility

- **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: sometimes complex, often simple**

- Indicators may require laboratory analysis or specialized equipment & techniques
  - Water quality testing for fecal coliform, heavy metals
  - 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!

---

**Examples of simple 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?
Examples of simple 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!

Design of monitoring

- Monitoring requires SYSTEMATIC measurement of indicators. This means...

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

For example

Example:
Water quality impacts of coffee-washing

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?

   Do research to obtain good baseline data
   Monitor at multiple stations/sampling locations

All are intended to show what the “normal” baseline conditions are, so the impacts of the activity can be distinguished from NORMAL VARIABILITY and other factors.

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 are:

- Monitor the actual project, plus a similar non-project area (a “control”)
- Monitor at multiple stations/sampling locations

USAID Regional Environmental Training Workshop, Bagamoyo, Tanzania, 2-6 June 2008
Explaining monitoring, part 2

Monitoring, part 2: Systematic verification of mitigation

Verification means...

ascertaining whether or not the measures have been implemented as specified by the EMMP.

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

Verification may be “from the desk” or by field visit

Information sources to evaluate implementation of mitigation

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

In the field...

Inspection shows clearly that segregation and incineration is NOT implemented at facility B.

Monitoring: analysis and dissemination

- Analysis is an essential element of monitoring
  - Raw or unprocessed environmental data is not useful to decision makers or project managers
- Dissemination of monitoring results is critical

Mitigation & monitoring in the project lifecycle

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

1. Implementation of design decisions.
   Monitoring of construction
2. Where required, capacity-building for proper operation

Design

Construct/ implement

Operate
   (may include handover)

Decommission
   (in some cases)

1. Decisions made regarding site and technique to minimize impacts
2. Operating practices designed
1. Operating practices implemented
2. Monitoring of:
   - Operating practices
   - Environmental conditions
EMMPs

- Mitigation and monitoring is set out in Environmental Mitigation and Monitoring Plans (EMMPs)

  (also called an Environmental Management Plan, or Mitigation and Monitoring Plan)

- EMMPs are the topic of an upcoming session and field visit

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!

But most of all, it must be: **IMPLEMENTED.**

Effective mitigation and monitoring requires implementing the EMMP.

AFR’s key resource for Mitigation & Monitoring

Each sectoral write-up presents mitigation options matched to impacts.

The annotated bibliographies provide links to key additional resources

Available on the ENCAP website at www.encapafrica.org

Coming next: getting acquainted with the Small-Scale Guidelines

Environmental Guidelines for Small-Scale Activities in Africa
Summing up

Mitigation & Monitoring are a critical part of environmentally sound design:

- Mitigation minimizes adverse environmental impacts
- Monitoring tells you if your mitigation measures are sufficient & effective.
Session 7.
Using the Small-Scale Guidelines

Summary
In the previous session, the Small-Scale Guidelines were introduced as USAID’s key regional resources for Mitigation and Monitoring.

This session is an exercise to build familiarity with this key resource—and to practice impact identification and mitigation design. Using actual local cases, we will, with reference to the Guidelines, identify key impacts of concern and identify potential mitigation approaches.

Instructions follow on the next page.

Format:
Small group exercise and follow-up discussion
Using the Small-Scale Guidelines

Agriculture & Irrigation
CBNRM
Construction
Ecotourism
Energy Sources for Development
Fisheries and Aquaculture
Forest Management, Plantations & Agroforestry
Healthcare Waste
Housing
Humanitarian Response & Disaster Assistance
Livestock
Micro & Small Enterprises (multiple sectors)
Pest Management: IPM
Pest Management: Safer Pesticide Use
Rural Roads
Small Health Facilities (in draft)
Schools (in draft)
Water Supply and Sanitation

Organization

Chapter outline
Brief description of the sector
Potential environmental impacts of development programs in the sector and their causes
Guidelines for sector program design
Environmental mitigation and monitoring
Annotated resources and references

Key source of information for identifying potential env impacts. (In design phase, prior to a field visit, etc.)

Not a design manual. Focused specifically on ESDM.

In table format—designed for easy use
Experience in the technical aspects of project design is assumed.

Link to extended resources via on-line bibliographies

ESDM & Health Facilities
(some key issues from the Small-Scale Guidelines)

As we discussed this morning:

- **Goal:** Improve public health
- **Risk:** Endanger the health of patients and the community with poor facilities design & improper waste management

Some clinic wastes requiring management

- **Sharps** (used needles, scalpels, broken glass)
- **Excrement** (Urine & faeces)
- **Pathological** wastes (tissues, organs, blood & body parts)
- **Gray water**
- **Site latrines, waste pits close to wells**
- **Site unscreened kitchen near latrines**

Key issue: environmental contamination that poses health risks to patients, staff and the community.
Assignme**: Dive into the **Guidelines**

A briefing on a local health clinic (coming next) will show images of key ESDM “assessment points”

In small groups, we will use the draft Small Health Facilities Guidance to identify:

- **Key ESDM deficits**
- **What would be better practice/recommended mitigations?**
  - Key issues will be divided among the groups
  - Facilitators & participant health sector experts will provide feedback/debriefing within each group.
  - Time allocation: 20 mins discussion/research + 5 mins debrief.
  - Be as detailed as possible in the time available.
  - Ask questions as needed!

**Miono Health Centre**

- **Miono, ~3hrs from Bagamoyo**
- **built 1972; 17 beds**
- **1 Doctor, 1 medical officer, 3 and a health assistant.**
- **Primary health centre for 7 neighboring villages.**
- **1st 9 months of 2007: 26,789 patients (growing ~3%/yr)**
- **Major serious disease: Malaria (~350–400 cases/mo)**
- **Other serious diseases: HIV/Aids, gastroenteritis, cholera, amoebic dysentery and malnutrition**

**Miono Health Centre: Water supply**

**Miono Health Centre: Grey Water**
Miono Health Centre: Biohazardous waste

Sanitation & vector control

Incinerator residue & solid waste
Session 8.  
“Transect Walk”

Summary
The transect methodology, which involves systematically recording observations along a set path, is used in many disciplines: e.g., ecology & natural resource management, landscape characterization for integrated agricultural development, etc.

In this exercise, we will undertake a “integrated transect” walk close to the venue. Observations will focus on:

- Economic uses of the land and other economic activities
- Natural landscape and human interventions
- Environmental health (that is, How intact are ecosystems & ecosystem functions? And, how healthy is the environment for the people who live in it?)

The objective of the exercise is to use a systematic, structured approach to practice observation of environmental baseline conditions—and to get a head start on understanding the Bagamoyo “baseline situation,” which is important for the field visits over the coming days.

Format
15 mins briefing (presentation follows),
45 mins field walk,
15 mins classroom de-brief.
Field exercise: Transect Walk

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

The transect methodology

- **TRANSECT**: a path along which one observes and records environmental attributes of interest, e.g.
  - **Key species counts** (record number of observations, distance from the transect line—a classic technique for estimating populations of key species and thus assessing ecosystem health)
  - **Land use and land cover**
  - **Soil profiles**
  - **Etc.**

Used in many disciplines: ecology & NRM, landscape characterization for integrated agricultural development, etc.

Our assignment

- **“Integrated transect” approach focusing on**
  - Economic uses and activities
  - Natural landscape and human interventions
  - Environmental health
    - How intact are ecosystems & ecosystem functions?
    - How healthy is the environment for the people who live in it?

**Objectives**

- Use a systematic, structured approach to practice field observation from an environmental perspective.
- Get a head start on understanding the Bagamoyo “baseline situation”

Recording transect results

- **Part 1: Map showing transect path**

Just kidding.

Path of the 1999 Central African “Megatransect” by Ecologist J Michael Fay & his team (15 months, 2000+ km)

Image: National Geographic. Articles and images at www.nationalgeographic.com
Recording transect results

Part 2: Transect diagram

Example from an integrated transect focused on agro-ecosystem characterization


Transcript Walk Field Exercise, visit www.encapAfrica.org
Exercise: Transect Walk

Objectives
Use a systematic, structured approach to practice field observation with an environmental focus.

Instructions:
Along the transect line chosen by the facilitators, use the template on the next page to make a continuous observation record that covers the environmental components listed in the table below.

Use orthogonal distance of ____ m.

Environmental components of interest

<table>
<thead>
<tr>
<th>Land use &amp; cover</th>
<th>Flora &amp; fauna</th>
<th>Topographic &amp; Geologic Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach/tidal</td>
<td>Note sitings of livestock, wildlife,</td>
<td>Relative Elevation</td>
</tr>
<tr>
<td>Agricultural (crop type or fallow)</td>
<td>numbers and species (if known).</td>
<td>(note if profile is artificial)</td>
</tr>
<tr>
<td>Pastoral</td>
<td>Note any large trees and</td>
<td>Paths &amp; Roads</td>
</tr>
<tr>
<td>Woodlot</td>
<td>species (if known)</td>
<td>(paved? Traffic density?)</td>
</tr>
<tr>
<td>Garden (ornamental landscape)</td>
<td></td>
<td>Waterbodies, waterways, &amp; drainage</td>
</tr>
<tr>
<td>Wetland</td>
<td></td>
<td>(note water quality, level)</td>
</tr>
<tr>
<td>Structures (note type &amp; economic status)</td>
<td></td>
<td>Barriers (fences, walls)</td>
</tr>
<tr>
<td>Parking area/transport yard</td>
<td></td>
<td>Utility lines</td>
</tr>
<tr>
<td>Waste disposal</td>
<td></td>
<td>Soil type (if apparent)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>Indications of erosion or soil degradation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Economic activity not captured by “land use”</th>
<th>Sanitation and contamination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note e.g. fishing &amp; fish processing, roadside vendors, etc.</td>
<td>Note any indications of poor sanitation, uncontrolled waste disposal, standing gray water, etc.</td>
</tr>
</tbody>
</table>

Post-walk discussion
Our invited experts and selected participants will highlight their observations & what they suggest regarding environmental health. That is:
- How intact are ecosystems & ecosystem functions?
- How healthy is the environment for the people who live in it?
Session 9.
Environment and Development:
A Panel Discussion

Summary
The arguments for ESDM as a necessary and explicit development objective are strong and sound, as is the need for an environmental assessment (EA) process to achieve it.

But myths and misperceptions about “environment and development” are common—from the belief that environment is an issue best addressed after a country is well on the path to developed-economy status, to the view that the EA process adds cost and time, but little of value. And even for those organizations and individuals most committed to environmental soundness in development, the temptation to treat the EA process perfunctorily can be strong when issues seem obvious or minor and solutions straightforward.

This moderated panel discussion is intended to confront and refute these myths and misperceptions with short, concrete examples, facts and experiences from our invited experts and selected participants and facilitators. The session will mix prepared topics and audience questions. Responses will be strictly time-limited.

Hopefully, we will all use the vignettes and anecdotes related in this session to argue the value of EIA processes, USAID’s environmental procedures and ESDM to the “environment and development skeptics” we encounter in the course of our work—and to ourselves.

This session thus ends the day as we began it, returning to and reinforcing the importance of ESDM as a necessary and explicit development objective, and of EIA-based procedures for achieving it.
Session 10.
Local Context

Summary
Environmental soundness, beginning with the identification of impacts and extending to the design of mitigation measures, is fundamentally context-dependent. To effectively undertake the field visits and follow-up classroom exercises that begin today, we need a basic appreciation of the environmental, social and economic context in the Bagamoyo area.

To address this need, each of the invited experts has prepared a 2-page “field briefing” on the issues of local context most important to understand for field review.

- Dr. J. Kabudi: Environmental context, as well as Tanzanian environmental review, licensing and compliance requirements
- Dr. H. Sosovele: Socio-economic context typically relevant to project design and implementation, as well as mechanisms of governance.
- Mr. Mkusa, town planner: Tanzanian Policy on land allocation / designation for projects. This includes the process followed (including challenges) and more importantly the environmental and social considerations assessed when considering investment projects in Bagamoyo.

The briefings follow in this section.

Everyone is expected to read these briefings in advance; each expert will be allotted 15 minutes to highlight their most important points, and an additional 30 minutes are reserved for Q&A.

Format
Briefing, Q&A.
Fame, Decline & Revival

Bagamoyo was formerly famous as an entrée port to the hinterland of what is today Tanzania, the Democratic Republic of Congo, Burundi and Rwanda and as the first headquarters of the colony of German East Africa. For several decades however, Bagamoyo slowly declined, becoming a desolate and decaying small town.

Now, Bagamoyo’s lost glory is glowing again mainly as a result of the growing tourism in the area and becoming a new conference destination rivalling Arusha.

In addition, Bagamoyo’s fame as the first education centre in what is today Mainland Tanzania—the town hosted a number of Catholic schools and the first multi-racial school during the German colonial period—is returning. The establishment of one of the best girl schools in Tanzania—the Marian Girls’ High School—run by the Roman Catholic Church in a predominantly Muslim area testifies the religious tolerance and national unity that exists in Tanzania. The fact that the current President has had a residence in Bagamoyo for many years adds political prestige to Bagamoyo.

All these developments have led to the rapid growth of population of Bagamoyo. In-migrants drawn from different parts of Tanzania and some from Kenya who have come to work in tourist hotel and tourism related activities. The construction of tourist hotels and population growth has not been accompanied by orderly land use planning and surveying of new plots. As a result Bagamoyo is now expanding haphazardly, with unplanned settlements sprouting daily.

The Government has initiated the process of nominating Bagamoyo and the old slave route to Ujiji on the shores of Lake Tanganyika for UNESCO World Heritage Site status.

Despite all the new developments the long neglect of Bagamoyo is seen in the abandoned old buildings built before or during the German colonial period. Many of these buildings—some of which are listed as national heritage under the antiquities law—are crumbling. They are not only eyesores, but many pose safety hazards.

Environmental Policy

The Environmental Management Act, Cap. 191 (EMA) enacted in October 2004 provides for the legal and institutional framework for dealing with environmental issues. It also provides for environmental management instruments including Environmental Impact Assessment (EIA).

To elaborate the EIA requirements and process—which includes monitoring and Environmental Audits—the Minister has also promulgated the Environmental Impact Assessment and Audit Regulations, 2005.

The EMA has provisions on enforcement outlining responsibilities of different institutions from the lowest level in the government structure of governance and to the national level. The Act combines both “Command and Control” and “Incentive and Disincentives” approaches in inducing compliance.

The EMA expressly states that its provisions (including EIA requirements) are binding on the government and government-funded projects.

Environmental Challenges

However, despite very substantial progress in development of Tanzania’s environmental management framework, a number of critical environmental issues in the Bagamoyo area affect ecosystem and public health:

Beach erosion. The construction of hotels close to the beach and the cutting down of mangrove trees in their vicinity has exacerbated the problem of beach erosion in Bagamoyo.
Some hotels have been built in contravention of the legal requirement stipulated in EMA. The law prohibits any human activity of a permanent nature or an activity which by its nature would likely compromise or adversely affect conservation and protection of ocean within sixty metres from the shoreline.

**Unplanned settlement.** The growth of unplanned settlement is discernible in Bagamoyo. Driven largely by the development of tourist hotels, this has not gone in tandem with the construction of infrastructure.

The situation creates squatter areas that are squalid due to lack of necessary facilities and services in a peri-urban or urban area.

Environmental, land use planning and urban planning legislation require the planned settlements that are built in conformity with physical planning regulations.

**Deforestation.** Deforestation—particularly of Mangrove forests—is rapid, driven by charcoal-making, shore development, and to some degree by salt-making and prawn-farming activities. This reduces shore protection (see beach erosion, above), and also eliminates critical fisheries breeding habitat.

Deforestation is proceeding despite the fact that mangrove forests are protected under the Environment and Forest legislation in Tanzania.

Charcoal is a major source of household energy in Bagamoyo. In additional, some local charcoal is sent to Zanzibar and there are rumours that it is then exported to Gulf states.

**Wastewater and Solid Waste Management.** The construction of tourist hotels, schools and other facilities, and residences has significantly increased the volume of wastewater and solid waste generated in Bagamoyo.

The EMA places the mandate for management of solid waste and sewerage on Local Government Authorities. However, solid waste collection services in Bagamoyo have not kept pace with the increased waste volume.

And although sewerage treatment is required by Tanzania’s Environmental and Public Health and Sanitation legislation, most sewerage (both “brown” and “gray” water) is discharged without treatment to the Indian Ocean.

**Quality of Water for Domestic Use.** The main source of water for most households is wells. Wells are highly susceptible to contamination, e.g. from latrines.

Many households thus rely on water that does not meet the water quality standards that have been gazetted by the Minister for Environment as well as those in the water legislation.

**Decaying and Derelict Buildings.** Some old buildings that are protected under the Antiquities Act such as the Old Boma have been neglected and are crumbling.

This situation poses a public safety hazard from collapses. In addition, Bagamoyo is losing its invaluable cultural heritage. Yet, preserving this cultural heritage and its beaches and natural environment (also at risk) are required to sustain and grow tourism in Bagamoyo—the engine of the town’s revival—over the medium & long term.

The EMA and Antiquities Act require the preparation of General Management Plan for such heritage.

**Compliance and Enforcement.**

On paper, Tanzania possesses the environmental policy tools necessary to address these issues.

However, there is lack of voluntary compliance culture in Tanzania. Many would wait for sanctions before they comply or implement the law.

There is thus a need for both public awareness and capacity building programmes, and for effective and efficacious enforcement of EMA and other relevant sector legislation.

Ground water in Bagamoyo is often saline. Wells are highly susceptible to contamination, e.g. from latrines.

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History

“Bwaga–moyo” (Lay down your heart) or Bagamoyo is a small coastal “town” that has undergone tremendous changes since the time of slave trade when it was the last major exit port for slaves before they were shipped to Zanzibar and the Arab countries. At this point, slaves were telling themselves to *lay down their hearts* because they would never see their land again.

Bagamoyo was also the exit port for ivory and agricultural products from the interior to the outside world. Imports such as clothes, and other merchandise passed through Bagamoyo and went all the way to Congo and Zambia. When the slave trade was abolished in the 1880s and the Germans established their hegemony in Tanganyika, they made Bagamoyo their headquarters before moving it to Dar es Salaam.

During the Arab slave trade and German colonial domination, Bagamoyo grew into a prosperous trade and commercial centre. However, this growth was not sustainable. When the German administration moved its headquarters to Dar es Salaam, it left behind a settlement area that was lined up with roads, some semblance of planning, and the first “modern” hospital to be built in Tanganyika.

However, with the move, official interest in developing the area waned; Bagamoyo’s proximity to Dar es Salaam seems to have retarded its development, rather than stimulating its growth as a supplier of agricultural commodities.

Population & Economy

Churches and Mosques, some few houses and a market dominated the main central area of Bagamoyo, which remained a village until very recently in the early 1990s.

Population grew slowly from 136,059 in 1978 to 250,164 people (45.8% male/54.2% female) in 2002. Average household size was 4.4 and population density was 27 persons/km². The estimated population by 2008 is more than 285,400. Population size, structure, and composition have also undergone significant recent changes. The population of Bagamoyo now is highly mixed due to migration and settlement of different ethnic groups.

The main economic activities for Bagamoyo include agriculture, fishing, mariculture (e.g. sea weed farming and prawn farming), trade and commerce, and tourism. These economic activities have been evolving slowly but still remain largely small and subsistence, with one important exception:

Largely in the past decade, the Bagamoyo area has become an important cultural, beach and conference tourist hub along the coast of Tanzania. This transformation to a tourism center has both created economic and development opportunities while adding new complexity to the key economic and social challenges facing the area:

Key Social and Economic Issues

Land use issues: These relate to various economic activities, especially:

(i) **Tourism development.** Bagamoyo has developed beach hotels that attract many people from Dar es Salaam. Most of the facilities are below the 60metres mark which is the limit from high water mark. Issues such as access to beach; waste (liquid and solid) and visual impacts are of concern to local people and visitors.

(ii) **Agricultural development**– No major cash crop is cultivated in Bagamoyo. Agricultural activity is largely subsistence and low value crops (i.e., small scale paddy farming). There is a new proposal for a sugarcane bioenergy facility in Bagamoyo.

(iii) **Fisheries** – in the deltas (Wami and Ruvu rivers) large vs. small fishermen.

(iv) **Mariculture** (prawn farming) and sea weed farming.

Deforestation of mangrove forests due to salt making, charcoal (shipped to Zanzibar and Arab countries), hotel construction, beach tourism.
Cultural changes. Youth delinquency, alcoholism, drug trafficking and smuggling (using the old port to bring goods to the mainland) are perceived to be increasing. Tourism, with its influx of cash and visitors, likely exacerbates these issues.

Poverty. Despite having several lodges, people are still very poor and vulnerable. Tourism development for the wealthy has exacerbated equity issues. Social cohesion in the area is not strong.

Population growth. Tourism and the availability of public services (even if inadequate) such as schools, colleges attract more people and push pressure on resources (degradation).

Water use issues. The Lower Ruvu river supplies Dar es Salaam, but there is not sufficient water in Bagamoyo for local and tourist use.

Social services. Health and education services are very poor and inadequate. HIV/AIDS is on the increase.

Unplanned urban settlement. Increasing squatters and poor urban services due to increasing population and inadequate resources to do proper planning.

Abandonment. The “town” appears to be abandoned especially the central area which was the most vibrant part of the area in the old days. Old buildings with historical, cultural and tourism value are dilapidated and left without attention. The main cultural and historical tourism assets of Bagamoyo are being diminished.

Inadequate compliance of laws and policies. The Environmental Management Act No. 20 of 2004 requires mandatory EIA for development activities along the beach and in protected areas. Most facilities in Bagamoyo have had no EIAs done and no environmental audits have been undertaken.

Lost opportunities. The proximity to Dar es Salaam, a good all weather road, abundant land and plenty of water from Ruvu and Wami Rivers, and the presence of several tourist facilities are important economic assets that could be utilized to kick-start the development of Bagamoyo.

These opportunities are not being fully exploited. What are the root causes for such a situation? What planning and environmental issues need to be taken on board? How can change be undertaken in Bagamoyo?

Governance

All governance matters are defined by the Local Government Authority Act.

Leadership at village level is by an elected Village Chairman. The Chairman is assisted by the Village Executive Officer, who is an employee of the government and oversees all government activities in the village. Each village has a Village Government (council) consisting of not less than 25 members elected by the villagers. The Village Government is divided into 5 Committees that undertake specific functions. The Village Act requires that at least one third of the representative must be women.

Leadership at the district level is provided by the District Commissioner, who is the arm of the Central government, and the District Executive Officer, who is an employee of the Local Government Authorities. Councilors elected from the divisions form part of the District Council Team that is charged with daily operations.

The District Council is led by the Council Chairman – who is elected from amongst the Councilors. Bagamoyo is not a municipal Council that qualifies to have a mayor; therefore, the Chairman of the Council is the highest authority from amongst the elected leaders.

The Local Government Act devolves to the District Council and the Village Councils powers to undertake planning, collection of certain types of taxes, and supervision of development activities. The District Council is also empowered to prepare bylaws that must be approved by the Minister responsible for local government.

Under the current administrative set up, traditional leadership in Bagamoyo has very negligible role, and is not part of the formal arrangement. Traditional leadership is relevant and practiced amongst the pastoralist communities that are found in Bagamoyo. However, traditional leadership in these groups will be limited to matters that have relevancy to the group.

Although rules and procedures are defined in the law, implementation gaps exist with respect to accountability and transparency of public resources and funds. Meetings at the villages to deliberate matters of interests to the villagers are not taking place as often as they are prescribed in the Act. Issues related to environmental governance – e.g. with regard to ensuring appropriate levies and taxes from natural resources are collected and properly accounted for are inadequately handled.
Sessions 11a–c.
Field visit: Baseline Characterization, Impact Identification and Mitigation Approaches

Summary
Sign-up for this field visit will occur on Day 1. Everyone should review the briefing for their site visit, immediately following in this section.

In working groups, we will travel to the field with the objectives of

- observing baseline conditions,
- identifying the most important potential (or current) impacts of the activities/prospective activities visited,
- characterizing ongoing environmental management efforts and measures (if any), and
- otherwise gathering as much information from the field as possible to help evaluate these impacts and design mitigation measures once “back in the office.”

Back in the classroom, working groups will write up field notes (in bullet form) characterizing baseline conditions, potential/current impacts, and recommendations or options for mitigation. Groups should use the Small-Scale Guidelines as a key reference.

Facilitators will help guide groups’ observations in the field and analysis back in the classroom, and serve as resources throughout the process.

Note that this session is intended to practice basic observation, impact identification and mitigation design skills—not to practice development of Reg. 216 environmental documentation. Thus, working group outputs are not expected to be in the form of an IEE outline or phrased in terms of “recommended determinations.”

Format
11a: 15 minutes orientation briefing
11b: 5:30 field visit (including transit & box lunch)
11c: 1:30 classroom follow-up, of which 20 minutes is allocated to wrap-up plenary discussions.
Day 2 Site Visit Briefings:  
“Baseline Characterization, Impact Identification and Mitigation Approaches”

Instructions:
See session summary in Participant Sourcebook.

Group 1: 
Sugar Plantation/Biofuel project
(MUKURUNGE VILLAGE, BAGAMOYO DISTRICT. ~ 5km from Bagamoyo town)

SEKAB BioEnergy Tanzania Ltd is a company formed following signing of a Memorandum of Understanding between the Government of Tanzania and Swedish Ethanol Chemistry (SEKAB), BioAlcohol Fuel Foundation (BAFF), and Community Finance Company (CFC).

(SEKAB) is committed to developing the first regional role-model BioEnergy “cluster,” eventually to amount some 400’000 hectares under cultivation. Roll-out will include a number of “role-model projects” (of around 15’-30’000 hectares each), as well as industrial-scale projects.

These role-model projects will focus on large-scale cultivation of high-yield energy crops (particularly sugar cane and sweet sorghum) in the form of a commercial estate supplemented by community farming schemes.

It is expected that the industrial-scale projects will foster social development in parallel with the commercial development of the cluster.

Full rollout of the cluster is anticipated to create some 70,000 direct jobs (depending on the level of mechanization), supporting over 210,000 people, assuming an additional 3 people sustained per job.

Razaba Farm pilot site. SEKAB BioEnergy Tanzania has selected some 18,000 ha (? figures vary) of land near Mukurunge village (~5 kilometers from Bagamoyo town) as a “role model” project site. This role model project (Razaba Farm) is intended to:

- demonstrate sustainability best practice, for larger rollout
- demonstrate commercial viability of BioEthanol production in the country;

The land earmarked for this project is home to approximately 60 families and is being used for smallholder cultivation of vegetables, maize rice and for livestock.

Irrigation water for the plantation would be abstracted from the Ruvu river. Potentially competing uses of water include rice irrigation and fish farming and the fishing activities.

There is very little vegetation in the area. The ground is flat and water table is very high—suitable conditions for sugar cane and rice cultivation.

Current status. The company has leased prison land to start seed cane multiplication in preparation for larger planting of sugarcane on Razaba. The construction of the factory is currently in progress. The cane seed has been planted on 200 hectares. The establishment of the plantation will continue during 2009 and the factory and plantation is supposed to start production by mid 2010.

Group 2: Hotel & Tourism Development

The group will travel ~2kms from the Paradise Hotel to the sites of 3–4 new hotels under construction.
The hotels are within the 60 meter zone on the shore.

Existing economic activities in the area include salt ponds about 1km from the Livingston hotel. Fishermen use the area to gain access to the shore.

Mangrove trees have been cleared in front of the beaches. However, one hotel faced pressure from a strong conservation ethic in the community, thus construction has been halted and mangrove bushes saved from clearance.

Note: a key part of the “baseline situation” for this group will be Bagamoyo’s historical heritage, the state of its preservation, and threats or barriers.

Group 3: Mariculture—Mlingotini Seaweed Farming (on-going activity)

(MLINGOTINI VILLAGE, BAGAMOYO DISTRICT. ~10kms from Bagamoyo Town).

Like most rural coastal communities, Mlingotini villagers rely on coastal resources for their livelihood. Their economy is dependent on small scale farming (cassava, bananas, mango, coconut are principal cash crops), subsistence forestry, mangrove harvesting, artisanal fishing, lime and salt production, livestock husbandry, small-scale trade, handicrafts and seaweed farming.

This field visit focuses on seaweed farming and its impacts.

Mlingotini villagers began individually farming seaweed in 1999. In 2002, the farmers came together to form the Msichoke seaweed farming group. The group now has 58 members (47 women and 11 men). Mrs Kishind Khamis chairs the group.

The seaweed farmers in Mlingotini are independent; that is, they purchase their own inputs and are free to sell to any buyer.

Seaweed farming takes place in a semi-enclosed shallow lagoon adjacent to the village. While the lagoon is well-protected from open sea conditions, there are high tidal variations that result in good water flow and tidal flushing. Farmers use the “off-bottom” cultivation method: up to 20m of line is strung between mangrove poles driven into the lagoon bottom. Several small branches of seaweed (seed) are tied to each run of line. Average cultivation depths are about 30cm.

Seaweed is harvested every 14 days, with farmers taking an average of 7 days to harvest 20 lines. Each line produces about 5 kilograms of wet seaweed. The seaweed is hand-carried in polythene bags to drying racks. Each of the 20 lines will produce 1 kilogram of dry seaweed. The dry seaweed is packed in polythene bags ready for the market.

In summary, production steps are (1) tying the “seed” to the line; (2) management of the farm; (3) harvesting; (4) carrying to dry; (5) packaging and storage; (6) delivery to market; (7) removal of old ties from the main line.

The main species of seaweed grown by Msichoke farmers are spinosum and cottonii, a more expensive species.

Cottonii is used as a thickener for ice creams and yoghurt. Spinosum is used in making toothpaste.
Sessions 12a & b.
Introduction to Reg. 216 &
Reg. 216 Screening Exercise

Summary

Session 12a: Intro to Reg. 216,
Reg. 216 (22 CFR 216) is a US federal regulation that sets out USAID’s pre-obligation EIA process
for new activities. The Regulation applies to all USAID programs or activities, including non-project
assistance and substantive amendments or extensions to ongoing activities.

The Reg. 216 process results in environmental review documentation (a request for categorical
exclusion (RCE), an Initial Environmental Examination (IEE), an Environmental Assessment (EA),
that must be approved at the Mission level and by the BEO. No “irreversible commitment of
resources” can occur to implement an activity unless it 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.)

This session briefs Reg. 216 as a specific implementation of the EIA process, with particular attention
to (1) the screening process and criteria established by the Regulation, and (2) the nature of the
environmental documentation determined by this screening process.

For USAID’s programs in Africa, the most frequent result of the screening process is that an IEE
(USAID’s version of a preliminary examination) is required. This session presents the basic structure
of the IEE and the nature of the recommended determinations it may reach regarding the
environmental impact of the proposed activities,
The IEE is briefed in more detail in Session 13.

Session 12b: Reg, 216 Screening Practice
In this session, we will practice screening hypothetical activities against the Reg. 216 categories. The
on-line IEE Assistant will be introduced as a key resource to assist in this process. Instructions for the
exercise follow immediately in this section.

Key resource:
On-line IEE Assistant (www.encapafrica.org/assistant.htm)

Format
12a: presentation
12b: short presentation & class exercise
Overview of Reg. 216

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

What is Reg. 216?

- Sets out USAID’s pre-obligation EIA process for new activities
- Applies to:
  - All USAID programs or activities, (including non-project assistance.)
  - Substantive amendments or extensions to ongoing activities

Reg. 216 is a FEDERAL REGULATION, not just an agency policy. Compliance is mandatory.

Reg 216 Origin and Timeline

1970

- (First national EIA requirements in any country.)

1975

- US NGO sues USAID over negligent pesticide use

1976

- USAID develops environmental review procedures for all activities

1979

- Exec. Order 12114 requires all U.S. agencies to consider environmental impacts of actions abroad

1980

- 22 CFR 216 revised and finalized.

- A generation of implementation.
- Current challenges:

  Satisfy host country environmental procedures without duplicating effort.
  Implement procedures effectively at the SO level
  Integrate into contracting, project management

- Phase I

  Understand proposed activity
  Why is the activity being proposed?
  What is being proposed?

  Screen the activity
  Based on the nature of the activity what level of environmental review is indicated?

  Conduct a Preliminary Assessment
  A rapid, simplified EIA study using simple tools (e.g. the USAID IEE)

Phase II

- Activity is Low Risk (based on its nature, very unlikely to have significant adverse impacts)
- Activity is High Risk (based on its nature, likely to have significant adverse impacts)
- Significant Adverse Impacts Possible
- Significant Adverse Impacts Very Unlikely

- Begin Full EIA Study
- Stop EIA process

Overview of Reg. 216. Visit www.encapafrica.org
Reg 216: The big picture

Like any EIA system, Reg. 216 features a tiered review system to focus review effort where it is needed.

Most activities are cleared with:

- Categorical Exclusion
  Activities specified by the regulation as having minimal environmental impact

- Initial environmental examination
  A much shorter, simpler version of a full EIA study

- Full EIA
  Requires a professional team, 2+ person months

Reg 216 specifies that an IEE must reach 1 of 2 decisions:

- Positive determination, (significant impacts likely, do full EIA)
- Negative determination, (no significant impacts, proceed with activity)

Overview of Reg. 216. Visit www.encapafrica.org

Screening under Reg. 216

1. Is the activity an EMERGENCY? YES

2. Is the activity VERY LOW RISK? NO

3. Is the activity HIGH RISK? NO

ATTENTION: You probably must do a full Environmental Assessment (EA) or revise the activity (or not yet clear)

TO ANSWER “YES”, THE ACTIVITY MUST MEET THE REG’S DEFINITION OF “EXEMPTION”

USAID Screening Categories: Exemptions

1. International disaster assistance
2. Other emergency situations requires Administrator (A/AID) or Assistant Administrator (AA/AID) formal approval
3. Circumstances with “exceptional foreign policy sensitivities” requires A/AID or AA/AID formal approval

“Exempt” activities often have significant adverse impacts. Good practice requires mitigating these impacts, where possible.

Overview of Reg. 216. Visit www.encapafrica.org
USAID Screening Categories: Categorical Exclusions

Under Reg. 216, ONLY a specific set of activities may receive categorical exclusions...

1. Education, tech. assistance, training
2. Documents or information transfers
3. Analyses, studies, academic or research workshops and meetings
4. Support to intermediate credit institutions where USAID does not review loans
5. Nutrition, health, family planning activities except where infectious medical waste is generated

And certain other situations where USAID does not have direct knowledge or control

Note: see 22 CFR 216.2(c)(2) for full list

USAID Screening Categories: EA Typically Required

Under Reg. 216, the following activities USUALLY require a full environmental assessment

- Penetration road building or improvement
- Irrigation, water management, or drainage projects
- Agricultural land leveling
- New land development; Programs of river basin development
- Large scale agricultural mechanization
- Resettlement
- Powerplants & Industrial plants
- Potable water & sewage, "except small-scale"

Reg. 216 does not specify scales for these activities.
USAID Screening Categories: EA Typically Required

AND...

Sections 118 & 119 of the Foreign Assistance Act require an EA for...

1. Activities involving procurement or use of logging equipment.
2. Activities with the potential to significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas.

Reg. 216 allows you to proceed directly to an Environmental Assessment for these activities. However, we recommend doing a preliminary assessment (IEE) first.

Overview of Reg. 216. Visit www.encapafrica.org

Review: Screening under Reg. 216

start

1. Is the activity an EMERGENCY?
   - YES

2. Is the activity VERY LOW RISK?
   - YES
   - NO

3. Is the activity HIGH RISK?
   - YES
   - NO

Prepare

- Initial Environmental Examination (IEE)
- Environmental Assessment (full EIA study)

Screening results & their meaning

“EXEMPTION”
- No environmental review required, but anticipated adverse impacts should be mitigated
- “CATEGORICAL EXCLUSION”
- In most cases, no further environmental review is necessary.

ATTENTION:
- You probably must do a full Environmental Assessment (EA) or revise the activity

Prepare

- Initial Environmental Examination (IEE)

What documentation is required?

- The outcome of your screening process determines the documentation you must submit:

<table>
<thead>
<tr>
<th>Overall screening results</th>
<th>Environmental documentation required</th>
</tr>
</thead>
<tbody>
<tr>
<td>All activities are exempt</td>
<td>None*</td>
</tr>
<tr>
<td>All activities are categorically excluded</td>
<td>Categorical Exclusion request*</td>
</tr>
<tr>
<td>All activities require an IEE</td>
<td>IEE covering all activities*</td>
</tr>
</tbody>
</table>
| Some activities are categorically excluded, some require an IEE | An IEE that:  
  - covers activities for which an IEE is required AND  
  - Justifies the categorical exclusions |

*plus a Compliance facesheet

Basic Reg. 216 compliance documents

1. Initial Environmental Examination
   - 1. Goals and purpose of project; list of activities
   - 2. Baseline information
   - 3. Evaluation of potential environmental impacts
   - 4. Recommended findings, mitigation & monitoring

The IEE is USAID’s “preliminary assessment”

2. Request for Categorical Exclusion
   - 1. Goals and purpose of project; list activities
   - 2. Baseline information
   - 3. Justification for a Categorical Exclusion (must cite the appropriate section of Reg. 216.)

The RCE is a simple document used when ALL activities are “low risk”

3. A “facesheet” accompanies both the IEE & the CatEx Request
Overview of Reg. 216. Visit www.encapafrica.org

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

IEEs for activities involving pesticides...

must satisfy additional requirements via a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP)

What does “approved” mean?

- Both IEEs and RCEs must be cleared at the Mission Level & by the BEO
- BEO concurrence not automatic or guaranteed
- Back-and-forth dialogue is sometimes required

Who signs?

Clearances:
- SO team leader
- MEO
- Regional Environmental Advisor (optional for T II)
- Mission Director

Concurrence:
- Bureau Environmental Officer

Approval:
- General Counsel

Be aware...

Categorical exclusions exist AT THE DISCRETION of the BEO

To avoid rejection or delay of IEEs, RCEs...

Consult with the MEO/BEO/REA on difficult issues BEFORE submission.
Submit a quality IEE (coming up)

An IEE is a likely result of the screening process...

The most common screening result (particularly for the AFR portfolio) is that an IEE is required.

The IEE is USAID's “preliminary assessment”

What is the purpose of a preliminary assessment?
Overview of Reg. 216. Visit www.encapafrica.org

Review:
Purpose of the Preliminary Assessment

Understand proposed activity
Why is the activity being proposed?
What is being proposed?
Screen the activity
Based on the nature of the activity what level of environmental review is indicated?
Conduct a Preliminary Assessment
A rapid simplified EIA study using simple tools (e.g. the USAID IEE)
Phase I
Beta
ACTIVITY IS OF MODERATE OR UNKNOW RISK
ACTIVITY IS LOW RISK (Based on its nature, very unlikely to have significant adverse impacts)
ACTIVITY IS HIGH RISK (Based on its nature, likely to have significant adverse impacts)
BEGIN FULL EIA STUDY
SIGNIFICANT ADVERSE IMPACTS POSSIBLE
SIGNIFICANT ADVERSE IMPACTS VERY UNLIKELY
STOP EIA process

ACTIVITY IS OF MODERATE OR UNKNOW RISK
ACTIVITY IS LOW RISK (Based on its nature, very unlikely to have significant adverse impacts)
ACTIVITY IS HIGH RISK (Based on its nature, likely to have significant adverse impacts)
BEGIN FULL EIA STUDY
SIGNIFICANT ADVERSE IMPACTS POSSIBLE
SIGNIFICANT ADVERSE IMPACTS VERY UNLIKELY
STOP EIA process

Purpose of the IEE

Like any preliminary assessment the purpose of the IEE is to...

Provide 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

What determinations result from an IEE?

Recommended Determinations in the IEE

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

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Reg. 216 terminology</th>
<th>Implications (if IEE is approved)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No significant adverse environmental impacts</td>
<td>NEGATIVE DETERMINATION</td>
<td>Activity passes environmental review</td>
</tr>
<tr>
<td>With specified mitigation and monitoring, no significant environmental impacts</td>
<td>NEGATIVE DETERMINATION WITH CONDITIONS</td>
<td>The activity passes environmental review on the condition that the specified mitigation and monitoring is implemented</td>
</tr>
<tr>
<td>Significant adverse environmental impacts are possible</td>
<td>POSITIVE DETERMINATION</td>
<td>Do full EA or redesign activity</td>
</tr>
<tr>
<td>Not enough information to evaluate impacts</td>
<td>DEFERRAL</td>
<td>You cannot implement the activity until the IEE is finalized</td>
</tr>
</tbody>
</table>

Note:
If a “negative determination with conditions” is approved, those conditions become REQUIRED parts of project implementation & monitoring.
Applying Reg. 216 at the SO level

- Reg. 216 was written with the idea that it would be applied at the project or activity level
- Most IEEs are written at the SO level  
  (in fact, all SOs require approved env documentation)  
  - To make MEO, BEO workload more manageable  
  - To better consider environmental issues early in program design
- The success of SO-level IEEs depends on:  
  - Mitigation and monitoring conditions successfully transferred to projects (e.g., written into contractor/partner SOWs)  
  - Effective implementation of sub-project review where required
Practice with Screening & Getting started with the on-line IEE Assistant

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

About this session

In this session:
we practice Reg. 216 screening using the step-by-step guidance and linked resources in the on-line IEE Assistant

www.encapafrica.org/assistant.htm

Getting started with Screening...

IEE Assistant: Overview

The Assistant organizes the Reg 216 documentation process into 5 basic steps:

1. Click on “list proposed activities”

- The assistant defines the differences between “activities” and “actions”
- Provides a summary table to help you stay organized
  - List each activity
  - Record screening results
**Review: what is an activity?**

*An activity is:*
- a desired accomplishment or output
  - E.g.: a road, seedling production, or river diversion to irrigate land

Accomplishing an activity requires a set of actions

<table>
<thead>
<tr>
<th>ACTIVITY:</th>
<th>ACTIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>market access road rehabilitation</td>
<td>Survey, grading, culvert construction, compaction, etc. . .</td>
</tr>
</tbody>
</table>

Screening is done at the activity level, NOT the action level.

---

**Next step: the screening decision tree**

1. **Click on “do screening”**
2. The assistant shows the screening “decision tree”

---

**Follow the screening decision tree**

Click on any of the screening questions and get a pop-up summary definition.

Another click gives you the detailed definition.

Complete the decision tree for each activity listed. Enter the results in the summary table.

---

**REMEMBER, Reg. 216 defines “Emergencies” (EXEMPTIONS) and “Low Risk Activities” (CATEGORICAL EXCLUSIONS) very specifically. YOUR ACTIVITY MUST SATISFY THE REG. 216 DEFINITIONS, or it is NOT an exemption/categorical exclusion!**
Review: What documentation is required?

- The outcome of your screening process determines the documentation you must submit:

<table>
<thead>
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| Some activities are categorically excluded, some require an IEE | An IEE that*:  
  - covers activities for which an IEE is required AND  
  - Justifies the categorical exclusions |

*plus a Compliance facesheet

Review: Basic Reg. 216 compliance documents

1. Initial Environmental Examination
   1. Goals and purpose of project; list of activities
   2. Baseline information
   3. Evaluation of potential environmental impacts
   4. Recommended findings, mitigation & monitoring

2. Categorical Exclusion Request
   1. Goals and purpose of project: list activities
   2. Baseline information
   3. Justification for a Categorical Exclusion (must cite the appropriate section of Reg. 216.)

3. A “facesheet” form accompanies both the IEE & the CatEx Request

The EPTM

- The IEE Assistant is based on the *Environmental Procedures Training Manual*
  - Also provides step-by-step guidance & resources
  - See presentation in sourcebook
  - Available online at www.encapafrica.org
Practicing screening: a classification exercise

In this exercise, we will practice the Reg. 216 screening process. Refer to the printed pages from the IEE Assistant (immediately following in this section) for the screening decision tree and screening criteria.

**Note:** The exercise can be conducted in working groups, or in plenary.

**Instructions.** For the assigned activities in the list below, answer the following questions:

- What screening outcome under Reg. 216 would you most likely choose for the following activities? (Write your response in the column provided)
- What additional information do you need to make a well-informed determination?

<table>
<thead>
<tr>
<th>#</th>
<th>Activity</th>
<th>Screening outcome: (Cat Ex; IEE, EA likely)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Health post with voluntary counseling and testing for HIV/AIDS</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Distribution of seeds and tools</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Farmer training</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>5 km dirt feeder road</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Diversion weir to irrigate 50 hectares</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Building bunds (low ridges to arrest run-off) on 1000 hectares of existing farmland</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Clearing 10 hectares of undeveloped land</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Commercial production of wild medicinal herbs</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>A small agroforestry research plot</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Distribution of information on health and nutrition</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Mosquito and rodent control</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Impregnated mosquito nets</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Rehabilitation of irrigation system on 100 hectares</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Reforestation of 100 hectares</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>New road passing through undegraded forest</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Refugee camp established near a national park</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Small earthen dam construction</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Land leveling of 10 hectares</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Relocation of 10 families for aquaculture farming</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Holding this workshop</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Establishing a 20km wildlife management fence</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Drilling borehole(s), digging well(s)</td>
<td></td>
</tr>
</tbody>
</table>
Screening exercise: Cluster 1

1. A farmers’ cooperative is undertaking a 16,000 hectare project to reclaim grazing land encroached by an aggressive and difficult to eradicate bush species. A combination of fire and host government-approved herbicide will be used.

2. In order to provide much needed water for drinking and irrigation, a dam is proposed that will store 1,000,000 cubic meters of water and will inundate degraded cattle land, an existing road, and a village of 100 families.

3. An NGO will sponsor farmer training in steep hillside tillage practices and weed control, including demonstration plots.

4. An international organization is establishing a micro-credit program to provide small startup loans for micro/small enterprises in agricultural processing, metal working, etc.

Screening exercise: Cluster 2

1. An NGO will sponsor training in school construction, including provision of latrines.

2. An international agrochemical company has developed a genetically modified rapidly growing teff (the traditional grain of Ethiopia) that is resistant to pests and disease. A community-based organization in Ethiopia plans to introduce the new plant to increase agricultural productivity and farmers’ incomes.

3. A joint Government/NGO maternal and child health program will provide training to traditional mid-wives, training in nutrition for nurses and mothers, and an immunization program. The organization will also construct 200 health posts across the country.

4. In order to promote soil conservation, an NGO will establish a large nursery and provide tree seedlings at low cost to all school children and encourage planting on hillsides. These non-indigenous tree seedlings are known to grow quickly and spread rapidly and, in addition, provide a good source of fuelwood.

Screening exercise: Cluster 3

1. An NGO will sponsor training in rodent control.

2. A group of transporters and two villages have formed a cooperative association and plan to rehabilitate a 20 km road, passing through cultivated fields, a wetland, and several smaller communities, in order to link the villages to a market town.

3. Open-ended grants are to be given to district councils, who will determine various projects to be funded with the grant monies. The principal criteria are that the projects must be designed in a participatory manner; respond to a broad range of community interests and concerns; target a community in need; and provide for the repair of war-torn infrastructure.

4. An NGO with USAID funding will promote the sinking of 200 boreholes to provide water for 200 schools in a province.

Screening exercise: Cluster 4

1. A women’s cooperative intends to establish a wool dyeing operation for the production of rugs and sweaters. The color dyes will be purchased from India and China. Water for dyeing will come from nearby wells.

2. USAID financing will be provided to develop preliminary plans and site layouts for three privately operated tourist lodges near protected areas. The bed limits for the lodges will range from 30 to 100.
3. An NGO will undertake a major training initiative, which includes farmer training covering instruction in soil conservation and correct application of fertilizers and pesticides.

4. To relieve crowded conditions in an existing camp, an NGO plans to assist in establishing a new refugee camp on marginal lands near a forest reserve and a river. The forest reserve provides traditional medicines and food for several existing communities; and the river provides a source of water for washing.
Screening Flow Chart from the IEE Assistant

Start

1. Is the activity an EMERGENCY? YES NO

2. Is the activity VERY LOW RISK? YES NO

3. USAID has direct knowledge/control? YES NO

4. Is the activity HIGH RISK? YES NO, or not yet clear

Screening results & their meaning

“EXEMPTION”
No environmental review required, but anticipated adverse impacts should be mitigated.

“CATEGORICAL EXCLUSION”
In most cases, no further environmental review is necessary.

“ATTENTION”
You probably must do a full Environmental Assessment (EA) or revise the activity.

Prepare Initial Environmental Examination (IEE)

Prepare Environmental Assessment (full EIA study)

Allowed but not recommended

recommended
Summary of exemptions (IEE Assistant)

International disaster assistance
i.e., situations in which an immediate response is required and no immediate alternatives are available, E.g.

- Emergency relocation of flood victims
- Establishment of refugee camps for rural populations caught in civil strife
- Emergency medical infrastructure, materials and equipment for victims of war

Other emergency situations:
(requires formal approval/designation by the USAID Administrator (A/AID) or Assistant Administrator (AA/AID))

Circumstances with “exceptional foreign policy sensitivities”
requires formal approval/designation by A/AID or AA/AID)

If you believe your activity may qualify for exemption, click here to check the detailed definition

Close This Window
Summary of categorical exclusions (IEE Assistant)

Categorical exclusions include 2 types of activities:

1. activities which, by their nature pose very low risks of causing significant adverse environmental impacts
2. activities in which USAID has no direct control over the activity

Examples are given in the table below:

### Activities normally qualifying for categorical exclusions because they pose inherently low risks of adverse environmental impacts

- Education, training or technical assistance
- Limited experimental research
- Analysis, studies, workshops, meetings
- Documents or information transfer
- General institutional support
- Capacity building for development
- Nutrition, health, population and family planning activities (except for construction)

### Activities normally qualifying for categorical exclusions because USAID has no direct control over or knowledge of the activity

- Support to intermediate credit institutions if USAID does not review or approve loans
- Commodity Import Programs (CIPs), when USAID has no knowledge of or control over use;
- Support to intermediate credit institutions if USAID does not review or approve loans; Projects where USAID is a minor donor;
- Food for development programs under Title III, when USAID has no specific knowledge or control; and
- Grants to PVOs where USAID has no specific knowledge or control

If you believe your activity may qualify for a categorical exclusion, confirm by checking the detailed definition including the proper regulatory citation.
Summary of activities normally having significant adverse impacts on the environment

Regulation 216 lists the following as activities that typically have significant adverse impacts on the environment and therefore are likely to require an ENVIRONMENTAL ASSESSMENT (EA). An EA is the fullest form of environmental review:

- Irrigation or water management including dams
- Agricultural land leveling & Drainage
- Large scale agricultural mechanization
- New land development
- Resettlement
- Penetration road building or road improvement
- Power plants
- Industrial plants
- Potable water and sewage, unless small scale
- Activities jeopardizing endangered and threatened plant and animal species, biodiversity or critical habitat
- Use or procurement of pesticides
- Activities adversely affecting relatively undegraded tropical forest

If you believe your activity falls into this category, confirm by checking the detailed definition, including the proper regulatory citation.
Annex A: USAID Definitions in More Detail

This section provides more detailed discussion of the different categories of activities defined by Regulation 216. Read and understand this section before you begin classifying your activities and preparing your IEE or other documentation.

Please note that the section (§) numbers from Reg. 216 are cited throughout this section. Actual excerpts from Reg. 216 are italicized. Both are section references and Reg. 216 excerpts are provided because you may need to cite the applicable portions of the regulation in preparing environmental documentation. The full text of Regulation 216 is contained in Annex B.

A.1 Definition of exempt activities

A.2 Definitions of categorically excluded activities

A.3 Definitions of “high risk” activities typically requiring an environmental assessment (EA)

A.1 Definition of exempt activities

Regulation 216 sets out criteria for exemptions as follows:

Exemptions [§216.2(b)(1)]:

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

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

(ii) Other emergency circumstances; and

(iii) Circumstances involving exceptional foreign policy sensitivities.

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

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

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

Table A.1 lists several kinds of PVO activities that USAID may determine to be exempt.

The Agency Environmental Coordinator has responded to several questions from the field concerning exemptions in order to clarify the underlying principles that justify an exemption.2

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

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

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

Source: Jim Heeter, USAID’s Agency Environmental Coordinator (AEC), May 14, 1998 e-mail to Charlotte Bingham, REISO/ESA REO and Nov. 30, 1998 e-mail to Walter Knausenberger.
The discussion below addresses these issues.

Table A.1: Some activities that may qualify for exemption

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

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

   Spending time and effort finding ways around an environmental review is time wasted that could have been used to make a project more effective. The purpose of the regulation is not to go through pointless bureaucratic gyrations, but to ensure a professional job of designing a project to be sustainable and not hurt the people and the society it is trying to help. With or without a regulation such as 22 CFR 216, inattention to environmental impacts can lead to under-performance or harmful activities.

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

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

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

- See Annex B.2 for information about “exemptions” as they apply to Title II-funded Emergency and Developmental Relief Programs. Activities carried out in response to persistent, protracted or complex emergencies lasting more than a year are likely NOT exempt.

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

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

- for bonafide declared emergencies threatening human lives with imminent danger, political sensitivities; and
- for overriding geopolitical factors and programmatic needs (such as regional HIV/AIDS programs) deemed important and “without borders”—thus being able to operate in countries in which USAID has no Mission (“non-presence” countries) or is prohibited by law from assisting (e.g., due to military coup—Section 508 of the FY98 Appropriations Act).

For pesticide use, notwithstanding clauses do not override the need for a proper risk-benefit assessment, following USAID’s Pesticide Procedures in 22 CFR 216.6(b).
A.2 Definitions of categorically excluded activities

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

(i) The action does not have an effect on the natural or physical environment;
(ii) [USAID] does not have knowledge or control over, and the objective of [USAID] in furnishing assistance does not require, either prior to approval of financing or prior to implementation of specific activities, knowledge or control over, the details of the specific activities that have an effect on the physical and natural environment for which financing is provided by [USAID]; and
(iii) Research activities which may have an effect on the physical and natural environment but will not have a significant effect as a result of limited scope, carefully controlled nature, and effective monitoring.

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

Specific activities which are usually “categorically exempt.” The classes of action defined as Categorical Exclusions are listed below. If Categorical Exclusions apply to your activities or components thereof, enter these activities in Error! Reference source not found., with the relevant information including the specific citation from the Regulation:

Categorical Exclusions [§216.2(c)(2)].

(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.);
(ii) Controlled experimentation exclusively for the purpose of research and field evaluation which are confined to small areas and carefully monitored [Note: a working definition of small would be fewer than four hectares (ha) or ten acres.];
(iii) Analyses, studies, academic or research workshops and meetings
(iv) Projects in which USAID is a minor donor to a multilateral project and there are no potential significant effects upon the environment of the United States, areas outside any nation’s jurisdiction or endangered or threatened species or their critical habitat [Note: USAID is a minor donor when its total contribution to the project is both less than $1,000,000 and less than 25 percent of the estimated project cost, or USAID’s total contribution is more than $1,000,000 but less than 25 percent of the estimated project cost and the environmental procedures of the donor in control of the planning of design of the project are followed, but only if the USAID Environmental Coordinator determines that such procedures are adequate.];
(v) Document and information transfers;
(vi) Contributions to international, regional or national organizations by the United States which are not for the purpose of carrying out a specifically identifiable project or projects;
(vii) Institution building grants to research and educational institutions in the United States such as those provided for under section 122(d) and Title XII of Chapter 2 of Part I of the FAA [22 USC 2220a. (1979)];
(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, waste water treatment, etc.) [Note: If biohazardous waste is handled, blood is tested, or syringes are used (as in an immunization program), mitigative measures to deal with waste disposal must be identified in an IEE.];
(ix) Assistance provided under a Commodity Import Program when, prior to approval, USAID does not have knowledge of the specific commodities to be financed and when the objective in furnishing such assistance requires neither knowledge, at the time the assistance is authorized, nor control, during implementation, of the commodities or their use in the host country;
(x) Support for intermediate credit institutions when the objective is to assist in the capitalization of the institution or part thereof and when such support does not involve reservation of the right to review and approve individual loans made by the institution [Note: if there could be some biophysical impact from the loans made by the credit institution, for most rural credit programs, procedures for environmental review should be incorporated in the program and this activity should be addressed as part of an IEE.];
(x) Programs of maternal or child feeding conducted under Title II of [Public Law] 480 [Note: when there are no on-the-ground physical interventions.];
(xii) Food for development programs conducted by food recipient countries under Title III of [Public Law] 480, when achieving USAID’s objectives in such programs does not require knowledge of or control over the details of the specific activities conducted by the foreign country under such program [Note: PVOs do not receive Title III funds, so this categorical exclusion does not apply.];
(xiii) Matching, general support and institutional support grants provided to private voluntary organizations (PVOs) to assist in financing programs where USAID’s objective in providing such financing does not require knowledge of or control over the details of the specific activities conducted by the PVO [Note: Title II is considered a commodity transfer, not a grant. Activities supported by 202(e) funds are subject to Reg. 216 compliance.];
(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as construction of facilities, etc.); and
(xv) Activities which involve the application of design criteria or standards developed and approved by USAID [Note: to date USAID has no such approved criteria or standards, so this categorical exclusion will not apply.]
A Few Reminders

- The most common Categorical Exclusions that will apply to PVO or Cooperating Sponsor small-scale activities are 216.2(c)(2)(i), (ii), (iii), (v), (viii) or (xi).
- The Categorical Exclusions of §216.2(c)(2) are not applicable to assistance for the procurement or use of pesticides. No use of pesticides will be approved unless USAID pesticide procedures have been satisfied. Consult Annex B [22 CFR 216.3(b)].
- Certain activities, for example, monetization or supplying computer equipment, may not fall under the specific list provided in §216.2(c)(2). However, since they normally have no significant adverse effect on the environment, they can be categorically excluded by citing one or more of the three general criteria in 216.2(c)(1). When an activity does not fit under §216.2(c)(2), but is still categorically excluded, this should be explained, together with citation of 216.2(c)(1).
- Categorical Exclusions are not a right; they are granted at the BEO’s discretion.

A.3 Definitions of “high risk” activities typically requiring an environmental assessment (EA)

What triggers an EA? Activities that can trigger an EA are covered under four sets of regulatory provisions. These are: (1) actions normally having a significant effect on the environment [22 CFR 216.2(d)(1)]; (2) some pesticides [22 CFR 216.3(b)]; (3) endangered species and critical habitats [22 CFR 216.5]; and (4) special provisions of the Foreign Assistance Act as described below. All those activities or components thereof to which these four provisions apply should be entered in Error! Reference source not found., as potential positive determinations.

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

The four regulatory provisions that trigger an EA serve as a potential “red flag” that an EA might be required. You will note as you read the items covered by these four provisions that there is no reference to scale or magnitude of actions. The need for an EA as opposed to an IEE is a matter of judgment. Thus, you will prepare an IEE, even if you have activities included in this list, so that you can provide information about scale, scope, and intensity of the activities. (For example, if your activities are small-scale or if pesticides have a specific kind of registration status, you will indicate in the IEE why mitigative measures and monitoring are sufficient and why an EA might not need to be prepared. Remember that EAs for small-scale activities are relatively rare. If you have sets of similar activities, or you and other USAID Partners working in the same area have similar activities, you might consider a Programmatic EA (PEA), which looks generically or programmatical at the entire class of actions. (E.g., “dams and irrigation interventions in Country X.”)

Guidance on the use of PEAs is also provided in Reg. 216 [§216.6(d)]. The regulation states they “may be appropriate in order to assess the environmental effects of a number of individual actions and their cumulative environmental impact in a given country or geographic area, or the environmental impacts that are generic or common to a class of agency actions, or other activities which are not country specific.”

Classic PEAs are of benefit when a broad examination of a class of impacts is needed, typically in situations where previous EAs have not been performed and there is little past experience to use as a guide. See Annex F: Programmatic Environmental Assessments—Special Application for additional detail.

See Section 3.3 for pointers regarding next steps if your IEE leads to a positive determination.

Specific activities usually requiring an EA. Reg. 216 identifies several generic “classes of action” that are considered a priori to have a high potential for causing harm to the environment and normally require an EA. These are

- Programs of river basin development;
- Irrigation or water management projects, including dams and impoundments;
- Agricultural land leveling;
- Drainage projects;
- Large scale agricultural mechanization;

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

(i) Programs of river basin development;
(ii) Irrigation or water management projects, including dams and impoundments;
(iii) Agricultural land leveling;
(iv) Drainage projects;
(v) Large scale agricultural mechanization;
**Other activities and project attributes often requiring an EA.**

- **Procurement or Use of Pesticides** (§216.3(b))
  
  Any assistance involving procurement or use of pesticides is subject to USAID’s Pesticide Procedures (22 CFR 216.3(b)). The definition of a pesticide is broad and includes insecticides, fungicides, herbicides, many other “cides” as well as botanical pesticides and certain biological controls. In many instances, an IEE suffices to describe the conditions for safe use of pesticides. Some types of pesticides require an EA (or EIS); other pesticides may require an EA on the basis of a threshold decision made in an IEE. If pesticide procurement or use is part of your activity, you will need to review the specific provisions of 216.3(b), then determine the USEPA registration status and what restrictions apply with respect to user or environmental hazard, and find out whether USEPA intends to cancel or suspend registration, or has initiated other types of regulatory actions. Unless the exceptions (stringent) of 216.3(b)(2) apply, an IEE must be prepared that addresses the 12 specific types of information required by 216.3(b)(1)(i).

  Users of the EPTM may find it useful to obtain up-to-date information on pesticide registration at the following Internet website: [http://www.epa.gov/ebtpages/pesticides.html](http://www.epa.gov/ebtpages/pesticides.html).

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

  In order to apply USAID regulations pertaining to pesticides, the name of the pesticide to be used and its USEPA registration status must be known. Contact your headquarters support staff and USAID’s BEOs for assistance.

- **Endangered species and critical habitat** (§216.5).
  
  Regulation 216 contains specific language regarding project activities which may affect endangered species and/or critical habitat:

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

For more on endangered and threatened species and the U.S. response to the Convention on International Trade in Endangered Species (CITES) see Box A.1.

- **Tropical forests, as addressed in the Foreign Assistance Act (FAA).** Based on amendments to the 1992 FAA, Section 118(c)(14) assistance must be denied for:

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

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

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

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

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

  (C) Colonization of forest lands.

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

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

  Section 119(g)(10) provides for the denial of direct or indirect assistance “for actions which significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas.”
In addition to the endangered species provisions of Reg. 216 and the Foreign Assistance Act, the Endangered Species Act of 1973 (as amended in 1978, 1982, 1988, and 1998) and the CITES convention affect USAID-funded actions overseas (see Box A.1).

### Box A.1
**Endangered and Threatened Species: What is CITES?**

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

**What are the Appendices of CITES?**
The UN sponsored a conference in Sweden in 1972 to recognize the need for focused international efforts to conserve wildlife. A treaty evolved from this conference which was designed to control the international trade in species that either were threatened with extinction or could become threatened with extinction. Three appendices were created:

- **Appendix I.** Species in which commercial trade is prohibited and non-commercial use strictly controlled.
  - Examples: red panda, golden-capped fruit bat and Arwana freshwater fish.
- **Appendix II.** Species in which trade is strictly regulated to avoid jeopardizing species survival.
  - Examples: Nile crocodile, minke whale and leopard cat.
- **Appendix III.** Species identified by individual CITES parties as subject to domestic regulations to restrict or prevent exploitation.
  - Examples: golden jackal, walrus and little egret.

**What is the Red List?**
The Red List is the most comprehensive inventory of threatened species and subspecies on a global scale. The “IUCN Red List of Threatened Animals” is compiled by the Species Survival Commission (SSC) of IUCN, which has more than 6,000 members.

- **List 1. Threatened Species**
  - Animals in this category are listed as Critically Endangered (CR), Endangered (EN), or Vulnerable (VU).
  - Examples: African wild dog (EN), black rhino (CR), and cheetah (VU).

- **List 2 - Lower Risk: Conservation Dependent**
  - Animals in this category are the subject of a targeted conservation program.
  - Examples: minke whale, spotted hyena and white rhinoceros.

- **List 3 - Lower Risk: “Near Threatened”**
  - Examples: Colobus monkey, white rumped vulture, and shoebill.

- **List 4 - Extinct and Extinct in the Wild**
  - Examples: dodo, Vietnam wart pig, and pig-footed bandicoot.

**What is the U.S. response?**

- The US is a signatory to the Convention.
- The Endangered Species Act of 1973 requires all Federal agencies to undertake programs for the conservation of endangered and threatened species, and prohibits the authorizing, funding, or carrying out of any action that would jeopardize a listed species or destroy or modify its “critical habitat.” Enforcement authority rests with the U.S. Fish & Wildlife Service. For information by Worldwide Web check: http://endangered.fws.gov/.
- Broad prohibitions against taking of wildlife are applied to all domestic and international endangered animal species, which could apply to threatened animals by special regulation.
- Under the Act, authority was provided to acquire land for animals and plants listed under CITES.
- The 1998 Foreign Operations Appropriations Act (P.L. 105-118) prohibits the use of development assistance funds for any activity which is “in contravention to, CITES.”
Sessions 13a & 13b.  
What makes an Effective IEE?

Summary

Session 13a: Effective IEEs are well-considered and well-written.

A well-considered, well-written IEE is the basis of good mitigation and monitoring and the foundation of the LOP compliance process.

The responsibility for assuring that good-quality environmental documentation is developed lies with team leaders, CTOs, and activity managers. The MEO should serve key roles as (1) a resource for IEE development; (2) IEE reviewer/gatekeeper.

This session will brief the structure and content of the IEE. A short individual exercise will then follow: each of us will try to identify good and poor IEE language from examples provided.

A presentation following the exercise will explain the each sample of IEE language in turn, and the rules for effective IEEs that they illustrate. These are:

1. Make a determination for each activity
2. Specify a mitigation for each impact
3. Make mitigation commensurate to impacts
4. Use clear, uncluttered language
5. DON’T copy blindly

We close by noting some key tools and resources to help with writing the IEE.

Session 13b: Effective IEEs are implemented

The best-written IEEs are useless unless actually implemented! This session presents prerequisites for partner implementation of IEE/EA conditions:

- A complete EMMP exists. An EMMP (Environmental Mitigation & Monitoring Plan) exists that addresses all IEE and EA conditions (The partners will develop the EMMP when the EMMP is not part of a pre-existing IEE or EA).

- Budgets and workplans integrate the EMMP. Project budgets and workplans provide for EMMP implementation, including any necessary capacity-building.

- PMPs measure EMMP implementation. Appropriate indicators of EMMP implementation are built into PMPs.

EMMPs are critical to IEE/EA implementation. This session explains the EMMP and presents a basic EMMP template. We return to the EMMP during the final field visit on Day 4.

These prerequisites are not specified by Reg. 216 or the ADS. But unless they are operationalized, systematic, accountable implementation of IEE/EA conditions is almost impossible.

Format:
13a: Individual exercise & presentation
13b: Presentation
Exercise: Effective IEE Language

I. Identify the entries with problem language in each row
(Each row has at least one “problem entry,” but may have more.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“A negative determination with conditions is recommended...for activities in cluster formation. This component includes . . . introducing grading and quality control facilities, and promoting the use of post harvest and handling facilities.”</td>
<td>“A categorical exclusion is recommended for training activities. XXX intends to train farmers belonging to producer organizations in financial and business management. These activities will have no effect on the environment.”</td>
<td>“For activities involving increased production, include the condition to monitor the impact of activities on land use to ensure that expansion of crop area does not lead to land degradation, destruction of forest or other adverse impacts.”</td>
</tr>
<tr>
<td></td>
<td>“For activities supporting improved milling and processing technologies where waste disposal could result in adverse environmental impacts, XXX will conduct training of staff and will ensure that an environmental management plan (EMP) is developed and implemented. . . ”</td>
<td>“For activities that might result in expansion of the agricultural frontier into sensitive or relatively undisturbed habitat, ensure that farmers understand concepts of soil erosion control.”</td>
<td>IMPACT: “there will be an increased risk of significant adverse environmental impacts if activities result in increased agricultural production without corresponding investments in sustainable natural resource use.”</td>
</tr>
<tr>
<td></td>
<td>“The negative determination is also conditioned on the provision of supplemental project technical assistance and training support to augment existing efforts aimed at the establishment of appropriate, sustainable policies and programs stimulating agricultural productivity and economic growth.”</td>
<td>Monitoring. “As required by ADS 204.5.4, the SO team will ‘actively monitor and evaluate whether the environmental features designed for the activity…are being implemented effectively and whether there are new or unforeseen consequences….’ If additional activities not described in this document are added to this program, an amended environmental examination must be prepared and approved.”</td>
<td>MITIGATION: Monitor the impact of activities on land use to ensure that crop expansion is not leading to land degradation, destruction of forest or other adverse impacts.</td>
</tr>
</tbody>
</table>

II. Which issue corresponds to which row?

<table>
<thead>
<tr>
<th>Issue: A quality IEE should...</th>
<th>Row</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use clear language specific to the activities being assessed</td>
<td>A</td>
</tr>
<tr>
<td>Clearly match recommended determinations conditions to activities</td>
<td>B</td>
</tr>
<tr>
<td>Use clear, uncluttered language specific to the activities being addressed</td>
<td>C</td>
</tr>
</tbody>
</table>
Pointers and Pitfalls
A guide to successful & effective IEEs

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

Objective

- Illustrate the key attributes of good and poor IEEs with examples of language from submitted IEEs
- As an IEE author, you want:
  - A successful IEE.
    An IEE that is approved so you can start work!
  - An effective IEE.
    An IEE that is a basis for effective action to control the adverse impacts of your activity

The Initial Environmental Examination (IEE)

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

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

5 basic rules of good IEEs

1. Make a determination for each activity
2. Specify a mitigation for each impact
3. Make mitigation commensurate to impacts
4. Use clear, uncluttered language
5. DON’T copy blindly
1. A determination for each activity

- **Remember, the IEE requires a recommended determination for EACH activity**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Reg. 216 terminology</th>
<th>Implications (if IEE is approved)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No significant adverse environmental impacts</td>
<td>NEGATIVE DETERMINATION</td>
<td>Activity passes environmental review</td>
</tr>
<tr>
<td>With specified mitigation and monitoring, no significant environmental impacts</td>
<td>NEGATIVE DETERMINATION WITH CONDITIONS</td>
<td>With the inclusion of the specified mitigation and monitoring, the activity passes environmental review</td>
</tr>
<tr>
<td>Significant adverse environmental impacts are possible</td>
<td>POSITIVE DETERMINATION</td>
<td>Do full Environmental Assessment or redesign activity</td>
</tr>
<tr>
<td>Not enough information to evaluate impacts</td>
<td>DEFERRAL</td>
<td>You cannot implement the activity until the IEE is finalized</td>
</tr>
</tbody>
</table>

Therefore, clearly state the specific activity and corresponding recommendation!

“A negative determination with conditions is recommended...for activities in cluster formation. This component includes...introducing grading and quality control facilities, and promoting the use of post harvest and handling facilities.”

Good! ✓

“A categorical exclusion is recommended for training activities. APEP intends to train farmers belonging to producer organizations in financial and business management. These activities will have no effect on the environment.”

Good! ✓

2. Mitigation for each impact

- **Mitigation measures should be clearly matched to impacts**

“For activities involving increased production, include the condition to monitor the impact of activities on land use to ensure that expansion of crop area does not lead to land degradation, destruction of forest or other adverse impacts.”

What is the problem?

This paragraph does not state clearly which activities involve increased production.

UNCLEAR ✗

What is the problem?

This paragraph does not state clearly which activities involve increased production.

OK... ✓

And even better... The RESPONSIBILITY for these mitigation measures is also clearly established.
3. Mitigation commensurate to impacts

- Strong, rigorous mitigation measures are needed to minimize potentially significant impacts.

Consider...?

For activities that might result in expansion of the agricultural frontier into sensitive or relatively undisturbed habitat, ensure that farmers understand concepts of soil erosion control.

What do you think?

✓ OR ✗ ?

Is this mitigation measure commensurate with the impact?

3. Mitigation commensurate to impacts

IMPACT: Misuse of fertilizers could negatively impact the soil ecology and result in pollution of watercourses and wetlands.

MITIGATION: Therefore, this IEE recommends that training in proper use be an integral part of any program to introduce fertilizers.

BASIC CRITERIA FOR MITIGATION MEASURES

- Mitigation measures should be...
  - Commensurate with the potential impact AND
  - MONITORABLE Implementation of the measure can be monitored
  - MEASURABLE Their effectiveness can be measured
  - REPORTABLE to USAID

4. Use clear language

Consider...?

If you read this, what is your reaction?

"The negative determination is also conditioned on the provision of supplemental project technical assistance and training support to augment existing efforts aimed at the establishment of appropriate, sustainable policies and programs stimulating agricultural productivity and economic growth."
4. Use clear language

Unclear and cluttered language makes the reviewer suspicious and confused.

The reviewer reaches 1 of 2 conclusions:

- Either the author doesn’t know what they are trying to say
- or
- They are trying to hide something!

Using clear language in an IEE means following 2 basic rules:

1. **WRITE IN ACTIVE VOICE**
   - "It will be monitored…"
   - "In coordination with Project Manager, the MEO will monitor…"
   - The passive tense hides responsibility and cause and effect. The active voice requires you to explain WHO monitors, and HOW they monitor.

2. **BE SUCCINCT**

To paraphrase NEPA:

- **The purpose of environmental review is "not to generate paperwork, even excellent paperwork, but to foster excellent action..."**

---

**NEPA says it best...**

"concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail."

Give precisely enough information so that the reviewer can make an informed decision.

Be analytic, not encyclopedic.
5. Don’t copy blindly!

Consider. . .

Monitoring. “As required by ADS 204.5.4, the SO team will ‘actively monitor and evaluate whether the environmental features designed for the activity…are being implemented effectively and whether there are new or unforeseen consequences….’ If additional activities not described in this document are added to this program, an amended environmental examination must be prepared and approved.”

What is the problem?

This text is copied directly from the ADS. It does not specify:

- WHO will monitor
- HOW they will monitor
- HOW they will determine if there are “new or unforeseen circumstances”

5. Don’t copy blindly!

Simply copying language from previous IEEs or from USAID IEE guidance causes the reviewer to lose confidence:

The reviewer reaches 1 of 2 conclusions:

- Either the author has given no thought to the issue, or they are deliberately avoiding making specific commitments.

Either way, this IEE will NOT “foster excellent action.”

Caveats. . .

- IEEs that follow these 5 rules will not be accepted automatically.
  - An informed reviewer may have a different opinion than you regarding the likely impacts of your activities.
  - Different MEOs, REOs, and BEOs interpret the regulations differently.
    - Categorical exclusions, and the sufficiency of IEE conditions are all subject to interpretation
    - Although USAID is moving towards more conformity, we have not yet achieved it!

Guidance & resources for writing IEEs

- Presentation:
  “Writing the IEE”
  (from the ENCAP EA-ESDM course; included in sourcebook)
- EPTM
- On-line IEE Assistant
- Other resources in the MEO Resource Center
- All are available at www.encapafrica.org
Prerequisites for Implementation of IEE/EA conditions

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

So now we have a high-quality IEE... 

- IEEs (and EAs) are useless unless the conditions they establish are implemented!
- USAID’s environmental procedures therefore require implementation

Review: Key LOP Env. Compliance Requirements

1. Environmental considerations must be taken into account in activity planning.
2. No activities may be implemented without approved Reg 216 environmental documentation.
3. Any resulting mitigation and monitoring conditions are:
   1. written into contract instruments.
   2. implemented, and this implementation is monitored.

What does the ADS say?

Team Leaders and Activity Managers or CTOs must ensure that all mitigative measures are implemented over the life of the project (ADS 204.3.4)

(For grants and cooperative agreements, this responsibility is specifically assigned to the CTO (303.2.f))

Implementation of IEE/EA conditions

Practically, implementation & monitoring of M&M conditions requires that:

1. Conditions from SO-level IEEs or EAs are mapped to the activity/project level.
2. Complete Environmental Mitigation and Monitoring Plan (EMMP) exists
3. Workplans and budgets integrate the EMMP
4. PMPs track EMMP implementation

EMMPs are critical.

What are they?
What is an EMMP?

An EMMP sets out:

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

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mitigation Measure</th>
<th>Monitoring Measure(s)</th>
<th>Monitoring &amp; Reporting Schedule</th>
<th>Responsible Party(ies)</th>
</tr>
</thead>
<tbody>
<tr>
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To determine if mitigation is in place and successful (i.e., visual inspection for leakage around pit latrine; sedimentation at stream crossing, etc.)

For mitigation, and for monitoring and reporting (May be different)

- If well-specified, quote directly from IEE
- If not well-specified in IEE, define more specifically (e.g., monitor weekly, report in quarterly reports and more frequently under specified conditions)

See EMMP template in sourcebook

Prerequisites for IEE/EA Implementation. Visit www.encapafrica.org

Implementation of IEE/EA conditions

These 4 “requirements” are not specified by Reg. 216 or the ADS.

But systematic, accountable implementation of IEE/EA conditions is almost impossible without them

For more information...

See the MEO Handbook for:

- More details
- Discussion of principles for monitoring IEE/EA implementation, including roles and responsibilities.

Principles of Mitigation and Monitoring: See session 6 (Day 1)

Mitigation and Monitoring measures:
see the Small-Scale Guidelines
recommended template:
Environmental Mitigation and Monitoring Plan (EMMP)

An EMMP should either be included in or developed for (1) all IEEs that have at least one “Negative Determination with Conditions” and (2) all Environmental Assessments (EAs).

If the EMMP is not developed as part of the IEE, the implementing partner should usually lead development of the EMMP, subject to review and oversight by the MEO and CTO.

In all cases, the tasks identified in the EMMP are incorporated into the implementing partner’s Work Plan, budget, and reporting.

The following EMMP format is recommended. It can be adapted, as necessary.

________________________________________________________

Environmental Mitigation and Monitoring Plan

Activity Title:

Implementing Partner:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mitigation measure(s)</th>
<th>Monitoring indicator(s)</th>
<th>Monitoring and Reporting Frequency</th>
<th>Party(ies) responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td>List all activities in IEE that received a “negative determination with conditions.”</td>
<td>If mitigation measures are well-specified in the IEE, quote directly from IEE</td>
<td>Specify indicators to (1) determine if mitigation is in place and (2) successful. For example, visual inspections for seepage around pit latrine; sedimentation at stream crossings, etc.)</td>
<td>For example: “monitor weekly, and report in quarterly reports. If XXX occurs, immediately inform USAID activity manager.”</td>
<td>If appropriate, separately specify the parties responsible for mitigation, for monitoring and for reporting.</td>
</tr>
<tr>
<td>Do not list any other activities.</td>
<td>If they are not well-specified in the IEE, define more specifically here.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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USAID Regional Environmental Training Workshop, Bagamoyo, Tanzania, 2-6 June 2008
Sessions 14a–c.
Field Visit: IEE Review

Summary

Sign-up for this field visit will occur on Day 2. Everyone should review the briefing for their site visit, immediately following in this section.

Each working group will receive a “draft IEE” for an activity (which itself may be real or hypothetical). The “draft IEEs” immediately follow in this section, Note that they are in bullet points rather than full text, to reduce reading time.

In working groups, we will travel to the field with the objective of evaluating the adequacy of the IEE with respect to (1) identification of key elements of the baseline situation; (2) evaluation of potential impacts; (3) adequacy of mitigation measures; and (4) reasonableness of the recommended determination(s).

This field exercise is intended to further sharpen observational and impact-prediction skills, give us practice/experience in implementing these skills within the IEE framework, and sharpen our understanding of what constitutes a good quality/poor quality IEE.

Note: the draft IEE is intended to stimulate critical thinking! Each is written with clear deficiencies and with deficiencies that are more subtle or debatable.

Groups will visit either (1) the site of a proposed project, or (2) the site of an activity already in implementation/implemented. In the latter case, the purpose is to gain insights into the impacts and environmental issues that have manifested in an activity already implemented, to better evaluate an IEE for a similar proposed activity.

Back in the classroom, working groups will develop a critique of the baseline, impacts identification and mitigation and monitoring portions of the IEE. Feedback will be provided within the working groups by facilitators. 30 minutes are allocated for this task.

Working groups will not debrief in plenary. Instead, 45mins of wrap-up plenary discussion will return to the issue of IEE implementation: e.g.:

- When are IEE amendments required?
- How are SO-level IEE conditions supposed to be “mapped” to the activity level?
- What is the role of the EMMP in turning very general IEE conditions into specific, implementable and monitorable measures?

Format

14a: 30 minutes orientation briefing & group prep

14b: 3 hrs field visit (including transit)

14c: 1:15 classroom follow-up (30 minutes working group critiques & 45 minutes plenary discussions).
Day 3 Site Visit Briefings:
“IEE Review”

Instructions
1. ADVANCE HOMEWORK. As advance homework, read (1) the briefing and (2) the “Draft IEE” relevant to your group. Briefly review the Small Scale Guidelines chapter relevant to the field visit.

2. PREPARATORY GROUPWORK (20 min). As a group, review key potential impacts of the activities described in Section 1 of each “Draft IEE.” Discuss primary mitigation/management approaches. Discuss the effects of context on both the significance of impacts & appropriate mitigation approaches.

3. IN THE FIELD (3 hrs), note:
   - The key aspects of the baseline situation that affect the significance of impacts & the type of mitigation that may be appropriate.
   - Look for evidence that the potential impacts you have identified are actual—and if yes, how significant they may be.
   - Look for evidence of the environmental management measures that may be in place, and their effectiveness

4. BACK IN THE CLASSROOM (30 min), and with reference to your field observations, critique the IEE as a group:
   - Does it report the aspects of the baseline situation critical to evaluating the significance of impacts?
   - Does it identify and adequately evaluate key potential impacts?
   - Are mitigation measures adequate?
   - Are recommended determinations reasonable and in accordance with Reg. 216?

Group 1: Smallholder Irrigation Project

Scenario:
Your mission program team has received an activity-level IEE from a partner for a new smallholder irrigation project in a district adjoining Bagamoyo. The activity will be an addition to an existing agricultural development program, but is not covered by the existing SO-level IEE.

You are aware of the Bagamoyo Irrigation Development Project (BIDP), now about 20 years old. The BIDP is closely analogous to the partner’s proposed activity, and the general social, economic and environmental conditions in Bagamoyo closely match those of the proposed site.

You therefore undertake a field visit to the BIDP to better evaluate the IEE you have received.

The description of the BIDP appears immediately below. The draft IEE is attached.
hectares of farm sites for training. Indigenous farmers who were cultivating rice along the Ruvu river were incorporated into the project.

The project abstracts irrigation water from the Ruvu river which also supplies water for household use and stocks in the area as well as being a source of fish.

By 1995, 100 farmers had been trained but had no land to cultivate. (The original 80ha of the project were for training only.) In response, the Tanzanian government started a pilot farming program with financial support from the Japanese government. 100 hectares of land were taken from the prison department, and 52 ha were allocated to 128 families each getting ¼ hectare.

Support under the project was given to local farmers who would receive training in appropriate wheat and rice cultivation techniques; receive farming inputs and technical services such as soil tests and advice on appropriate fertilizers to use, in exchange for 5 bags of rice. Trainee farmers worked on an acre of land each during the training producing about 35 bags on average. The scheme produced 15 new graduate farmers each year and would allocate to them land for cultivation in the “pilot” section of the land.

From 1997 support from the Japanese stopped but farmers continued to receive support from the Tanzanian government until the year 2000 when the cooperative took over.

Without the financial and technical support, and in the face of declining yields, increasing crop diseases, farmers started using more and more fertilizers (TSP, DAP and Urea) and insecticides (Thionex, Actellic and Fungise.) Production costs soared. To keep costs low, families use more of the family labour rather than hired help.

Since 1991, 250 farmers have been trained. These are from neighboring villages—Kaole, Matimba and Bagamoyo town. Support from the cooperative is in the form of inputs and irrigation, all at a fee of Tsh 100 000 per family per season.

Individual input into the farming is for transplanting, weeding, and harvesting. Each family produces 36 bags of rice, on average, per season translating to an income of Tsh 900 000 on average. Typically, rural dwellers earn less than US $10 a month, so these rice farmers are among the high earners in their communities.

Training still continues for new farmers at a fee of Tsh 200 000.

Group 2: District Hospital Expansion and Rehabilitation

Scenario:
Your mission program team is adding a major activity to your health program. The purpose of the activity is to rehabilitate and expand a number of older district hospitals. The partner was tasked with developing an IEE for this activity, and you have just received the draft.

The final set of hospitals that will benefit from this program has not been determined, but Bagamoyo District Hospital meets the general criteria for the program. You undertake a visit to the hospital to help you assess the IEE.

Bagamoyo District Hospital
Located ~2km from Bagamoyo town and ~200m from the ocean in a settled area, Bagamoyo District Hospital is a 125-bed facility opened in 1972. Initially providing health services largely to fishermen, it now serves tourists and the local community, as well as some patients who travel from Dar es Salaam.

Baseline population growth and the development of tourism and other economic activities in Bagamoyo have substantially increased the population the hospital serves, currently estimated
at about 300,000 households. The number of patients has grown 1000-fold; however, the hospital facilities have not been expanded.

Facilities include dressing rooms, laboratories, maternity wards, general wards, pediatric wards and the mortuary. Canteen facilities are available for hospital staff and patients.

The hospital has 3 doctors, 1 district medical officer and 4 Assistant medical staff. Patients report to the casualty rooms and have their medical complaints registered. Depending on the complaint, they are taken to appropriate unit. The most common serious diagnoses are Malaria, TB, and HIV/AIDS.

The hospital generates significant volumes of medical and non-medical wastes. Facilities available to handle medical waste include special bins for sharps and “red bag” (potentially infectious) waste, and incinerators. In Sept 2007, the incinerator was malfunctioning and unsecured. Children were observed playing 50m from the incinerator. Solid waste is removed to landfill twice/week.

The hospital is not connected to a central sewerage system. A set of septic tanks on-grounds must be pumped out regularly. The hospital is 200 meters from the ocean and less than 100 meters from a school.

The group will have the opportunity to talk with Dr. Dorothy from the environmental health section and to tour the hospital.

Group 3: Mariculture—Prawn and Shrimp Farming

Scenario:
Your mission program team has received an activity-level IEE from a partner for a new prawn and shrimp farming activity in a district adjoining Bagamoyo. The activity will be an addition to an existing coastal communities integrated development program, but is not covered by the existing SO-level IEE.

You are aware that the PRAWN Tanz prawn and shrimp farming enterprise in Kingani village has been under construction.

Kingani is about ~7km from Bagamoyo town, and you believe that the general social, economic and environmental conditions in Kingani closely match those of the proposed activity. You therefore undertake a field visit to PRAWN Tanz to better evaluate the IEE you have received.

The description of PRAWN Tanz appears immediately below. The draft IEE is attached.

**PRAWN Tanz enterprise**
PRAWN Tanz is a private, small-scale mariculture operation producing saltwater prawns,

Its ponds, about 2 ha in extent, are situated in a flatland area approximately 2 km from the Indian Ocean and near the Ruvu, one of Tanzania’s principle rivers.

The river provides water for household use and irrigation. Artisanal fishing in the river is a key subsistence and cash-earning activity. Other economic activities in the area are fishing, salt production, livestock husbandry and vegetable cultivation.

The operation is located in Kingani village; however, prior to construction the site was unsettled grassland.

Construction of the ponds started in July 2007, and as of late Sept. 2007, 45 casual laborers had manually cleared the groundcover and completed construction of a perimeter dike and 2 ponds. A reserve/collection pond was also constructed with the intent of collecting fresh
seawater at high tide. A diesel pump and piping was installed to transfer seawater from the reserve to the cultivation ponds. After harvest, the water is discharged.

In Sept 2007, stocking of the ponds was anticipated in October, with prawns to be sourced from hatcheries at the Mbengani college of fisheries. Due to floods in the area, the operation has been suspended for the time being.

Markets for the prawns were identified as hotels in Bagamoyo, Dar es Salaam— with expert to international markets being possible after expansion of the operation. Depending on the project success, plans for processing before shipping would be considered.
IEE for Group 1 Review
“Pilot Smallholder Irrigation Activity”

1. Background and Activity Description
1.1 Purpose and Scope

- This is an activity-level IEE supplementing the existing SO-level IEE covering the “Smallholder Agricultural Productivity and Market Access Program (SAPMA)”
- Its purpose is to provide the first review of the reasonably foreseeable effects on the environment, as well as recommended Threshold Decisions, for the new “Pilot Smallholder Irrigation Activity” of the SAPMA.
- This IEE is necessary as construction & operation of Irrigation Projects is not covered under the parent SAPMA IEE.

1.2 Background

- SAPMA is intended to boost smallholder agricultural productivity with improved varieties and cultivation practices, and to support cooperative processing & marketing.
- SAPMA was designed with the intent that improved varieties and practices would be applied to existing smallholder plots. However, experience in the field shows that lack of irrigation infrastructure is a key barrier to smallholder productivity.
- This activity will construct a 200 Ha smallholder irrigation scheme, train farmers, and hand-off management to an existing cooperative. Larger roll-out of this approach (5-10 such schemes) in the next SAPMA phase is anticipated.

1.3 Description of Activities

- **Construction:** Wing dam and intake structure on the Zee river, a tributary of the Ruvu; (intake will be 1km above junction with the Ruvu). Construction of 300m feeder canal to scheme. Estimated diversion is 15% of Zee River median low-flow volume.
  - Minimal leveling of 200 Ha site, construction of primary and secondary canals and control gates.
  - Construction of 3 dwellings for households currently occupying the site (see below)

- **Operation.** SAPMA will operate the scheme for a 1-season training period and then provide technical assistance to the cooperative for another season.

- **Training and extension.** Cooperative members will be trained in irrigated agriculture techniques (over 1 season) and cooperative and scheme management. Extension services will be provided for a period of 2 years.

2. Country and environmental information

2.1 Locations affected

- 200Ha site is state land. (The site was gazetted and cleared for a state-run plantation in the 1970s. The scheme was never completed.) It lies ~ 100m from Zee river and several kilometers from the ocean. Vegetation is scrub typical of the area.
- Site is uninhabited except for three households illegally occupying the land. Cooperative has already negotiated with these households and they have agreed to
voluntary resettlement near ABC village, a settlement of 200 households ~0.5km distant.

2.2 Applicable Host Country Environmental Policies and Procedures

- Scheme has received approval from the office of the District Commissioner. No further permits or studies are required.

3. Evaluation of Project/Program Issues with respect to Environmental Impact Potential

- **Construction** of irrigation structures can lead to downstream sedimentation.

- **Operation.** *Note that operation is only in the purview of this IEE until hand-off to the cooperative.* Irrigation schemes have a number of potentially significant adverse impacts, including:

  1. salination of soils; (2) contamination of surface and shallow groundwater with seepage and discharge containing pesticides and fertilizers; (3) excessive diversion adversely affecting downstream uses and ecosystems; (4) increased incidence of malaria and similar insect-borne diseases due to increase in standing and stagnant water. Regarding these potential impacts:

    **Significant salination** is unlikely to occur within the period of SAPMA operation and technical assistance.

    SAPMA will not be supplying pesticides. Any pesticide impacts are thus outside the scope of this IEE.

    The scheme will be managed for minimal discharge. And discharge will be to an existing wetland area adjacent to the scheme. Natural filtration and purification functions provided by the wetland should prevent any contamination of the Zee river via surface discharge. Groundwater is used neither on-site nor in ABC village, which receives piped water.

    Impacts of water diversion on the Ruvu are not expected to be significant.

    Stagnant/standing water already exists due to proximity of wetland; any stagnant or standing water associated with the irrigation scheme will be minor in comparison.

- **Technical assistance and extension.** Training and technical extension should have no adverse environmental impacts.

4. Recommended threshold decisions and mitigation actions, including monitoring and evaluation

- **A negative determination** is recommended for construction activities, **subject to the condition** that best construction management practices described in the *Small Scale Guidelines* are followed.

- **A categorical exclusion is recommended for technical assistance and extension activities, pursuant to §216.2(c)(2)(i) (education, training and technical assistance).**

- **A negative determination with conditions** is recommended for operation with the condition that the contractor develop and submit a plan for monitoring soil chemistry for any early indications of soil degradation.
IEE for Group 2 Review  
“District Hospital Expansion and Rehabilitation”

1. Background and Activity Description

1.1 Purpose and Scope

- This is an activity-level IEE supplementing the existing SO-level IEE covering the “Maternal, Child & Rural Health Support Program” (MCRH)
- Its purpose is to provide the first review of the reasonably foreseeable effects on the environment, as well as recommended Threshold Decisions, for the new “District Hospital Expansion and Rehabilitation” component of the MCRH.
- This IEE is necessary as rehabilitation and expansion of major health care facilities is not covered by the existing IEE

1.2 Background

- District hospitals are key “anchors” of the public health system. In addition to providing treatment for more serious cases (and quarantine of potentially epidemic diseases), they serve as supervisory and data-collection centers for the clinics and health posts in their districts. District hospitals also act as primary stocking, treatment and distribution points for ITN programs.
- Many district hospitals, particularly in the MCRH target areas, are 35-40 years old, and have undergone no significant expansion or rehabilitation since construction.
- Survey of existing facilities has determined that the planned MCRH activities of medical assistant training and equipment provision will fail to achieve the desired results unless hospital facilities themselves are significantly upgraded.

1.3 Description of activities.

5 District hospitals in MCRH target areas will be chosen according to criteria developed in consultation with the Ministry of Health. For each hospital:

- **Construction of new ward blocks & rehabilitation of existing ones.** The expected result is a 50% increase in bed capacity at beneficiary hospitals (usually ~ 60 beds), with significant improvements to lighting, ventilation and hygiene over existing conditions.

- **Construction and installation of new facilities for management of sharps and “red bag” waste.** At all facilities surveyed, existing incinerators are operating poorly or are non-functional. They are largely non-reparable. New incinerators will be constructed/installed, per attached specification. On-site waste pits will be provided at all hospitals.

- **Rehabilitation and new construction of latrine blocks**

- **Repair or construction of perimeter fences, walls, construction or reconstruction of drainage, and**

- **In consultation with each facility, development of management plans for infectious waste, training of staff, and implementation monitoring.**
2. Country and environmental information

2.1 Locations affected.

- Individual locations vary, but most hospitals eligible for this scheme are in built-up areas. Many were originally peri-urban but are now urban. Often they are co-sited with schools or other public facilities.
- In some cases, adjacent settlement is informal and dwellings lie within hospital grounds.

2.2 Applicable Host Country Environmental Policies and Procedures

- The scheme has been developed in consultation with the Ministry of Health. It will be implemented in active coordination with the MoH and the Administrator of each hospital. MoH will have responsibility for consultation with the office of the District Commissioner. No further permits or studies are required.

3. Evaluation of Project/Program Issues with respect to Environmental Impact Potential

- Construction in built-up areas has nuisance impacts (dust, noise and vibration). In the hospital environment, these impacts can have significant adverse effects on patient health, e.g. on the safety of surgical procedures.
- As environments are urban and otherwise built-up, no adverse impacts on ecosystem functions or biological resources are anticipated.
- Hospitals in operation produce a number of waste streams with potentially significant adverse impacts. While MCRH is not responsible for hospital operations per se, facilities installed under this project will clearly affect waste streams and their management. These impacts are expected to be beneficial:
  1. The effect of this project should be to improve existing waste management of the most biologically hazardous waste streams: sharps and “red bag” waste.
  2. Rehabilitation of wards, construction & rehabilitation of latrines, and drainage improvements will produce a healthier environment for patients, staff and community.
  3. Repair and construction of perimeter fences will reduce opportunities for community exposure to infectious material (particularly by children & livestock.)

4. Recommended threshold decisions and mitigation actions, including monitoring and evaluation

- A negative determination is recommended for all construction activities subject to the conditions that:
  1. good construction management practices specified in the Small Scale Guidelines are followed; and
  2. for each hospital, MCRH develop a mitigation and monitoring plan to minimize the impacts of construction on patients and hospital operations, that this plan give the Hospital Medical Director clear authority to require immediate halt and remedy, and that this plan be approved by the Hospital administrator and medical director.

- A categorical exclusion is recommended for development of management plans for infectious waste, training of staff, and implementation monitoring pursuant to §216.2(c)(2)(i) (education, training and technical assistance).
IEE for Group 3 Review: “Prawn Farm Cooperative Pilot Activity”

1. Background and Activity Description

1.1 Purpose and Scope

- This is an activity-level IEE supplementing the existing SO-level IEE covering the “Integrated Coastal Communities Development Program (ICCDP)”
- This IEE is necessary as inland aquaculture activities are not covered by the existing IEE
- Its purpose is to provide the first review of the reasonably foreseeable effects on the environment, as well as recommended Threshold Decisions, for the “Prawn Farm Cooperative Pilot Activity.”

1.2 Background

- Sustainable income-generation activities are critical to the development of coastal communities, and shrimp and prawn aquaculture offers attractive, sustainable returns in a growth market.
- At the same time, professional management and marketing of farms is essential to sustain production & market successfully, particularly for export. In the past, this has prevented equity participation by local residents or village cooperatives.
- As described below, this pilot project is intended to resolve this conflict, demonstrating a prawn farm operations model that provides community equity participation with benefits substantially beyond compensation for casual labor.
- This activity is a pilot for potential larger roll-out of this model in the next ICCDP phase.

1.3 Description of Activities

- In this project, an innovative partnership will be tested in which (1) management and marketing services will be provided by East Africa Prawn, Ltd. a private company, and (2) equity ownership will be held by a village cooperative. East Africa Prawn will draw blueprints and supervise construction without fee.
  (USAID has completed environmental due diligence of review of East Africa Prawn and concludes it is a socially and environmentally acceptable partner.)
- Cooperative members will share in profits according to household labor contributions. Accounts will be independently audited.
- USAID support will fund construction and materials costs related to establishment of the cooperative, and training. Construction will use principally manual labor.
- The facility will use extensive farming methods, with only limited use of feed.
- Construction will include provision of three equivalent dwellings for households currently occupying the site (see below).

2. Country and Environmental Information (Baseline information)

2.1 Locations affected
- 10 Ha site, mostly comprising salt flats, in coastal flatland typical of area, ap 2km from shore & 300m to Zee river, a major. (See attached environmental and social briefing on coastal communities in this part of Tanzania.)
- Site is adjacent to ABC village, a small coastal settlement of 50 households engaged in a mix of subsistence and small-scale commercial activities typical of the area, principally fishing, salt mining, livestock husbandry and vegetable cultivation.
- Site is uninhabited except for three households who have already agreed to voluntary resettlement in another area of the village.

2.2 Applicable Host Country Environmental Policies and Procedures

- “60m” provision of the TZ Environmental Management Act. This provision prohibits “any human activity of a permanent nature or an activity which by its nature would likely compromise or adversely affect conservation and protection of ocean within sixty metres from the shoreline.”

3. Evaluation of Project/Program Issues with respect to Environmental Impact Potential

- Inland saltwater prawn cultivation has a set of potential significant environmental impacts: (1) destruction of mangrove forests with consequent loss of erosion protection and “nursery” functions, (2) permanent degradation of soils due to build-up of salinity, acidity, and chemicals loads; (3) salination of surrounding agricultural lands; (4) eutrophication and contamination of surface waters receiving pond discharge.

Experience shows that these impacts are controllable with appropriate siting decisions and management protocols. See below.

The proposed site is composed largely of salt flats and is not suitable for other uses; degradation of otherwise fertile land is therefore not an issue.

- Establishment of a cooperative and training should have no adverse environmental impacts.

4. Recommended threshold decisions and mitigation actions, including monitoring and evaluation

- A negative determination is recommended for construction of ponds, storage facilities, and infrastructure, subject to the condition that best construction management practices described in the Small Scale Guidelines are followed.

- Operation of ponds are not funded by USAID and are therefore outside the remit of this IEE. However, as a condition of its management contract, East Africa Prawn will manage operations according to BMPs set out in the Tanzania Mariculture Guidelines Sourcebook.

Note that the use of essentially extensive methods will reduce problems of nutrient and chemical loading of discharge water and sludge accumulation on pond bottoms.

- A categorical exclusion is recommended for the establishment of the cooperative, pursuant to §216.2(c)(2)(i) (education, training and technical assistance).

- A categorical exclusion is recommended for training of cooperative members, pursuant to §216.2(c)(2)(i) (education, training and technical assistance).
Sessions 15a–c.
Field Visit: EMMP Development

Summary
Sign-up for this field visit will occur on Day 3. Everyone should review the briefing for their site visit, immediately following in this section.

As we learned on Day 3, the Environmental Mitigation and Monitoring Plan (EMMP) is the basis of IEE and EA follow-through. Being able to critique, design and audit against EMMPs is a core ESDM/LOP Compliance skill for CTOs, MEOs, Activity Managers and M&E Officers. This field visit builds & practices these skills.

In this field visit, we are faced with a "non-compliance" situation:

SO-level IEE conditions exist, but they were not translated into contract requirements. A project-specific EMMP (Env Mitigation and Monitoring Plan) was thus never developed, and the mitigation and monitoring activities necessary to comply with the IEE conditions were thus never identified, and not incorporated into the project workplan or budget.

Each working group will receive the IEE conditions (see briefing on following pages) and will then visit the “non-complying activity” that is in process.

Back in the classroom and informed by their field observations, working groups will develop an EMMP responsive to the IEE conditions—and identify how they would propose to monitor implementation of this EMMP. Feedback will be provided within the working groups by facilitators, 45 minutes are allocated to this exercise.

Working groups will not debrief in plenary. Instead, 30 minutes of wrap-up plenary discussion will focus on, e.g.:

- Modalities of implementing the EMMP in mid-stream, given the budget and contractual issues involved;
- How to integrate monitoring of EMMP implementation into project M&E, including how EMMP implementation should be evaluated during field visits; and
- What to do if EMMPs prove to be inadequate.
- How MEOs, CTOs & activity managers should respond when when confronted with non-compliance situations.

Format
15a: 30 minutes orientation briefing & group prep
14b: 3 hrs field visit (including transit)
14c: 1:15 classroom follow-up (45 minutes working group critiques & 30 minutes plenary discussions).
Day 4 Site Visit Briefings:
“EMMP Development”

Instructions (all groups)

1. ADVANCE HOMEWORK. As advance homework, (a) read the briefing relevant to your group & (b) briefly review the Small Scale Guidelines chapter relevant to the field visit.

2. PREPARATORY GROUPWORK (20 min). As a group, review the IEE conditions provided and discuss the potential impacts they are intended to address. Discuss the possible mitigation/management approaches that can be employed to address these impacts. What are the key factors that determine which measures are appropriate, and their adequacy?

3. IN THE FIELD (3 hrs), (a) ascertain the environmental management and mitigation measures in place with respect to the SO-level IEE conditions that apply to each activity, and (b) attempt to assess their adequacy, given local context and the size and operational characteristics of the project/facility.

4. BACK IN THE CLASSROOM (45 mins) informed by their field observations, develop as a group an EMMP responsive to the IEE conditions—and identify how they would propose to monitor implementation of this EMMP.

Group 1: Bagamoyo District Hospital

Scenario:
For the purposes of this exercise, we assume that Bagamoyo District Hospital (described below) is one of several district hospitals receiving financial and technical assistance under the USAID/XXX “Maternal, Child & Rural Health Support Program” (MCRH). The purpose of this assistance is to better monitor, diagnose and treat HIV/AIDS, TB, Cholera and other infectious “epidemic diseases.” The hospital also provides prevention/education services via the out-district health posts under its direction.

MCRH is covered by an SO-level IEE, which imposed the following conditions (among others):

- **Medical waste handling.** The medical facilities and operations receiving assistance under this program must have adequate procedures and capacities in place to properly handle, label, treat, store, transport and dispose of blood, bio-hazards and other medical waste.
  

- **Kitchen & Sanitary/Hygiene facilities.** The medical facilities and operations receiving assistance under this program must have kitchen and sanitary/hygiene facilities (i.e. toilet/latrines & showers) & management protocols for these facilities sufficient to minimize the possibility of patient-to-patient & patient-to-staff transmission

- **Brown and gray wastewater systems** must be sufficient to prevent contamination of surface or groundwater with infectious pathogens.
Unfortunately, these SO-level conditions were never stated as contract conditions for the partner nor written into the MOU with the hospital and Ministry of Health.

You are visiting in mid-implementation to assess the adequacy of environmental management and mitigation measures in place with respect to these conditions.

Back “at the office,” you will develop a draft EMMP focused on correcting issues identified by your field observations. (This draft EMMP would then be discussed with the partner and MoH/Hospital.) Also address how you (the Mission) would propose to monitor implementation of this EMMP.

**Bagamoyo District Hospital**

Located ~2km from Bagamoyo town and ~200m from the ocean in a settled area, Bagamoyo District Hospital is a 125-bed facility opened in 1972. Initially providing health services largely to fisherman, it now serves tourists and the local community, as well as some patients who travel from Dar es Salaam.

Baseline population growth and the development of tourism and other economic activities in Bagamoyo have substantially increased the population the hospital serves, currently estimated at about 300,000 households. The number of patients has grown 1000-fold; however; the hospital facilities have not been expanded.

Facilities include dressing rooms, laboratories, maternity wards, general wards, pediatric wards and the mortuary. Canteen facilities are available for hospital staff and patients.

The hospital has 3 doctors, 1 district medical officer and 4 Assistant medical staff. Patients report to the casualty rooms and have their medical complaints registered. Depending on the complaint, they are taken to appropriate unit. The most common serious diagnoses are Malaria, TB, and HIV/AIDS.

The hospital generates significant volumes of medical and non-medical wastes. Facilities available to handle medical waste include special bins for sharps and “red bag” (potentially infectious) waste, and incinerators. In Sept 2007, the incinerator was malfunctioning and unsecured. Children were observed playing 50m from the incinerator. Solid waste is disposed off at a landfill twice a week.

The hospital is not connected to a central sewerage system. Some effluent is collected in a septic tank but quite often is discharged directly into the Indian Ocean. The hospital is only 200 meters from the ocean and less than 100 meters from a school.

The group will have an opportunity to talk to Dr Dorothy from the environmental health section of the hospital.

**Group 2: “Stanley Salt Ponds”**

**Scenario:**

For the purposes of this exercise, we assume that the “Stanley Salt Ponds” are a enterprise that received a small enterprise development grant and ongoing technical assistance under the USAID/XXX “Coastal Livelihoods Enhancement Program” (CLEP). The grant helped in part to fund construction of the facility. Technical assistance is being extended in the areas of marketing and to optimize production rates and product quality. By design, CLEP provides TA to all grant recipients.
CLEP is covered by an SO-level IEE, which imposed the following conditions:

- **Review of small enterprise grants.** The potential adverse impacts of classes of activities to be supported under CLEP’s small enterprise grants and technical assistance program should be readily controllable with basic good practice and sound design measures. However, specific activities are not yet known.

Therefore, an Environmental Review Report (ERR) will be required at a site and activity-specific level that describes the intervention, potential environmental consequences, and recommends mitigation measures. At the discretion of the REA/MEO, a determination will be made of the scale of the intervention and the range and significance of impacts and, based on this analysis, whether additional environmental review will be necessary. Mitigation measures specified by approved ERRs shall be implemented and monitored.

Unfortunately, the subproject review/ERR was never undertaken. Construction was completed and the scheme is now operational. You are visiting in the “ongoing support” phase to assess the adequacy of environmental management and mitigation measures.

Back “at the office,” you will develop a draft EMMP focused on correcting issues identified by your field observations. (This draft EMMP would then be discussed with the partner.)

Also address how you (the Mission) would propose to monitor implementation of this EMMP.

**Stanley Salt Ponds.**

Located at one km from the Paradise Holiday Resort Hotel in Bagamoyo, the Stanley Salt Pond site is a private owned enterprise started some 10 years ago.

The exploitation was set up after the clearing of a mangrove area. It consists of a set of evaporation pans for the production of salt.

The clearance of the mangrove to construct solar evaporation pans for salt production added to other development activities such as tourism, and could lead to major destruction of the mangrove areas cleared for hotels and complexes, as occurring along the beaches of Bagamoyo.

**Salt making process by solar evaporation**

Salt is made by moving sea water through a series of ponds that become progressively more saline as a result of evaporation. Beginning with an intake pond, where sea water is taken into the salt pond system and salinity matches that of the sea, brine (hypersaline water) is moved through evaporator ponds until saturated with sodium chloride. The brine, or pickle, is then moved to the final pond, called the pickle pond.

The portion of the salt pond system where the salt is harvested include—in order of their stage in the salt production cycle—pickle ponds (which are used for storage), crystallizers (where the salt precipitates on leveled and packed beds and is harvested using heavy equipment), bittern desalting ponds (where residual brine solution discharged from crystallizers prior to harvest is sent for removal of additional salt), bittern storage ponds (where bittern is stored prior to sale for dust suppressant and de-icing products or mixed with sea water and sent back to crystallizers for harvest), and wash ponds (which receive sea water that has been used to wash impurities from the crystallized salt).
Group 3: Bagamoyo Irrigation and Development Project (BIDP)

Scenario:
For the purpose of this exercise, we assume that the BIDP (described below) is a project designed and constructed under the USAID/XXX “Smallholder Agricultural Productivity and Market Access Program (SAPMA).”

SAPMA is covered by an SO-level IEE, which imposed the following conditions:

- **Subproject review of irrigation works.** While 22 CFR 216 does not provide guidance regarding what is considered small versus large-scale, an Environmental Review Report (ERR) will be required at a site and activity-specific level that describes the intervention, potential environmental consequences, and recommends mitigation measures. At the discretion of the REA/MEO, a determination will be made of the scale of the intervention and the range and significance of impacts and, based on this analysis, whether additional environmental review will be necessary.

- **Farmer training.** Farmers must be adequately trained on management and maintenance of irrigation canals.

Unfortunately, the subproject review/ERR was never undertaken. Construction was completed and the scheme is now operational. You are visiting in the “ongoing support” phase to assess the adequacy of environmental management and mitigation measures.

Back “at the office,” you will develop a draft EMMP focused on correcting issues identified by your field observations. (This draft EMMP would then be discussed with the partner.) Also address how you (the Mission) would propose to monitor implementation of this EMMP.

**The Bagamoyo Irrigation Development Project.**
BIDP is a cooperative union of 128 families. The project started in 1987 –1990 with preparation, site clearing, surveying and preparation for 80 hectares of farm sites for training. The site clearing was limited to grass only as there were no trees. Indigenous farmers who were cultivating rice along the Ruvu river were incorporated into the project.

The project abstracts irrigation water from the Ruvu river, which also supplies water for household use and stocks in the area as well as being a source of fish. A proposed sugar plantation which plans to draw water from the same river source will be a competing irrigation use.

By 1995, 100 farmers had been trained but had no land to cultivate. (The original 80 ha of the project were for training only.) In response, the Tanzanian government started a pilot farming program with financial support from the Japanese government. 100 hectares of land was taken from the prison department, and 52ha was allocated to 128 families, each of whom received ¼ hectare.

Support under the project was given to local farmers who would receive training in appropriate wheat and rice cultivation techniques; receive farming inputs and technical services (e.g., soil tests and advice on appropriate fertilizers to use), in exchange for 5 bags of rice. Trainee farmers working an acre of land each during the training period produced about 35 bags on average. The scheme produced 15 new graduate farmers each year and would allocate to them land for cultivation in the “pilot” section of the land.

From 1997 support from the Japanese stopped but farmers continued to receive support from the Tanzanian government until the year 2000 when the cooperative took over.
Without the financial and technical support, and in the face of declining yields and increasing crop diseases, farmers started using more and more fertilizers (TSP, DAP and Urea) and insecticides (Thionex, Actellic and Fungise.) Production costs soared. To keep costs low, families use more of the family labour rather than hired help.

Since 1991, 250 farmers have been trained. These are from neighboring villages—Kaole, Matimba and Bagamoyo town. Support from the cooperative is in the form of inputs and irrigation, all at a fee of Tsh 100 000 per family per season.

Individual input into the farming is often for transplanting weeding and harvesting. Each family produces 36 bags of rice, on average, per season translating to an income of Tsh 900 000 / US$ 900 on average. Typically, rural dwellers earn less than US$ 10 a month, so these rice farmers are among the high earners in their communities.

Training still continues for new farmers at a fee of Tsh 200 000.
Session 16:
Operationalizing Partner Responsibility for Compliance

(Incorporating Environmental Compliance Responsibilities into Procurement Instruments)

Summary
The ADS requires that CTOs & Activity Managers assure that environmental conditions are incorporated into procurement instruments. In practice MEOs are likely also to be involved.

The incorporation of IEE/EA conditions into procurement instruments is a critical mechanism to assure that the general environmental mitigation and management measures identified and incorporated at the design stage are translated into action. However, many USAID procurement instruments do not currently incorporate IEE or EA conditions.

The “ECL” is intended to facilitate this process. The ECL is a combination of guidance and “boilerplate” procurement language to enable MEOs, CTOs or Activity Managers to easily develop the appropriate environmental compliance language for any procurement instrument.

Use of the ECL should assure that (1) environmental conditions are translated into contract requirements, (2) that implementation and monitoring of these measures are integrated into workplans and budgets; and (3) that environmental monitoring and reporting is integrated into routine activity monitoring and reporting.

The language makes clear that primary responsibility for Reg. 216 compliance in project implementation lies with implementing partners, reducing demands on Mission staff by placing the Mission clearly into an oversight rather than implementation role.

Further, by assuring that environmental conditions and monitoring become a part of project workplans and routine reporting, the language provides a structure to facilitate this Mission oversight of contractor and grantee environmental compliance. The result is that environmental compliance is integrated into routine project management and monitoring.

Format:
short presentation and Q&A
Why address
Env Compliance in Procurement Instruments?

IEEs and EAs are meaningless unless conditions are implemented.*

Environmental management must be an integral part of project planning and implementation
- generally partners implement,
- USAID monitors/oversees

For partners to implement, env. management/compliance responsibilities need to be written into procurement instruments

ADS therefore requires that IEE/EA conditions are written into procurement instruments
(204.3.4.a.6 & 303.3.6.3e)

(*ADS requires implementation)

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Why address
Env Compliance in Procurement Instruments?

But to operationalize partner responsibility for environmental compliance/ESDM, procurement instruments should also require that:

1. The partner verifies current and planned activities annually against the scope of the RCE/IEE/EA.
2. Proposals address qualifications and proposed approaches to compliance/ESDM for environmentally complex activities.
3. The necessary mechanisms and budget for partner implementation of IEE/EA conditions are in place

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

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Effective implementation & monitoring of M&M conditions requires that:

- Complete Environmental Mitigation and Monitoring Plan (EMMP) exists
- Workplans and budgets integrate the EMMP
- PMPs track EMMP implementation

CTOs are required to actively manage and monitor compliance with any IEE conditions per ADS 202 and 303 (202.3.6 AND 303.2.F)

Systematic, accountable implementation of IEE/EA conditions is required—and almost impossible without these prerequisites.

See Session 13a for more detail
Problems:

- Many agency procurement instruments do not address environmental compliance requirements (or do so incompletely)
- Lack of guidance requires CTOs, COs, Activity Managers to “reinvent the wheel” repeatedly

NEEDED:
Easy step-by-step guidance and “boilerplate” language

Introducing... Environmental Compliance: Language for Use in Solicitations and Awards

- For RFAs/ RFPs/ agreements/ grants/ contracts
- Optional, not required
- Being added as an “Additional Help” document to ADS 204
- Addresses all the issues presented here

In addition to improving LOP compliance... 

By clearly communicating to partners that primary responsibility for Reg. 216 compliance in project implementation lies with them,

and

by assuring that environmental monitoring and reporting is integrated into routine activity monitoring and reporting

The ECL should reduce demands on mission staff
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 216\(^1\)) 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.

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

\(^1\) Full text of 22 CFR 216 can be found at http://www.usaid.gov/our_work/environment/compliance/reg216.pdf
When the situation is that... | Use these environmental compliance language paragraphs from the Model Language...
--- | ---
Approved Regulation 216 documentation\(^2\) exists and it contains... | 1a through 1c
Categorical Exclusions and Negative Determinations only | 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

The project includes a sub-grant fund | To any of the above language/situations that apply, add:
 | 7a and 7b
 | 8a through 8d

\(^2\) 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).
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/](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.
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 17: 
Resources for ESDM & Compliance

Summary
This session reviews key resources already introduced to support ESDM and environmental compliance (the MEO Handbook, the IEE Assistant, the Small-Scale Guidelines) and highlights the new on-line MEO Resource Center (www.encapafrika.org/meoentry.htm) which provides access to all of these resources and many more.

The session also summarizes compliance & ESDM support services available to Missions via ENCAP, a technical assistance and capacity-building program of USAID/AFR/SD.

Format
Presentation
Resources for ESDM & Env. Compliance

USAID Staff Environmental Training
Bagamoyo, Tanzania 2-6 June 2008

Key resources already introduced:

- **MEO Handbook**
  - LOP Env. Compliance

- **Small-Scale Guidelines**
  - Impacts of concern
  - Mitigation & Monitoring

**Individual copies provided**

ESDM and Env. Compliance Resources. Visit www.encapafrica.org

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**MEO Resource Center**

**NEW!**

“a single point of access to a wide range of environmental compliance, best practice, and related references.”

- **MEO Resource Center**
  - 12 topic areas
  - Basic concepts and knowledge
  - USAID Regulations, Procedures and Official Guidance
  - Frequently asked questions
  - Special compliance topics
  - Sectoral guidance
  - Mitigation and monitoring (M&M)
  - Mission processes & MEO authority
  - Environmental Compliance & Partner Responsibility
  - Contacts & Training
  - ENCAP Services and Assistance

- [www.encapafrica.org/moentry.htm](http://www.encapafrica.org/moentry.htm)

ESDM and Env. Compliance Resources. Visit www.encapafrica.org
The DVD in the course materials contains the MEO Resource Center & the whole ENCAP website.

ENCAP Services

- A program of USAID/AFR/SD
- Provides tools, resources, technical assistance and capacity building to strengthen environmental management and environmental compliance
- Serves USAID/Africa Missions and partners.

ENCAP services are available...
- On a subsidized basis (access via request to REA), or
- Via TO buy-in/direct contract with ENCAP program partners.

ENCAP Service areas

1. BPR Facilitation
3. Assistance in incorporating partner environmental compliance responsibilities into procurement instruments.
4. Design and evaluation of EMMPs for compliance with IEE and EA conditions.
5. Development and review of Reg. 216 documentation, including IEEs, PERSUAPs, and EAs.
6. Development of sub-project environmental review processes and associated training
7. Support for IPM, safer pesticide use and pesticide procedures.
8. Preparation of FAA 118/9 (Environmental Threats and Opportunities) Assessments.
9. Conduct of environmental due diligence in support of GDA activities.
10. Program design and evaluation support to incorporate environmental concerns and Reg. 216 compliance

And other services upon request.
Session 18:
Taking stock, effecting change

Summary
This workshop has set out the ways that MEOs, CTOs, Activity Managers, etc. should function together to achieve ESDM by assuring (1) environmental compliance over LOP and (2) that environmental issues are “mainstreamed” into activity design and implementation.

As we have discussed over the course of the workshop, gaps and shortfalls exist. This session will take stock or/recap the most systemic issues, but turn immediately to how we can, collectively and individually, effect change for the better. Questions to be considered may include:

- With reference to the previous session, are there support needs or tools that are lacking?
- Are there success stories that participants can share from their own missions?
- Are there barriers or support needs for adoption of “environmental compliance language” in procurement instruments?
- Etc.

This session will be designed in response to key issues and discussions that arise during the course.

Format:
Facilitated discussion
Session 19: Workshop Evaluation

Summary
This is the first presentation of an Africa-region USAID Staff Environmental Training strongly oriented around “life of project compliance.” This is the anticipated focus of future workshops, and your feedback is essential to strengthen materials and agenda—and to draw attention to Mission TA and support needs for ESDM and environmental compliance.
Workshop evaluation

USAID Environmental Procedures &
Integrating Environmental Considerations into the Implementation of Development Programs
Bagamoyo, TANZANIA ▪ 2–6 June 2008

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

Learning approach
For each issue, please check the assessment you most agree with

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

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.)

<table>
<thead>
<tr>
<th>Session</th>
<th>Comment (Please explain why you made this choice.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIGH-RATED</td>
<td></td>
</tr>
<tr>
<td>HIGH-RATED</td>
<td></td>
</tr>
<tr>
<td>LOW-RATED</td>
<td></td>
</tr>
<tr>
<td>LOW-RATED</td>
<td></td>
</tr>
</tbody>
</table>
## Overall evaluations

Please check the assessment you most agree with.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Assessment</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical quality (Program and Content)</td>
<td>Very poor</td>
<td>Poor</td>
</tr>
<tr>
<td>Facilitation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logistics and venue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Impact

Please circle the characterization you most agree with.

<table>
<thead>
<tr>
<th>Question</th>
<th>Characterization</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline Knowledge</td>
<td>Had poor or limited understanding</td>
<td>Understood the basics, lacked some details</td>
</tr>
<tr>
<td>Empowerment</td>
<td>Not at all</td>
<td>Moderately</td>
</tr>
<tr>
<td>Motivation</td>
<td>Not at all</td>
<td>Moderately</td>
</tr>
</tbody>
</table>

## Key topics not covered

<table>
<thead>
<tr>
<th>Question</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Were there any topics of key important to you that were not covered/given very limited attention?</td>
<td></td>
</tr>
</tbody>
</table>

## Support needs

<table>
<thead>
<tr>
<th>Question</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there particular environmental compliance/ESDM support needs or resources that you require?</td>
<td></td>
</tr>
</tbody>
</table>

## Additional comments welcome on any topic.
Special Topics