GEMS Training Report:

USAID/Ethiopia Life of Project Environmental Compliance and Environmentally Sound Design and Management Workshop

Ethiopia Mission Training Workshops for DA and DCHA USAID Staff and Implementing Partners

Held November 26-30th (DA) and December 3-6th (DCHA), 2012 in Adama, Ethiopia

February 8, 2012

This publication was produced for review by the United States Agency for International Development.
It was prepared by Sun Mountain International in collaboration with The Cadmus Group, Inc. under the GEMS Project.

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CONTENTS

1. List of Acronyms 5
2. Overview.....6
3. Workshop Objectives 7
4. Participant Expectations.....9
5. Technical Sessions 10
6. Participant Evaluations..... 60
7. Information Sheet..... 62
8. Agenda DCHA WS 65
9. Agenda DA WS..... 72
10. Participant List..... 77

Prepared under:
The Global Environmental Management Support (GEMS) project, a USAID Bureau for Africa, Office of Sustainable Development program. Contract Number GS-10F-0105J, Task Order No AID-OAA-M-11-00021 - the CADMUS Group Prime Contractor and Sun Mountain International Principle Partner.

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Photo on front cover:
Youth from the nearby community play at the spate irrigation site, utilized as a field visit site and application of skills during the Workshop. Photo credit: Fiona Littlejohn-Carrillo, Ethiopia, 2012.

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The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

CONTENTS

1. List of Acronyms 5
2. Overview.....6
3. Workshop Objectives 7
4. Participant Expectations.....9
5. Technical Sessions 10
6. Participant Evaluations..... 60
7. Information Sheet..... 62
8. Agenda DCHA WS 65
9. Agenda DA WS..... 72
10. Participant List..... 77

1. List of Acronyms

AOR – Agreement Officer's Representative
BEO – Bureau Environmental Officer
CE – Categorical Exclusion
COR – Contracting Officer's Representative
DCHA – USAID Bureau of Democracy, Conflict and Humanitarian Assistance
EA – Environmental Assessment
EIA – Environmental Impact Assessment
EMA – Environmental Management Agency
EMP – Environmental Monitoring Plan
EMPR – Environmental Mitigation Plan and Report
EMR – Environmental Mitigation Report
EPTR – Environmental Procedures Training Manual
ESR – Environmental Status Report
ESDM – Environmental Sound Design and Management
ETD – Environmental Threshold Decision
GIS – Geographic Information System
GEMS – Global Environmental Management Support
IEE – Initial Environmental Examination
IPs – Implementing Partners
IPTT – Indicator Performance Tracking Table
LAC – USAID Bureau for Latin America and the Caribbean
M&E – Monitoring and Evaluation
MEO – Mission Environmental Officer
ND w/ cond. – Negative Determination with Conditions
NGO – Non-Governmental Organization
PD – Positive Determination
PEA – Programmatic Environmental Assessment
PERSUAP – Pesticide Evaluation Report and Safer Use Action Plan
PVO – Private Voluntary Organization
REA – Regional Environmental Advisor
REA – Rapid Environmental Assessment
REG 216 – USAID Regulation 216
RFP – Request for Proposal
SMTN – Sun Mountain International
USAID – United States Agency for International Development

2. Overview

On behalf of the Planning Team for the Life of Project Environmental compliance and Environmentally Sound Design and Management workshops held in Adama, Ethiopia November-December 2012 , we are pleased to present this workshop final report. This training initiative was jointly sponsored and hosted by the USAID/Ethiopia mission, the USAID Africa and DCHA bureaus.

The workshops were the latest in a series of international environmental trainings for USAID staff under the Global Environmental Management Support (GEMS) Project. The overall goal of these workshops was to strengthen environmentally sound design and management of USAID-funded activities in Ethiopia by assuring that participants (including USAID MEO, CORs/AORs, Activity Managers, Team Leaders, M&E Officers & PDOs, and IPs) have the motivation, knowledge and skills necessary to (1) achieve environmental compliance over life-of-project, and (2) otherwise integrate environmental considerations in activity design and management to improve overall project acceptance and sustainability. Participant evaluations strongly indicate that these workshops achieved their objectives.

These workshops provide a forum for mission and regional staff and implementing partners to discuss recent and current environmental compliance and ESDM issues, including Mission needs for technical assistance and backstopping.

Like all Sun Mountain International coordinated training events since 2011, this capacity building initiative was planned and carried out considering carbon management strategies, and the carbon footprint that could not be avoided will be offset. Carbon credits will be purchased to compensate for the emissions incurred by the training (materials, electricity, gasoline, jet fuel use, etc).

The training program was developed by GEMS in consultation with key contributions from the USAID/Ethiopia mission, and regional and bureau offices. Logistics support was provided by GEMS.

This report presents a compilation of key information exchanged during the workshops, the main points of discussion addressed and the principal recommendations that emerged during the trainings

The workshop planning team greatly appreciates the participation and support of all presenters and participants, and all those who contributed to making the workshop a great success.

3. Workshop Objectives

This training initiative aims to aid the USAID Mission and partners to more effectively design, implement and monitor environmentally sound practices, and to evaluate activities in order to achieve more sustainable and competitive development programs.

To achieve this general goal, the workshops were designed to:

1. Strengthen the capacity of participating organizations to incorporate environmentally sound design and management (ESDM) practices into existing and upcoming development and relief program designs and budgets.
2. Improve the ability of USAID staff and partner agencies to consistently apply and comply with USAID procedures, Regulation 216 and to generate high-quality environmental analysis.
3. Enhance collaboration, networking, exchange of new strategies and technical solutions for development efforts between implementing partners and their local staff in the field, government ministries and USAID personnel.

In order to achieve these objectives field site visits and group work activities were carried out.

Intent of GEMS Workshops

The Global Environmental Management Support (GEMS) Consortium Workshops are viewed as a learning exchange between participant, facilitators, and everyone in the training room. This is why the events are called workshops rather than courses. The program structure creates a two-way learning tract as participants learn from each other as well as from the presenters, and lessons learned from each workshop are channeled back to the environmental officers in Washington.

Workshop Conceptual Flowchart:

CONTEXT AND LEGAL FRAMEWORK

- USAID Environmental Regulations
- Macro environmental analysis: Country and regional level

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CONCEPTS, TOOLS AND EXPERIENCES IN ENVIRONMENTAL MANAGEMENT

- Regulation 216 Compliance Documentation (IEE, EMMP, EA)
- Basic concepts of environmental mitigation and monitoring (M&M)
- Challenges, rapprochements and lessons learned in environmental management
- Medical Waster Management
- Water Quality testing

DCHA Workshop

- Environmental Budgeting and M&E Greening
- Climate change adaptation in Ethiopia
- Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP)

DA Workshop

- Subproject review

↓

CASE STUDIES IN THE LOCAL CONTEXT

DCHA Workshop

- Mojo Tannery
- Berio Keleta watershed rehabilitation
- Wonji Paper and pulp factory
- Spate irrigation site

DA Workshop

- Mojo Tannery
- Wonji Paper and pulp factory
- Adama referral hospital
- TB/ HIV testing and counseling center

↓

COLLABORATION AND FOLLOW-UP

- Conversation: Share environmental mitigation and monitoring knowledge, and tactics to overcome environmental management obstacles
- Group work: Discuss lessons learned from the field and strengthen environmental management in project design, mitigation, and monitoring
- From theory to practice: Identify and document the next strategic steps for USAID staff and key personnel from partner organizations to incorporate the workshop information and results into current and future programs

4. Participant Expectations

Participants' expectations of the workshop were identified through a plenary exercise. The following needs and expectations were highlighted:

- Clarify the relationship between food aid fumigation and environment. The IPs are often required by USAID
- to fumigate food aid.
- Learn about experiences and lessons learned on mitigation measures, especially in relation to refugees and in pastoralist contexts.
- Identify methods and tools for monitoring environmental mitigation and adaptation measures.
- Reach a clear understanding on the USAID environmental procedures, regulations and IEE/EMMP requirements.
- Secure tools for environmental planning, implementation, and monitoring.
- Analyze how to avoid negative impacts from chemical, fumigation residues on the environment.
- Learn how to mitigate negative impacts that come from Dam construction (micro-dams).
- Familiarize ourselves with the USAID environmental procedures Reg 216.
- Gain skills on environmental sound design and management throughout the life of the project.
- Become knowledgeable in simple, applicable, and low-cost mitigation measures.
- Gain knowledge and skills on environmental considerations for project design, implementation, and M&E.
- Understand the purpose of environmental compliance documentation and reviews. What is the greater goal?
- Share responsibility for implementation across project staff.
- Integrate additional best management practices into PIM.
- Gain skills and knowledge in IEE/ESMF preparation (design, implementation and monitoring).
- Share experience among participants.
- Improve environmental budgeting.
- Learn how to make effective implementation and monitoring of sub-projects.
- Increase awareness on environmental compliance indicators.
- Discuss the relationship between supply management and the environment.
- Understand and acquire knowledge on how to conduct EIA and IEEs.

5. Technical Sessions

SESSION 2 Environmentally Sound Design and Management (ESDM) as a Foundation for Environmental Compliance

Presenters:

Yitayew Abebe, Ethiopia MEO & Scott Solberg, Sun Mountain International

Objectives:

Guide participants in understanding the concept of "environment", and introduce the concept of environmentally sound design and management in the context of potential impacts that may arise as a result of program implementation.

Key points

Considerations that emerged from open plenary discussions:

DCHA WS

- Environmental issues must be considered up front during the design stage of a program;
- Local people must be included in discussions during the design stage, since program failures will have repercussions on them;
- Consider best practices during project design;
- Demonstrate responsibility and accountability;
- Keep sustainability in mind during the design stage;
- Goodwill in program development for communities in need is not enough since if ill-conceived, improper actions during and after program implementation could have negative impacts on the community in the future.

DA WS

- Use a holistic approach in designing program activities;
- Project failure is associated with environmental failure;
- Mitigation measures should be incorporated into projects at the design stage;
- Multi- and inter-disciplinary teams are required to address all areas of concern in project design;
- Ensure mitigation plans are reflected in the project M&E systems to ensure actions are taken.

SESSION 3 Fundamental skills of environmental Impact Assessment (EIA)

Presenter:

Patrick Hall, The Cadmus Group Inc. Gems Consortium

Objectives:

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

Key Points:

- *Environmental Impact Assessment*: A formal process for identifying likely effects of activities or projects on the environment, as well as on human health and welfare; the means and measures to mitigate & monitor these impacts.
  There are two phases in an EIA: During Phase I, you determine if there is need for an assessment, and if necessary, conduct a preliminary assessment. In Phase II, if the preliminary assessment determines that more study is needed, a full EIA is conducted. Most USAID projects and programs do not require a full EIA study.
  - *Phase I:* Activity Screening - to determine if the impacts will be low, medium or high (this exercise does not require analysis or specific information on site, techniques or methods - it is based on the nature of the activity).
    - Preliminary Assessment - Conduct an Initial Environmental Examination (IEE) - this determines if a follow-up assessment/phase II is needed.
  - *Phase II:* a detailed analysis of environmental impacts is carried out, covering different alternatives.
- *Fundamental skills of the EIA process:* Characterizing the **baseline situation**; Identifying (and evaluating) the potential adverse **impacts** of planned development activities (issues of concern); and Developing a **mitigation** strategy to address these impacts.
  - **Baseline situation:** The baseline situation is described in terms of environmental components (water, soils, etc) of interest. These are the components which are (1) likely to be affected by your activity, or (2) those upon which your activity depends for its success. It is the existing environmental situation or the condition of the environment in the absence of the activity.
  - **Identify impacts:** The impact of an activity is the change from the baseline situation. The EIA is concerned with all types of impacts (E.g. direct, indirect, short term, long term etc.), although the most significant impacts are what should be focused on.
  - **Mitigation Design:** As a result of the EIA process, the design of a program will be affected so that impacts are reduced, avoided or offset. Mitigations measures are developed to achieve this.
- EIA is a universal requirement for USAID funded projects.

Key Discussion points

DCHA WS

1. Discussion on whether it is better to avoid the impact rather than to think about mitigating it when we know that there would be impacts.

i. In program design we are trying to bring about development but the activities conducted almost always create some form of negative impacts. During implementation some problems also do crop up that need to be mitigated.
ii. When mitigation controls (environmentally sound strategies) are built into the project during design stage most of the impacts could be eliminated.
iii. Good implementation practices (environmentally sound practices and strategies) also reduce significantly the negative impacts that may arise.

DA WS

Q: What type of professional expertise is required during the first phase of EIA?
A1: There are several tools and resources that have been developed. Some activities are specified by USAID as low risk and some as high risk. The intent is for the process to be simple so that non-experts can also do it.
A2: There is need for professional help.

Q: How do we get baseline information when the project has already started and is having an impact on the environment?
A: This is the reason why the analysis should be done before the project starts.

Q: Can you provide guidance on the approximate amount of monetary resources that should go into an EIA?
A: The idea is that the cost of a mitigation measure should not be too high. Generally allocating 5-10% of the total budget to mitigation measures is acceptable. 1-5 % of the total budget is adequate for funding of mitigation measures proposed in an EMMP.

Q: Sound environmental management and compliance should be universal. USAID regulations only cover USAID-supported activates; but what about the various activities that are not related to USAID?
A: There are several consistent and above-board conventions to enhance sustainable development, and EIA is the accepted universal concept and framework. Various countries, in their environmental legislations, implement the provisions of this universal framework in their own context. Most governments understand and appreciate these sound management concepts and practices and have incorporated these in their national regulations and procedures.

SESSION 4 Transect walk

Presenter:

Fiona Littlejohn-Carrillo, Sun Mountain International - The GEMS consortium

Objectives:

Provide participants with an interactive learning experience through a mini-field visit to spaces within the hotel, in order to gain skills in field visit methodologies, baseline situations, and identification of potential environmental impacts of project sub-activities.

Scenario: The hotel is going to undertake an expansion project and double its capacity.
Four groups were formed each representing the following areas:

1. Energy sources
2. Waste disposal
3. Construction activities

4. Socio-economic issues

The tasks assigned to each of the groups are to determine: the baseline conditions around the hotel; and the possible impacts due to this expansion program in order to begin discussion on the mitigation strategies for identified possible impacts.

Group Work Outcomes:

DCHA WS

1. Energy group:

Baseline conditions

Existing power sources:

- Electricity from the national power grid
- Propane gas in cylinders
- Diesel generator

Impacts

Use of Diesel generator results in:

- Noise pollution – Mitigation: sound absorber power house, advanced low-sound power plant
- Air pollution – carbon dioxide filters, solar energy equipment,

Mitigation measures

- Construct a sound absorber at the power hour
- Procure high-tech, low noise output generator
- Install carbon dioxide filter on the generator
- Use solar energy source of power

2. Waste disposal group*:*

Major focus areas of interest

- Types of waste generated
- Where waste is disposed of
- How waste is disposed of
- Staff awareness
- Location and signposts for waste disposal
- Air pollution
- Laundry, location and chemicals used
- Types of disinfectants used and knowledge about disposal
- Upstream and downstream issues
- Types of protective measures in place
- Rooms, kitchen distance from waste disposal facilities
- Handling of leftover food
- Future expansion vs. waste management capacity
- Maintenance of sewerage facilities

Baseline conditions

Upstream

- Solid and liquid wastes are not properly disposed of outside the compound.
- Road drainage is interrupted by solid waste
- Off-road drainage system is not constructed

Solid waste

- No specific place for temporary storage of solid waste
- Solid waste disposal is contracted out
- Solid waste storage area and kitchen, rooms and meeting halls are in close proximity
- No categorization of solid waste

Liquid waste

- The two large septic tanks are emptied regularly but disposal location is unclear
- There are drainage facilities and other sanitation facilities
- Waste baskets are placed everywhere properly
- Staff assigned to take care of waste disposal
- Two staff members have been assigned and maintenance is properly undertaken

Staff awareness and protective measures

- No formal training provided for relevant staff
- Staff members use protective measures
- Impact on health of chemicals used for sanitation purposes are not known
- Information on sanitation-related updates provided to customers only upon request

Impacts

- Dry waste management is a challenge for the hotel
- Staff awareness of waste management is low
- Expansion has to go with waste management capacity development of staff
- Sanitation is very contiguous but focus is only on the inside of the hotel
- All solid waste is treated similarly, there is no segregation

Mitigation measures

- Training of staff in waste management
- Storage space for dry waste
- Provision of public toilet nearby (hotel has to lobby the municipality to construct a public toilet in the neighborhood
- The hotel needs to build an incinerator to safely dispose of solid waste temporarily
- The hotel should re-design the drainage system of the main roads
- There is a need for the hotel to develop a "green" area during the expansion phase
- Final destination of waste generated by the hotel should be known and the hotel should contribute to the waste disposal effort

3. Construction activities

Baseline conditions

- Type of building - G+5
- Number of bed rooms- 60 with different standards
- Number of halls- 4 (with different purposes)
- Septic tank – Available
- Sewerage system- Exists
- Solid waste collection tanker- Exists
- Water reservoir- Exists
- Power source- Exists (stand-by generator + Hydro power)
- Exhaust of generator is closer to EPCO transformer
- Kitchen and administration offices available
- External and ground basement parking lot
- External emergency exit door available
- Various types of plants, flowers, etc

Existing problems

- Exhaust of generator polluting the environment as it installed horizontal to the road
- Exhaust of kitchen open to air (air pollution)
- Noise pollution as the hotel is adjacent to main road (disturbance)
- Carbon monoxide released from vehicles would have impact on health

Impacts of Hotel renovation

1. Demolishing work pollution
   - Dust
   - Noise
   - Solid waste accumulation
   - Removal of existing plants/ trees
2. Solid waste disposal
   - Water source pollution
   - Topography disorder
   - Dust pollution and vehicle exhaust
3. New construction materials requirement
   - Cutting trees that causes deforestation
   - Sand and stone mining, etc
4. Increase in overall waste production of the hotel

Mitigation measures

- Provide protective cover of construction site
- Planting trees in the new arrangement
- Careful demolishing and proper care of materials for reuse
- Appropriate installation of generator and kitchen exhaust
- Maximize use of non-forest products for construction
- Use of non shiny construction materials

4. Socio-economic impacts

Basic assumptions

- Horizontal expansion is impossible due to shortage of land (roads on three sides, one of which is likely to encroach into hotel land)
- Sufficient capital

Baseline conditions

- Spatial extent limited due to existing infrastructure and possibility of displacement
- Increased runoff
- Existing small hotel
- Air pollution (carbon and dust)
- Noise
- Traffic not problematic (accessibility?)
- Currently the hotel has 60 rooms
- 80 workers (mostly locals)
- Good infrastructure (road, water and electricity)
- Waste disposal appropriate (recycling)
- Government investment policy

Potential Impacts

Construction phase (positive):

- Employment (laborers, small hotels and services)
- Market for construction materials and shops
- Transporters

Construction phase (Negative):

- Pollution (air, dust noise)
- Mobility inconvenience (traffic)
- Disruption of existing services (water electricity)
- Potential displacement
- Source of materials could create negative impacts

Demolition phase (positive):

- Employment
- Opportunity for transporters and small hotels
- No displacement

Demolition phase (Negative):

- Noise
- Dust
- Debris
- Safety and health

- Temporary layoff
- Loss of market
- Shortage of hotel rooms
- Increased disposal of waste

Operation phase (positive):

- Foreign currency
- Increased incomes
- More services for tourism
- Employment of more workers
- Market for local produce
- Water harvesting
- Possibility of self sufficiency in energy

Mitigation measures

- Dust control measures or screens
- Traffic plan and management (alternate)
- Design of acceleration and deceleration lanes
- Fencing of construction site
- Refilling of material sites (rehabilitation)
- Compensation (if required)
- Siting of backup energy source viz neighbors
- Occupational health and safety of workers
- Parking design
- Use of well maintained machinery

Post presentation key issues discussion:

Several impacts were identified in this exercise by all the groups and various mitigation strategies were suggested. The principal questions posed were: Can we mitigate all impacts identified or are there limitations? What is under our control to mitigate? Which ones are not within our scope of work for us to mitigate? What mitigation strategies are priorities?

The general consensus was that there are cost and time limitations to implementing proposed mitigation strategies. Some impacts can be classified as more sever and urgent than others, and some of the mitigation measures are more critical and affordable to implement than others. Priorities must therefore be identified.

<u>DA WS</u>

1. Energy group:

Project: expanding/doubling the capacity of the hotel

EIA: Energy consumption and demand

Baseline

- Source of energy (electricity, generator, solar)
- Amount of consumption (bills: 50lt/month
- Purpose
- Level/adequacy of interruption
- Use of power saving lamps
- Safety provisions
  - Extinguishers
  - Grounding
  - Electric line set-up
  - Emergency exit/safety procedures
  - Kitchen set up
- *Source of information*
  - General or operations manager
  - Documents (bills)
  - Observations
  - EELPA local authority

Impact

- Generator –frequent diesel
- Sound, carbon pollution
- Less safety measure
- Less power for local communities

Mitigation Plan

- Re-consider solar energy
- Sound proof and less polluting generators
- More safety measures
- Energy saving lamps

2. Waste disposal group*:*

Impacts

Solid Waste: Increased production of waste will lead to accumulation of waste, with health consequences to the staff and other costumers (site for vectors, bad odor etc..)

Additional cost of medical care

Liquid waste

Capacity of existing septic tank is limited

Use of liquid waste as fertilizer without proper processing

Poor municipal drainage system.

3. Construction activities

Activity: expand Dire hotel by two fold

Potential impacts: space resource

Baseline

- Confined space: no extra space
- X,y,z water electric consumption and waste disposal

Impacts: long term in priority order

- Displacement of families/human beings
- Increase liquid and solid waste
- Minimal air circulation
- Over utilization of resources e.g., water, electricity etc
- Effect on the ecology: ground water, etc
- Contribute for deforestation

Impact: short term

- Traffic jam during construction
- Loss of resident places for families
- Water and electric systems affected
  - Leads to shortage /absence in the area
- Pollution-dust

Mitigation plan

- Compensation
- Re-cycling and/or connect to the right system
- Adequate ventilation
- Adequate consultation on the ecology
- Non-wood materials use

4. Socio-economic impacts

Socio-Economic impact activity of hotel expansion

Methodology: interview and site observation

Findings: Economic

- Creates job opportunities
  - During construction and after completion
- Increased revenues and improved guest services
- Income to the suppliers and the government
- Loss of income to the neighboring guest house
- Gender??
- Uncertainty of health impact

Findings social

- Compensation for displacement
- Prostitution

SESSION 5: EIA and USAID Environmental Procedures: the Initial Environmental Examination (IEE) and Beyond

Presenter:

Patrick Hall, The Cadmus Group Inc. Gems Consortium

Objectives:

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

Key Points:

- Activities and/or programs financed by UAID are legally obligated to follow Reg 216 procedures. Although non USAID funded programs are not legally obligated to comply, it is good practice.
- USAID Environmental Procedures dictate processes that must be applied to all activities **before** implementation. The output documentation of this EIA process includes: IEEs and EAs/PEAs that specify environmental management conditions (mitigation measures).
- Proposed activities must be screened. The following results will be produced:
  - Exemption: Regulation 216 exempts certain activities undertaken in response to emergencies, such as international disaster assistance (famine, civil war and displaced populations), or in circumstances involving exceptional foreign policy sensitivities. Exemptions require the Administrator's or Assistance Administrator's formal approval - *must submit a statement of justification must be handed to USAID*
  - All activities are categorically excluded: Categories of projects which are considered by their nature very unlikely to have significant impacts on the environment. These project types are eligible for 'categorical exclusion.' *Must submit a Categorical Exclusion Request + Facesheet*
  - All activities require an IEE: *Must submit IEE covering all activities + Facesheet*
  - Some activities are categorically excluded, some require an IEE: *Must submit an **IEE** that covers activities for which an IEE is required AND Justifies the categorical exclusions + FACESHEET*
  - High risk: Activities for which an EA is required eg. activities involving: 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; Power plants & industrial plants; Potable water & sewage (except small-scale).

  - The IEE can recommend one or a combination of the following determinations:

Categorical Exclusion (CE): Very low risk activity. Activity has minimal to no environmental impacts and there are no required conditions. Examples of CE Projects:

- Education, technical assistance, or training;
- Capacity building that will not result in environmental impact;
- Controlled experimentation;
- Analyses, studies, academic, or research workshops or meetings; or
- Documentation and information transfers.

  *Most of these activities are taken from 22 CFR 216 categorical exclusions.

Negative Determination with Conditions (NDwC): "Moderate Risk" Activity that has minor environmental impacts that can be mitigated, an Environmental Mitigation Plan and Report (EMPR) is required. Examples:

- Small-scale infrastructure or rehabilitation;
- Most agriculture activities, and use of fertilizers;
- Production and/or disposal of medical waste; or
- Field agricultural experimentation of more than 4 hectares (demo plots).

Positive Determination (PD): "High Risk Projects" - Activity has potential significant environmental impacts and a formal Environmental Assessment (EA) is required. Anything changing the layout of land is considered high risk. Examples:

- River basin/watershed development;
- Large-scale irrigation or water management projects, including dams (>100 ha);
- New land development;
- Large-scale agriculture (>100 ha);
- Timber harvesting (even low-impact);
- Drainage projects (significant change in land-use);
- Construction of new roads; or
- New sewage and potable water projects (>100 ha).

Deferrals: Activities in too early of a stage to make a decision or there is missing information in the project design.

- At the Mission level, all three determinations are approved by the Mission Environmental Officer (MEO) and the Regional Environmental Advisor (REA) before being sent to the Bureau Environmental Officer, who issues a Threshold Decision for the activity. This is the formal USAID determination for the activity in question.

Key discussion points and observations

A question of definition: Difference between "activity" and "actions"

A Common confusion observed by trainers relates to the understanding by program staff of the difference between "activity" and "action". For example, construction of a school is an activity and the steps involved in the construction are referred to as actions. Knowledge of this difference is very important for successful development of the IEE.

Observed poor access to program IEEs by all program staff

- Many of the participants stated that they have never seen their program IEE. This, it was observed, is a serious omission since every participant in the project must be acquainted with the expected environmental

impacts and the associated mitigation strategies presented in this document. Furthermore, the question arises as to who prepares the environmental Status Reports and what it is based on if staff do indeed not have access to the key documentation: the IEE. An auditor would not take this omission lightly if he/she were to discover this in any USAID-funded program.

- All staff members are advised to get a copy of their IEEs as part of their responsibilities of knowing what the expected impacts of their program are and the mitigation actions that have been proposed by the organization.

SESSION 6 (DCHA), 14(DA): Introduction to the USAID Africa Environmental Guidelines

Presenter:

John Azu, Sun Mountain International, The GEMS consortium

Key Points:

Several environmental guidance resources exist which can assist development professionals in program design and in identifying environmental impacts and mitigation measures. USAID has developed environmental guidelines for development programs:

- "Environmental Guidelines for Small-Scale Activities in Africa"- EGSSAA
- The ENCAP AFRICA website (www.encapafrica.org) also contains useful reference materials.

SESSION 7(DCHA), 8 (DA): Environmental Mitigation and Monitoring Plan

Presenter:

Walter Knausenberger, USAID Bureau for Africa/ DC, Senior Regional Environmental Policy Advisor

Objectives

Build knowledge on the Environmental Mitigation Plan and Report (EMMP) procedures format, format and development with focus on narrative as well as mitigation and monitoring tables.

Key Points:

- USAID is required to implement and Monitor IEE/ EA conditions. This requires the following:
  - USAID communicates applicable IEE/EA conditions to the IP*
  - A Complete **Environmental Mitigation and Monitoring Plan** (**EMMP**) exists
  - Project work plans and budgets integrate the **EMMP**
  - Project reporting tracks implementation of the **EMMP**
  - The EMMP must:
    - Identify mitigation measures (Copy and paste the ones that are in table 2 to ensure that all are covered in both tables).
  - Identify (specific) responsible parties for each mitigation measure. Such as a position within the implementing partner organization, project or sub-contractor.
  - Identify an indicator that easily measures the success of the mitigation action. Did it happen? Was it implemented? Was it effective?
- Present a monitoring log outlining the frequency and methods of monitoring.
- The monitoring must be documented in the final report.
- Appropriate Mitigation measures can be identified by reviewing appropriate standards or best practice guidance.

- Partners are responsible for what is in their contracts, grant awards, cooperative agreements. So implementation of mitigation breaks down unless mitigation requirements are written into contracts.
- USAID is increasingly using best-practice environmental compliance language that goes beyond the ADS minimum.
- The Environmental Compliance: Language for Use in Solicitations and Awards (ECL) is a useful document to guide partners in the development of documentation. it:
  - Assures that environmental monitoring and reporting is integrated into *routine activity monitoring and reporting*; reduces the cost and effort of USAID verification/oversight.
  - Avoids the effort, costs and loss of good will that come from imposing "corrective compliance" measures after implementation has started.
  - Provides clarity regarding environmental compliance responsibilities
  - Prevents "unfunded mandates"—requirements to implement mitigation and monitoring after activity has commenced and without additional budget.
- EMMP must be approved by the project COR or AOR
- EMMP is usually submitted and approved with the project work plan or PMP
- EMMP may also be submitted with the project IEE (typical for Title II partner MYAP IEEs)
- Sometimes additional review by the MEO or REA

SESSION 8(DCHA), 7(DA) Principals of Environmental Monitoring

Presenter:

Fiona Littlejohn-Carrillo, Sun Mountain International, GEMS Consortium

Objective

Provide a conceptual basis for environmental mitigation and monitoring; Recognize what an environmental indicator is and what information it provides; Discuss several simple strategies to incorporate environmental monitoring into projects.

Key Points

- Mitigation measures are designed to reduce or eliminate undesired environmental impacts of a proposed action. Mitigation is a key part of the environmental analysis process. It is essential in order to achieve an environmental friendly design.
- Complete the environmental analysis process before applying project indicators and implementing monitoring plans.
- Keep part of the environmental analysis process, it is essential for environmental sound design.
- Example of rural road in design and mitigation process: What kind of materials should be used for ESDM, or to mitigate impacts? Example in implementation process: How can we ensure erosion control for structures and drainage systems? Maybe speed limits or schedules are needed.
- Each one of the mitigation measures are divided in three points:
  - Prevention & control - Change technique, change site, specify operating practices.
  - Compensation - Offset adverse impacts in one area with improvements elsewhere. Replace what we has been used/negatively affected.
  - Remediation - Repair or restore the environment after damage is done. Restore back to the original

condition or better.

- Mitigation measures are considered in the EMMP process. The tool allows us to plan the application of mitigation measures to address the impacts identified. When the EMPR is developed, the following need to be noted: potential impacts, measures to be applied, when each measure is implemented, responsible to carry out mitigation measures, responsible to manage or verify, responsible for payment (especially when there are multiple donors).
- When the project monitoring indicates an unforeseen problem or unexpected result during the project implementation, the EMPR allows for modifications in the project strategy.
- USAID doesn't really have a plan to improve access roads. Project beneficiaries will continue to use the road out of necessity, even if it is a safety or security issue. This should be incorporated and considered in the EMPR and environmental analysis process.
- If beneficiaries are selected to carry out the mitigation measures, training will most likely need to be carried out. New technology is often required, as well as designing mitigation measures and engineering tasks. Behavior change should be contemplated too. It is important that the community takes ownership of the project.
- Environmental Monitoring is a systematic measurement of key environmental indicators over time, within a particular geographic area, in order to determine the effects of project implementation short term and long term. It is a systematic evaluation of the implementation of mitigation measures.
- The monitoring process should be completed by more than one person to receive the benefits of different perspectives. Define a common methodology for measuring the indicators and making the best decisions.
- Why should we monitor projects? Are we achieving what we said we were going to achieve? Did we apply the erosion control, did the beneficiaries receive the proper training, and how effective were these measures? Was it completed on time, according to the standard? If not, why not? Were the budgets correctly estimated? How can we improve this activity to diminish undesired impacts and increase positive impacts?
- Indicators provide facts: Did we do what we said we were going to do? They should be as simple as necessary to give us the exact information that we need.
- Types of indicators
  - Support/Resources: Did we earmark enough resources (financial and other) to the project?
  - Performance/Products Produced: Did we do what we said we were going to do?
  - Effectiveness results/Immediate results: Did we reach the expected results in a timely manner?
  - Impact/Long-term results: If we don't have a baseline we could make a lot of mistakes.
- SMART indicators. Indicators are:
  - Specific
  - Measurable
  - Achievable
  - Realistic
  - Time-limited
- Mitigation and monitoring must be:
  - Realistic and achievable within the timeframe
  - Focused: Define what adverse impact is to be reduced
  - Funded: Well budgeted
  - Time considerate: Prevention and control is better than compensation. Preventive mitigation is usually cheapest and most effective
  - Considered early: Program monitoring and mitigation budgets at the design stage, at the beginning of the process. Good gender analysis is required to improve mitigation and general design.
- Remember mitigation minimizes adverse environmental impacts and monitoring measures if the mitigation

actions were/are sufficient & effective.

Recommendations

- It was recommended that sessions principles of Environmental Mitigation and Monitoring' be presented prior to the 'Environmental Monitoring and Mitigation Plan' session. (*This recommendation was incorporated into the second workshop (DA))*

SESSION 9: Indicator Exercise

Presenter:

John Azu, Sun Mountain International, GEMS consortium

Objective

Practical exercise to fine tune skills in indicator selection and monitoring log development: dDevelopment of indicators to measure the success of the mitigation measures identified in the transect walk.

Recommendations

- It was recommended that the same groups used in the transect walk work together in the indicator exercise to reduce the time spent on presentations. *This recommendation was incorporated into the DA workshop.*

SESSION 11: Environmental Compliance Reporting

Presenter:

Patrick Hall, The Cadmus Group inc., GEMS Consortium

Objective

Provide a conceptual basis for environmental mitigation and monitoring; recognize what an environmental indicator is and what information it provides; discuss several simple strategies to incorporate environmental monitoring into projects.

Key Points

- Project reporting must provide an auditable record of environmental compliance.
- One or more key project performance indicator(s) (project results framework) should reflect overall environmental soundness/ environmental compliance.
- Since the EMMP contains a monitoring log, once completed the latter should be attached to the report.
- A text summary or short analysis of EMMP implementation is needed: *Containing key mitigation activities underway in the reporting period; Any significant issues encountered; and Corrective actions/adjustments made.*
- Stand-alone Environmental Compliance reports may also be warranted
- Environmental issues can be integrated, or "mainstreamed" into the project results framework for reporting purposes. This does *NOT* mean that every mitigation

measure must be captured in core indicators or that every core program indicator must be "environmentalized"

- The COR or AOR is the primary reviewer of EMMP Environmental Complience Reporting, The MEO and M&E function may also be invovled

Key Discussion Points

Most PVOs claim to implement mitigation measures in the field, however, they are not aware of the existence of established and functional environmental management monitoring plans in place from which they can derive an indicator tracking table and since there is no plan, there is consequently no reporting.

Participants expressed interest in knowing how to integrate environmental monitoring with regular program monitoring to ensure that environmental monitoring and reporting and regular M&E would go hand-in-hand.

SESSION 12: Environmental Compliance/ ESDM knowledge game

Workshop participants have received the core technical skills and knowledge up to this point of the workshop. Before transitioning to the field-based portion of the of the workshop and focus on Mission and IP-specific topics, participants were engaged in playing an environmental compliance/SDM knowledge game to review key concepts related to core technical skills and knowledge. The three-round game took the form of a competition among four teams. There were three rounds of five (5) multiple-choice/fill-in-the-blank questions each. Questions in each round correspond to core agenda topics and they assess the objectives of that component. Questions increased in difficulty as the rounds progressed. The results of the competition are given below:

SESSION 13: Environmental Priorities for USAID Activities in Ethiopia

Panelists:

DCHA WS:

Yitayew Abebe, USAID/ Haiti, MEO

David Kinyua, USAID/ Nairobi, REA

DA WS:

Yitayew Abebe, USAID/Haiti, MEO

Walter Knausenberger, USAID/DC, Senior Regional Environmental Policy Advisor

Facilitator:

Scott Solberg, Sun Mountain International, GEMs Consortium

Objective

Provide an opportunity for participants to pose questions to USAID staff regarding regional priorities and USAID perspectives.

DCHA WS Discussion Points

REMARKS BY DAVID KINYUA – USAID REGIONAL ENVIRONMENTAL ADVISOR

In the last four (4) years USAID Missions have undergone Office of Inspector General (OIG) environmental audits. USAID is a government body and thus activities implemented by Implementing Partners (IPs) using USAID funds have to be audited. All instances of non compliance are reported and recommendations are issued which must be implemented within a given timeframe, such as one year. The MEO is responsible for ensuring these recommendations are implemented. This year USAID/Kenya, Congo, Egypt and Kosovo Missions were audited. Some of the issues considered during the audit include: Existence of IEE reports; EMMP existence and effectiveness; IP skills to ensure compliance.

This training process is part of the capacity building initiative for partners to improve compliance. This initiative resulted from the recommendations prescribed during the audit. Key sectors noted for non compliance include Healthcare Waste Management and Water projects.

REMARKS BY YITAYEW ABEBE - THE USAID Ethiopia MEO

- There is a need for local partners to be concerned with the local environment. Currently the Ethiopia mission finances 123 projects. The mission must be mindful when working with contractors considering they have a reputation to protect.
- It is Ethiopian government policy to consider environmental compliance in project implementation. The EMMP should be available in all project implementation offices.
- The OIG audits found discrepancies in water quality of USAID funded projects due to lack of testing.
- Reports must have an environmental compliance section to make it complete. All USAID implemented projects must meet the minimum environmental requirements.
- Concerning consolidation of different reporting requirements i.e., USAID and World Bank for the ESMF program, the ultimate goal is the same. ESMF reporting is accepted at government level. Double reporting seems like duplication of effort but until harmonized formats are provided, the partners must keep the current reporting process.
- Regulation 216 encourages regard of host government regulations and standards.
- The REA clarified that best practice on conflicting reporting systems must come about through an agreement between the various donors. Usually this is achieved through an MOU. Unfortunately the only country in Africa that can use the G2G system is South Africa.

QUESTION AND ANSWER SESSION

Question 1: Does Reg 216 support the use of compensatory mitigation measures?

Answer: USAID does not specify the type of mitigation measures to be used. Rather it relies on partner knowledge and judgment to make decisions considering the local environmental conditions.

There are two types of compensatory measures to use

1. Compensation of a community or people who are displaced by a development such as a dam or a road
2. Provision of the environmental resource that was destroyed e.g. planting of trees on an alternative site to replace those removed during a development.

Question 2: From experience Reg 216 only focuses on the biophysical environment and not on the social aspects. So why has this training workshop considered social aspects?

Answer: Every project that is implemented always has a human aspect to it. For instance, water projects supply water to people and therefore the social aspects are considered as benefits or impacts. Reg 216 has not left out social impacts of development. Partners tend to focus more on the biophysical environment and forget the socio economic impacts**.**

Questions 3: What is the difference between EAs and EIS?

Answer: EA is the assessment of projects with significant impacts as a result of a positive determination. It requires a multidisciplinary approach in terms of expertise as well huge resources to carry out, which results in a detailed EMMP and assessment report.

An EIS is a short report for projects that affect the environment of the United States or affect the global commons

Question 4: What advice would you give relating to selecting a group of experts to carry out a PEA?

Answer: A PEA saves resources especially where implementation of similar projects is likely. Usually it is broad and may be based on sectors or programs. Country specific issues are addressed at program level.

The choice of a consultant is a function of the Scope of Works (SOW). Therefore a poor SOW will get you wrong consultants. Therefore it is important to critically review the SOW using the provided guidelines. A review committee inclusive of the MEO will be useful in selection of the right consultancy.

Comment:

One participant shared his experience in selecting experts for a consultancy. To date a consultant has not been selected due to the shortage of consulting firms with relevant experience. This has become a challenge in terms of fulfilling the requirement for selection within the stipulated time.

Question 4: What has been the experience with refugee camps

Answer: Outbreaks have been common in refugee camps and any exemptions have to follow due procedure. Any activities done for the refugee camps have to follow environmental procedures as well as host country policies. The REA informed the team that usually the Office of Foreign Disaster Assistance (OFDA) funds can be utilized directly as long as the justification process is completed including exemptions of needed.

DA Workshop

Question 1: **What are the biggest challenges in incorporating environmental considerations in our day to day work? What are the obstacles?**

Answer: The awareness and readiness of other partners outside USAID to appreciate the parameters within which they are working is important. The environment we work in unfortunately is not rooted in a long-term environmental perspective.

Question 2: How fast do IEEs get approved? There is a lack of motivation, incentives for compliance of environmental priorities and a lack of clear roles and responsibilities for environmental compliance.

Answer: there is a need for behavior change on the part of partners. There are no incentives, the incentives are the partner's prerogative as a result of choosing to work with USAID as partners in development. Partners have to change their mindset from thinking that they are doing anyone a favor for which they should be rewarded. The regulations are requirements without which budgets are not approved by the MEO

Question 3: USAID has peculiar environmental regulations that are different from what other donors require and not too many people know about the requirements of USAID. Why?

Answer: The regulations were the result of a tragedy and so there is commitment to ensure that they are complied with. Environmental issues must be looked at in the same way as gender etc., are treated. They must be practical to ensure that compliance does not become a burden.

Greatest misconceptions: People think that the MEO should be the one who should be concerned with the environment and solve issues. In reality He is an advisor and partner who is there to assist those who are working through their environmental documentation activities.

ESMF and IEE: the objectives are the same. Env. Issues should be looked at during design. Screening and mitigation. Differences: IEE has more detailed EMMP.

Question 4: When is water quality testing required?

Answer: There is a need for water quality testing to be conducted in order to avoid diseases related to arsenic etc. Water quality is a requirement at the design stage and funding is granted accordingly. That is why EMMP development provides an opportunity for the implementer to include a budget for water quality tests which have been designed during the project design stage. When the issue is identified early on then the Mission will be made aware of the level of funds required to ensure that testing takes place. Education, health, economic growth etc all have water components and they should identify the problems early on so that planning for funding of mitigation activities could be completed earlier and funds provided.

Question 5: Are there private companies providing water quality tests?

Answer: Not too sure. Some PVOs have their own water testing facilities, such as CRS. At the present time the regional and federal testing agencies are in charge of providing water testing services.

SESSION 14 (DCHA), 15(DA): Case Studies

Facilitator:

DCHA WS:

Fiona Littlejohn-Carrillo, Sun Mountain International, The Gems consortium

DA WS:

Patrick Hall, The Cadmus Group Inc., The GEMS Consortium

Presenters

Selected Spokes persons from each field site.

Objectives:

Participants share findings from the field trip with other groups.

DCHA WS Case Studies

Berio Keleta Watershed group

Key Findings

Baseline Information

- The area was highly degraded

- Less vegetation cover
- High run off
- Proliferation of gullies
- Soil erosion
- Unproductive pasture land
- No rural access road
- Low moisture below required Inappropriate utilization of natural resource
- Competition for the limited /scarce resource
- Poor awareness of the community on natural resource management

Impacts of NRM interventions

- Soil disturbance
- Burden on communities work norm
- Less diversified tree species
- Shrink for public pasture land that led concentration of livestock at other locations
- Gully formation and expansion

Impact of Road construction

- Exacerbated soil erosion and gully formation
- Damaged at some points

Mitigation Measure	**Responsible Party**	**Monitoring Scheme**			**Est. Cost**
		Indicators	• **Data source/ Method**	• **How Often**	
4mx1mx1m trench excavation	Community	# of trenches excavated	Field visit/observation Discussion with Woreda expert/DA	Weekly, monthly	83,160.00 Birr(990 Benif.*14 Birr*6month)
Tree plantation for bio diversification and ground cover	Community	# of different agro-ecologically suitable tree species planted	Field visit/observation Discussion with Woreda expert/DA	Weekly/monthly/three months	18birr/15 Pit
construct ford, culvert and side ditch	Community	# of structures put in place	Observation based on the expert recommendation for the specific location	Bi-weekly, periodically	714,000.00 Birr(3000 Benif.* 14 Birr*6)

Recommendations

- Plant different tree species that have various
- economic benefits from the project
- Establish community groups for sustainability
- Environmental awareness creation
- Culverts or fords needs to be constructed at
- appropriate locations on the road
- Maintenance of the roads
- Biophysical rehabilitation at the upstream of
- the gullies near to the main road

Post Presentation Discussion

The questions asked related to the impact of closing a watershed, during re-habilitation. When a watershed is closed for re-vegetation and regeneration, it means that the project has deprived the communities that use that watershed for their livelihood of access to it. The communities will therefore be forced to extend their activities to other communities thus putting more stress on other open areas. It remains importance to allow communities to benefit from the improved watershed conditions.

Question: What should be the strategy for reducing the hardship on communities that depended on that degraded watershed for their livelihood?

Answer: It is no use for the improved watershed to demonstrate tall grasses while the community members are debarred from using them. What can be done for instance is to institute a community cut and carry system in closed watersheds for livestock feeding. The cut and carry system allows the communities to benefit from the improved conditions in the closed watershed and reduce the burden on other stressed areas around the communities. This provision is also re-enforced in the rules governing watershed management in the PSNPs.

Wonji Paper Pulp Factory Group

Findings

Baseline

- The factory Uses Old Machines except New Corrugator Machine.
- There exists fine dust pollution at raw material storage and processing areas.
- The factory compound is estimated 76ha, out of this the factory used 10 ha for vegetable gardening.
- Recreation park is available within the compound.
- Health clinic is available within the compound.
- The factory provided drinking and irrigation water supply for wonji Gefersa community.
- The factory used chemicals like Rosin, Aluminum sulfate, china clay, and Dye
- The factory recycle the water and used the overflow for irrigation.
- No waste treatment management in place.
- The factory creates job opportunity for youths of local community.
- Part of the raw material is stored at open air.
- Organized labor union is available.

- The factory uses 35,000 Liter water/day from Awash River and 2.1MW electric power.
- Capacity of production: 9,300Ton/year

Impacts and mitigation measures

Activity	Description of impact	Mitigation Measures
1. Raw Material Storage	1.1 Air pollution due to fine dust that affects health of factory workers particularly vision and respiratory system	1.1.1 The factory set binding agreement and train staff on use of safety materials 1.1.2 The youth association avails enough safety materials for casual workers
	1.2 Partial storage of raw material at open air exposed to rain and sunlight that results decay and has economic impact.	1.2.1 Construct shed with drainage that will accommodate the raw material.
	1.3 Importing raw material has an economic impact due to hard currency.	1.3.1 Establish pulp meal that can produce paper raw material locally.
2. Paper production process	2.1 Untreated water discharged from the factory has possibility to affect human health, soil and vegetation as it may contain toxic metals. E.g. The factory and local community is producing vegetables-food chain.	2.1.1 Install or repair processing machine to water recycling efficiency of the machine. 2.1.2 Construct settling ponds
	2.2 Physical and biological soil structure could be affected due to cake formation of fibers.	2.2.1 The discharged water to the community required to pass through protected conveyance.
	2.3 The discharged water contains fiber which causes loses and has economical impact.	2.3.1 Continuous monitoring and follow up for reuse of the fiber layer.

Monitoring tables

Mitigation Measure	Responsible Party	Monitoring Scheme			Est. Cost, USD
		Indicators	Data source/ Method	How Often	
1.1.1 The factory set binding agreement and train staff on use of safety materials.	Company Management Youth	• # of staffs trained. • % of staffs regularly used	• . Review training documents • . Survey	Quarterly Quarterly	2000

	Association	safety materials increased.			
1.1.2The youth association avails enough safety materials for casual workers.	Youth Association	• % of casual workers regularly used safety materials increased	• .Survey	Quarterly	1200
2.1.1 Construct shed with drainage that will accommodate the raw material.	Company Management	• Increased % of raw materials stored under shed	• . Store inspection/Assessment	Monthly	16500
3.1.1 Establish pulp meal that can produce paper raw material locally.	Government / Ministry of Industry	• # of pulp mill established	• Review Ministry of Industry Reports	Annually	330 Million
2.1.1 Install or repair processing machine to improve water recycling efficiency of the machine.	Company Management	• % of fiber in discharged water • % of toxic metal in discharged water	• Water Quality test Result	Bi-Annual	2Million
2.1.2 Construct settling pond	Company Management	• % of fiber difference from in and out of discharged water increased • # of settling ponds constructed	• In and Out flow measurement result • Factory Annual Report	Weekly Annual	3000
2.2.1 Make the discharged water to the community pass through protected conveyance.	Local Community	• Meters of protected conveyance constructed	• Survey	Annual	25000
2.3.1 Continuous monitoring and follow up for reuse of the fiber layer	Company Management	• MT of fiber reused	• Factory Annual Report • Survey	Quarterly	1000

Observations

- The factory doesn't have any environment assessment
- Document and did not conduct EA so that it is difficult to clearly identify

- Environmental impacts, there fore it is recommended that the
- Factory should undertake EA.
- The factory has served long period and most machines are

Aan old type so that it needs renovation/upgrading

- Since the factory used chemicals and discharged wastes to the
- Community it is recommended that there should be environmentalist
- To reduce potential adverse effects on environment

Post-Presentation Discussion

It was observed that the costs of the mitigation measures prescribed were very prohibitive and could be a disincentive for adoption. There must be capacity and commitment to adopt the suggested activities.

It was suggested that this should be a negotiated process. Mitigation measures should be doable and the management authority to implement it should be willing and able to implement them.

Modjo Tannery

Findings

Baseline

Infrastructure

- Very large compound convenient for factory purpose (nearly 10 hectares)
- Good space for future expansion and waste treatment
- Poor storage space for semi processed products
- Aeration problem (poor ventilation)
- Poor warehouses
- Uses its own water for the factory's
- Low standard processing and production houses
- Very old machineries and malfunction of some equipments

Accessibility and Suitability /Location

- Water and eclectic access
- Employment accessibility
- Raw materials access
- Road accessibility
- High market accessibility

Warehouse management

- Inadequate space for storage of items, equipments, chemicals and semi and fully processed materials
- Different and dangerous chemicals stored in one warehouse
- Fire extinguisher only placed at chemical warehouses only
- Poor store ventilation, Shortage of pallets

Chemicals

- Chromium, sulphides, different salts, different types preservative chemicals, different dyes, HCL, aluminum sulphates
- Chemical containers not stored properly
- Poor management of disposal of chemical containers

Water

- Uses own water supply (two wells)
- High water consumption and adequate water supply

Health and safety matters

- No formal and informal training on staff safety matters
- Workers highly exposed to chemicals
- Protective cloths are poorly provided and used
- Milk provided to staff
- Staff is working with chemicals up to 8 hours/daily
- Clinic available
- Bi-annual staff medical check-up
- Safety procedures are not in placed and displayed

- No safety logos in factories
- No safety control personnel
- Poor ventilation

Waste Disposal and treatment

- Liquid waste treatment plant
- Uses aerobic and anaerobic treatment
- Poor internal drainage system
- Old internal drainage facilities
- Poor maintenance of drainage facilities and houses floor
- No proper slop to drain liquids properly
- No solid waste treatment plant or system is available
- Most solid wastes burned
- No complete treatment of liquid wastes (only dangerous chemicals treated)
- Untreated liquid wastes directly disposed to nearby river
- Open ditches with dangerous liquid chemicals are common inside factory
- Poor management of by-products which contributed to large volume of solid wastes
- Collaboration with AA University on liquid waste treatment has been started

Odor

- Bad small inside and outside the factory due to chemicals usage and waste (solid & liquid) management.
- High air pollution due to dusts

Impacts and Mitigation Measures

#	Sub-activity or component	Description of Impact	Mitigation Measure
1	**Infrastructure Related activities**	1.1 Possibility of inflammability of chemicals	▪ Renovation of construction facilities is required ▪ As a short term ventilation should be installed at all appropriate places
		1.2 Reduces shelf life of chemicals	▪ Chemicals should be grouped based on their category and stored properly
		1.3 Poor aeration	▪ Additional standard houses construction ▪ Placement of ventilation facilities at all appropriate places
		1.4 Inconvenient for supervision and chemical handling	
		1.5 Congested houses contributing for poor aeration	
		1.6 Workers exposed to short and long term respiratory diseases	▪ All workers should use all possible protective measures ▪ Workers awareness on respiratory diseases
		1.7 High risk of exposure to chemicals and physical damage	▪ Workers awareness on chemical handling and impact of chemicals ▪ Use of protective measures
		1.8 High medical expenses to staff and factory	

2	**Warehouse management**	2.1 Reduces efficiency of workers	
		2.2 Reduces quality of semi-processed products due to poor storage	▪ Construction of new standard warehouse
		2.3 High potential for fire outbreak due to chemicals	▪ Chemicals should be stored separately based on their nature in a well ventilated warehouses. ▪ Store chemicals in warehouses constructed from Hallow block to reduce risks
		2.4High risk of chemical reaction and contamination; wastage of chemicals	▪ Improve storage to reduce waste and spills
		2.5High exposure to fire and loss of property	▪ Improve storage to reduce waste and spills
3	**Use of Chemicals**	3.1 High risk of exposure to heavy metal by people using chemical containers for HH purposes	▪ Do not provide or sell chemical containers for HH uses ▪ Guideline on disposal of chemical containers should be developed in consultation with concerned gov't office.
4	**Staff health and safety**	4.1 Staff direct exposed to different chemicals at different stages	▪ Provide safety equipment such as face masks, rubbers gloves, boots, eye glass for workers
		4.2 High expose to physical damage (ex: cutting hands)	▪ Train workers in proper use of safety tools that minimize accident exposure. ▪ Assign staff safety personnel
		4.3 High exposure respiratory diseases	
		4.4 Health risk & physical damage to staff, visitors and supervisors	▪ Proper display of safety procedures and logos at the right place. ▪ Visitors briefing & provide safety equipments
		4.5 High exposure to different chemicals for staff and high risk of health	▪ Use of alternative chemicals that are less hazardous
		4.6 High medical expenses	
		4.7 High risk of respiratory diseases	
5	**. Waste (solid & liquid) treatment/Disposal**	5.1 High exposure to chemicals due to contamination	▪ Improve chemical usage to reduce waste and spills
		5.2 Deteriorates internal and external sanitation system	▪ Timely and proper maintenance of internal and external drainage system
		5.3 Reduces staff performance	
		5.4 High risk of health problem	
		5.5 High contamination of nearby river and air pollution (Solid waste)	▪ Experience sharing with AA slaughtery on removing bad oder ▪ Emphasis should be given to proper disposal of solid wastes

		5.6 High contamination of nearby river (liquid waste)	▪ Scaling up of existing biological liquid waste treatment
		5.7 Health hazard of human and animals of down stream users	▪ Recycle chrome and tanning bath solutions.
		5.8 Health hazard (heavy metals) for vegetable users produced using Mojo river	▪ Establish regular monitoring system for wastes before discharged to the river
		5.9 High volume of solid waste products for disposal and environmental pollution	▪ Alternative by-product processing plant ▪ Recycling of wastes

Recommendations

- High volume of bi-products contributed to large quantity waste disposal recycling of by-products maximize profit of the organization and reduces negative environmental impact of the factory.
- Upgrading the existing and expansion of warehouses is very crucial for efficient and health of staff.
- Proper design of drainage system
- Proper and standardized storage of chemicals
- Continues on job formal and informal staff training
- Fulfillment of minimum requirement of health safety/protective materials
- Proper display of safety procedures and logos at the right place reduces potential damage.
- Regular water test should be conducted and information should be available to downstream users
- Proper fencing of factory compound and information display about dangerous chemicals.
- Safety guard personnel should be hired to improve safety break of employers and the factory.
- Establishment of environmental R&D unit adds value for the company

Post-presentation discussion

Comment on mitigation processes: Economic aspects of environmental mitigation activities are very important in designing mitigation interventions. When not considered and analyzed properly, the burden of funding would cause the program not to pursue the suggested mitigation activities

- Who are we as those going to do environmental impact assessment? Since the most legislations require that the project proponent do the EIA, then the team doing the assessment is part of the project proponents and their language should reflect that so "we" are a part of the system
- Do we carry out the EIA at the beginning? Yes! This means when we went there for the field visits, it is not necessarily an EIA but it can better be characterized as an Environmental Audit.

This has implications on what we consider as baseline in our presentation. What were the baseline conditions before the program started? In this exercise we went in there during the operational stage. What we saw during the visit are could be a baseline that has been altered by the operations of the project and could easily be part of the impacts of the project.

In identifying the impacts, our challenge is to be objective in our findings so that visit by others would get the same or similar results.

- We must always ask: is the impact affecting the environment in a serious way especially whether the impacts are affecting the health of the lives, livelihoods, and other sections of the community. There are methods for determining whether an impact is serious but we have not dealt with it here.

Some of the tools that we use to be objective in impact assessment include: Leopold Matrix, Cost Benefit Analysis, GIS, Maps and Overlays.

Finally most mitigation measures can easily be characterized as Best Management Practices: Using internationally acceptable benchmarks – ISO registration shows the direction of the company in ensuring that it is complying with some international standards, especially ISO 1400 talks of environmental management obligations.

Spate Irrigation System

Findings

Baseline

- Location: Oromia region, Arsi zone, about 30 km South of Adama.
- Climate: Area is semi arid
- Hydrology: Rainfall about 800mm, no perennial river, seasonal flooding from the foothills of Chilalo
- Soils: Volcanic silty-loam, well drained, generally considered fertile and good for crop production
- Vegetation: Accacia Sps, Combretum, Cordia, Eucalyptus, Shinus Molle
- Farming System: Mixed agriculture ; Major crops: Wheat, Teff, Barley, Harricot Beans, Maize, Onions and Tomatoes (after the introduction irrigation)
- Topography: Dominantly flat, with undulating landscape of up to 10% slope in some areas,
- Social services: Seasonal road, Health Post, Potable water, Church, Mosque,Modern meteorological station
- Population: 4172 households (12, 000 people)

Scheme Description

- Established to support Chronically food insecure communities
- PSNP supported
- Designed, constructed, owned and managed by Oromia Region Irrigation Authority
- Construction started in 2005, completed in 2008
- Total Command area 5000 ha (seven Kebeles)
- Command area straddles two weredas (upstream, downs stream)
- Water source: seasonal flood from the foot hills of Mt Chilalo
- Estimated peak flow is 6 cubic meters per second
- Scheme structures: A diversion weir, 17 km main canal, many secondary and tertiary canals, Nineteen 640 cubic meter capacity storage ponds, many drop and division structures
- Only 2000ha. reported to access irrigation water

Observations

- Added value due to irrigation: Increased income from production of vegetables (onions, tomatoes), increased productivity due to the silt load from uplands
- Produce sold at farm gate
- Insufficient irrigation water
- Only beneficiaries from the first two upstream canals have uninterrupted access to water
- No irrigation schedule (some reported three , two days irrigation interval)

- Arbitrary irrigation duration
- No measurement of irrigation water supplied (to canals, plots)
- Some Households get potable water from places as far as 12 km
- The gate operators are paid by Oromia Water Authority (WA)
- Farmers for chemical fertilizers than for organic
- No Water Users Associations (WUAs)
- There are symptoms (foot prints) showing the use of the ponds for livestock watering

Impacts of Activities

- Siltation of diversion weir and canals
- Vegetation in canals
- Erosion of canal sides, undermining of drop and division structures
- Upstream-Downstream dispute on use of irrigation water
- Water losses from the system (leaking outlet of a storage pond resulting in the loss of all the water collected during the season)
- Overuse of Fertilizers (at the rate of 200 kg DAP per hectare – above the nationally recommended rate?)
- Unsafe use of pesticides (used without protective measures)
- High conveyance losses (due to lack of canal maintenance, only PSNP labor used for canal maintenance)
- Unmet expectations on irrigation water supply (diversion of adjacent river, ground water sources)

Mitigation Measures

- Conservation work on uplands, Silt trap at head work, desilting of weir and canals
- Removal of vegetation, regular follow up
- Rehabilitate structures, amend canal slopes
- Establish WUAs, do capacity building, equitable water use (either decrease the size of irrigation plots per household or increase the amount of irrigation water – whichever is easier)
- Repair or maintain leaking parts and portions (off-take gates, canals) to stop the leakage, put a regular operation and maintenance system in place
- Use of protective gear against pesticide, training on safe use

DA WS Case Studies

Modjo Tannery

Key Findings

Baseline Information

- Good market
- Store for chemicals (120 chemicals)
- Clinic
- Safety rules posted (all staffs are not using it)
- Water treatment plant
- Wet land treatment plant
- Addis ababa university project (Bio-gas digester)
- No safety officer

Impacts and Mitigation Measures

Activity	Impact	Mitigation Measure
Liquide waste Management	Environmental resource and quality • Impact on Human and Animal Health • Soil fertility (acidity/alkalinity/salinity) • Crop production/Productivity • Air pollution	• Renovating the existing primary treatment plant and Investing on a secondary treatment plant so that they can recycle the water or • expand the wet land treatment plant and capture all the liquid waste of te factory and variety of plants used
Use and handling of chemicals	• Workers Health and safety • Explosion and loss of property and life • Leakage and spillage	• Enforcement of the existing safety rules • Health/medical insurance • Standard storage facility • Fire hydrant • Recruit a safety officer

Monitoring Log

Mitigation Measure	Responsible Party	Monitoring Scheme			Est. Cost
		Indicators	Data source/ Method	How Often	
	Tannery	• Number of secondary treatment plant installed • Sedimentation tanker repaired • 4 wet land treatment plant established with different plant varieties	Observation, Supervision, Inspection, Document review	Bi annually	• 8 mil • 1 mil • 10 mill
	Tannery	• number of standard warehouses constructed • Insurance and health policy in place • Fire hydrants installed • Number of safety officers recruited	Observation, Supervision, Inspection, Document review	Quarterly	- 2 mil - 1 mil -

Wonji Paper and Pulp Factory

<u>Key Findings</u>

Baseline information

- Open channel system used to transport liquid waste
- Liquid waste is used for gardening
- Waste water is banned from being channeled to Awash River
- Solid waste is recycled (used as raw material)
- Expired chemicals not yet disposed
- Chemical bags being used to pack garden produces
- Suspended fiber in liquid waste is used for irrigation which later solidifies into paper on the garden

Health and Safety

- Safety unit/personnel in place
- 2 hydrants and 17 fire extinguishers of different type
- Adequate Safety signs
- Clinic for workers
- Pipes leaking at the additive (mixing) section
- Death has once been reported due to explosion
- Workers complaining about respiratory problems
- First aid kits not in place
- No gloves and safety equipment in use "although available"
- Workers complaining about safety equipment running out and not being replenished

Impacts and mitigation measures

Activity	Impact	Mitigation Measure
1. Liquid waste disposal	• Pollutants (fiber, dyes and other chemicals) surfacing to the soil and possibly percolating to the ground water • Use of untreated waste water for gardening	• Construct waste water treatment pond • Establish waste management policy • Limit the use of waste water for gardening if tested hazardous • Find productive uses of the fiber waste (card boards) • Upgrade factory to improve performance
2. Chemical handling and storage	• Unsafe exposure to chemicals	• Increase awareness • Provision of adequate safety equipment • Establish safety guidelines • Dispose expired chemicals and chemical bags as per national standards

Monitoring Log

Mitigation	Responsible Party	Monitoring Scheme	Est.

		Indicators	Data source/ Method	How Often	
Construct waste water treatment pond	Company / GM	• # of staffs trained and effectively using safety precautions	• Missing	Quarterly	4mln
Establish waste management policy	Board of directors of company	# of hats, gloves, helmets… provided to staff semi-annually	Company record Observation	Quarterly	200K
Stop the use of waste water for gardening if tested hazardous	Quality management service unit + agronomist	Updated safety guideline #of accidents recorded	Test certificates		10K
Find productive uses of the fiber waste (card boards)	Quality management service unit	Volume of expired chemicals safely disposed	Company reports	Quarterly	250K +
Upgrade factory to improve performance (long term plan)	Board of directors GM + Production manager	% of waste release reduced	Observation Daily Production data	Quarterly	100mln
Increase awareness	Clinic HR		Training report/record	Quarterly	30K
Provision of adequate safety equipment	HR + safety unit		Procurement records Observation	Quarterly	400K
Update safety guidelines	HR + safety unit + Quality Mg't service		Report /medical records	Quarterly	5K
Dispose expired chemicals and chemical bags as per national standards	Quality management service		Company record/inventory report/audit report	Quarterly	??

Comment [MH1]: Missing data?

Geda Heath Center

Key Findings

Baseline

- Average # of Beneficiaries:
  - OPD-80,200
  - TB-70 Per Day
  - FP-100 Per Day
  - Delivery 4-5 Per Week
  - ART-500 Since the beginning of Service
  - Pre-ART 1,200 Since the beginning of service
  - First of the Top Ten Diagnosis URTI

Impacts and Mitigation Measures

Activity	Impact	Mitigation Measure
Laboratory specimen collection and diagnosis of TB	Exposure to Infections Materials Exposure to Hazardous Materials	Broken down into Intervention Areas: Human Resource Capacity, Building, Systems, Resources
Dispensing pharmaceuticals through OPD and ART	Risk of environmental and human exposure to expired Drugs • NB: - precaution is important as there can be few hazardous substances especially in relation to ARV drugs and laboratory reagents that can cause mutation, birth defects and cancer)	

Monitoring log

Mitigation	Responsible	Monitoring Scheme	Est. Cost

		Indicators	Data source/ Method	How Often	
Human Resource Capacity Building 1) Relevant Staff in place 2)Annual refresher training on universal precautions 3)Add Environmental Compliance to JD and Evaluate at Performance Review 4) Minimize Expiration through IPLS training & Implementation	1)HC Head 2)All HC Staff 3)Supervisor 4)Zonal health office DTC, Pharmacist	1) Number of staff employed according to qualifications 2) Number of staff refreshed each year 3) Number JD's with Environmental Compliance as a Performance Indicator 4) Type and quantity of expired drugs	1) HR Documentation 2) Certification 3) HR Documentation 4) Records & Observation	Quarterly	*ETB 3950 Per Year – Refresher training occurs at HC
System 1) Strengthening of a functional IP Committee 2) Establishment of SOP on IP and Medical Waste Management 3) Regular Monitoring Scheme 4) Formation of functional DTC committee	1) HC Head and Sanitarian 2)HC Head and Sanitarian 3) IP Committee and Sanitarian 4) The Facility head and Pharmacist	1) Number of documented meetings conducted 2) Number of SOPs developed (inclusive of Waste Management, Universal Precaution, etc.) 3) Number of Monitoring Visits 4) No of meetings and their Minutes signed Report	1) Meeting minutes 2) SOP Document 3) Monitoring Visit Report 4) Meeting Minutes	1) One time 2) One time 3) Quarterly 4) Quarterly	*HC Supplies (Paper, Staples, etc.) *1200 ETB Per Quarter
4) Proper waste management of expired, and unwanted Pharmaceuticals should be in place.	DTC Zonal health office Hygein and sanitation	No of on site supervision Records from Check list	Observation Check list	Monthly Weekly	

Resources 1) Dedicating Budget to IP and Medical Waste Management 2) Infrastructure Modification	1) HQ Head/ Management 2) HQ Head/ Management	1)Budget is allocated to IP and Medical Waste Management AND items budgeted are procured and are in use 2) Proper space allocated for laboratory according to WHO guidelines	1) HC Financial Records & Observation 2) Observation	1) Quarterly 2) once per year	*It is assumed that there will be no construction and only relocation of departments

Adama Referral Hospital

Key Findings

Baseline

- 300 kg/day of solid wastes produced
  - Non infectious waste 75%
  - Infection waste 25%
    - Sharp, Pathological, Pharmaceutical waste , Ampoule bottle , pressurized containers, radioactive substances, etc
- 5,300 liter/day of liquid waste produced
- Only 1% of the hospital budget (36 mil.) allocated for cleaning
- HCWM policies and procedures
- National IP and WM guideline in place
- Facility IP and WM plan in place
- Most of the health workers and cleaners trained on IP
- PPE available
- Adequate availability of sanitary supplies
- Continuous availability of water and electricity
- No waste segregation at the point of generation
- No adequate color coded segregation bins
- Poor compliance of health workers and cleaners to the standard
- Unsafe transport of wastes
- Open waste (open defecation, infectious wastes around the hospital) disposal

Impacts and Mitigation Measures

Activity	Impact	Mitigation Measure
Clinical and	Risk of acquiring infection and	Regular training with intensive follow up

laboratory services	injuries for health care providers and clients	Rational budget allocation for waste management
		Vaccination and universal availability of PEP
Health care waste management	Risk of air pollution	Budget allocation for waste management
		Regular training with intensive follow up
		Maintenance and efficient use of incinerators

Monitoring log

Mitigation Measure	**Responsible Party**	**Monitoring Scheme**			**Est. Cost**
		Indicators	**Data source/ Method**	**How Often**	
Regular training with intensive follow up	IP Committee and \Partners	Percentage of health care workers who demonstrated standard waste management practice	Report, site visits	Monthly	20,0000
Rational budget allocation for waste management	Hospital Management	Percentage of budget allocated for HCWM	Document review, report	Annually	5%
Construction of standard incinerator	IP Committee	Standard and functional incinerator in place	Report and site visit	Monthly	450,000

SESSION 15 (DCHA), 17 (DA): Pesticide Risks, Safer Use and Compliance

Presenter:

DCHA WS

David Kinyua, USAID/ Nairobi, REA

DA WS

Walter Knausenberger, USAID/ DC, Senior Regional Environmental Policy Advisor

Objective

Become familiar with the PERSUAP format, technical content and procedures, and increase awareness of best practice on pesticide use and integrated pest management methods.

Key points

- Pesticides are biological chemical or physical agents used to kill unwanted plants, animals or disease agents

- Pesticides derived from natural sources (like Pyrethrum) are still pesticides. USEPA has fact sheets for "Biopesticides".
- Use of pesticides typically include: In-field crop protection, spraying for mosquito and other disease vector control, dosing of lakes, ponds & lagoons to control disease vectors, household insect and structural pest control, stored product protection (seeds, food aid crops, etc.), insecticide treated bed nets, treatment of export crops, fumigation of timber, outbreak pest control – locusts, rodents, etc, livestock tick control-dipping, spraying, pouring and other uses.
- It is USAID policy to apply the principles of INTEGRATED PEST MANAGEMENT (IPM) to every activity that involves or influences pesticide procurement or use.
- IPM is an ecologically-based pest management approach which prioritizes the health of crops and their ecological system; Monitoring, degrees of intervention, reduced risk and low toxicity controls such as biological and botanical controls; Actions required when pests reach economically-damaging levels.
- A PERSUAP will be needed if "Pesticide procurement or use" is part of a proposed activity. Procurement includes: Direct purchase of pesticides; Payment in kind, donations, provision of free samples and other forms of subsidies; Provision of credit to borrowers; Guarantee of credit to banks or other credit providers.
- Use includes: sale; handling, transport storage; mixing, loading, application; disposal, provision of fuel to transport pesticides, Technical assistance in pesticide management, including training.
- Fertilizers are often lumped with pesticides under the generic heading of "agrochemicals" but the Pesticide Procedures do *not* apply to: Use of synthetic or organic fertilizers. Still, the EMPR can specify and identify good fertilizer use and soil fertility practices.
- A PERSUAP is triggered by an IEE determination and has two major parts that meet 216.3(b) Pesticide Procedures:
    - PER (Pesticide Evaluation Report): Response to the Pesticide Procedures requirements
    - SUAP (Safer Use Action Plan): Identifies actions and actors for mitigation & monitoring, including compliance with host country & private procedures.
- The Pesticide Evaluation Report (PER) includes 12 factors that must be described:
    - US EPA registration status. Must be for the same or similar use.
    - Basis for selection of the pesticide. Often times looking at costs availability and toxicity.
    - Extent to which the proposed pesticide use is part of an IPM plan. Needs a crop by crop IPM plan. It has to be crop specific. For health activities it would be for vectors
    - Pesticide availability and it´s method(s) of application
    - Toxic hazards
    - Effectiveness of the requested pesticide for the proposed use
    - Compatibility of the pesticide with the local ecosystems
    - Environmental conditions under which the pesticide is to be used
    - Availability and effectiveness of other pesticides or non-toxic controls
    - Host country ability to regulate the requested pesticide
    - Provisions made for training of users and applicators
    - Provision made for monitoring the use and effectiveness of the pesticide. Pests may become resistant to a pesticide which is why monitoring is key.

SUAP -Safe Use Action Plan

- Monitoring plan and reporting,
- Training and development and distribution of appropriate information education and communication, this is a huge challenge as not always the labels have the same language as the one spoken in host county, establish pesticide quality standards and control procedures, what happens when pesticides become obsolete? This has to be part of the monitoring plan

- The PERSUAP requires you to consider and address a number of mitigation and monitoring measures proactively
- Provides opportunities to minimize exposure are along the process. Before, during and after.
- Suggests additional recommendations and best practices: Minimize exposure risks, minimize product toxicity, use personal protective equipment (PPE) as required by pesticide label.
- Enforces restricted entry level intervals REI and pre harvest intervals PHI as specified by the EPA.
- Provides dosage rates, the label is a legal document that has to be followed
- Opportunities to minimize exposure exist before, during and after pesticide use: Consider transport, packaging & storage practices; choice of formulation and equipment, use of buffer zones, waiting periods, clean/bathing, storage & disposal practices.
- US pesticide labels are legal documents containing language, regulated by the EPA on product use and safety.

SESSION 16(DCHA): Critical Tools and New Guidance to Improve Environment of Food Security Programs

Presenter

Scott Solberg, Sun Mountain International, The GEMS Consortium

John Azu, Sun Mountain International, The GEMS consortium

Objective

Provide an introduction to M&E system greening

Key Points

- Food Aid programs may have large environmental costs. eg. Soil Erosion, Salinization and Nutrient Depletion, water Over-Exploitation and Contamination
- Environment can both be threatened and play an inherent role in the success of program
- A common goal is to reduce food insecurity. Numerous factors may be responsible for food insecurity in a region. Of these, environment and social factors can play a large role in exacerbating the existing conditions. Environment is linked to food insecurity.
- The goal in planning should be to design projects that meet the needs of the present without compromising the ability of future generations to meet their own needs
- Sustainability and Environmental Protection are inextricably linked, Well-designed programs that consider environmental impacts, will be more sustainable.
- Ownership is a key aspect of Sustainability, Community engagement in the development process is necessary for sustainability
- There must be an interaction between a program's M&E system and environmental analysis so that environmental considerations may be brought in to programming.
- Like any interdisciplinary analysis environmental sustainability requires an interdisciplinary thought process, requiring input from specific sector experts for details
- USAID developing “how to” guidance on incorporating priority environmental issues in program M&E systems
- Guidance will provide a simple “step by step” approach to guide Title II partners through this process

    - Currently finalizing approach and structure with USAID and FANTA III. A later round of stakeholder consultation will take place with PVOs once a draft has been developed
    - Expect Beta-level testing during a new Title II proposal RFA
    - GEMS and Title II BEO working together to incorporate environmental and quality considerations into Annual Monitoring Indicator list currently under development
- Cross cutting environmental indicators:
    - Proportion of target population reporting agreement that environmental resources are managed more sustainably as a result of USG assistance (e.g., soil conservation, reforestation, watershed management, water availability, water-borne vector management)
    - Proportion of target population reporting agreement that environmental hygiene in the community has improved as a result of USG assistance (e.g., medical waste management, water quality, indoor air quality, solid and sanitary waste management)

Key Discussion Points

Plenary feedback on cross-cutting environmental indicators:

- Indicators should be specific;
- Not related to a particular activity; "target population reporting" component may be problematic; terms need to be very specific, esp. in terms of what constitutes "reporting" and "more" (vis-à-vis env. resources being managed more sustainably).
- Indicators lack specificity; need "indicator reference sheet" to be able to comment on indicators.
- Indicators cannot be measured quantitatively
- Need to be changed to a physical indicator

SESSION 18 (DCHA), 10(DA): Medical Waste Management

Presenter

John Azu, Sun Mountain International, The GEMS Consortium

Objective

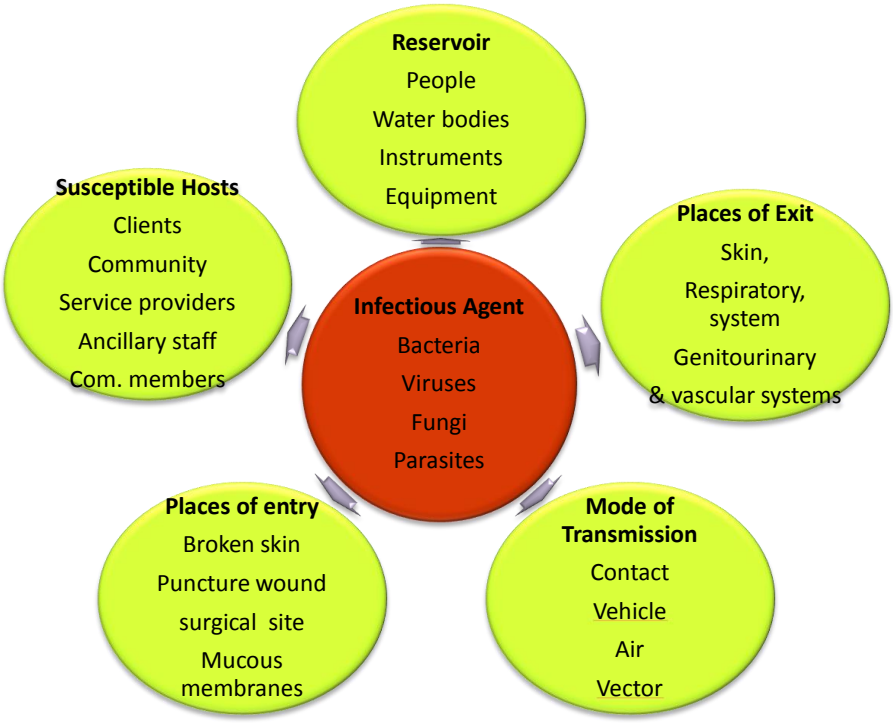
Increase awareness of the potential risks and hazards associated with medical waste and their improper disposal; Become familiar with the several components of in-house and out-house medical waste management as well as the overall requirements of effective waste management

Key Points

- Medical Waste: The term includes what is commonly described as garbage, refuse and trash. The US EPA's regulatory definition of waste includes any discarded item; things destined for reuse, recycle, or reclamation; sludge and hazardous waste. It is also called *healthcare waste* or *clinical waste*.

  Broadly, medical waste is defined as any solid or liquid waste generated in the diagnosis, treatment or immunization of human beings or animals in research pertaining thereto, or in the production or testing of biological (NAN & HCWH, 1999 Medical Waste in Developing Countries).

- Medical Waste may be generated by: Different sections of hospitals and clinics, pathological laboratories, diagnostic centers, doctors' offices, other medical and research facilities , food facilities, medical stores
- Waste is classified based on content (solid, liquid, gaseous, radioactive), based on health impact (general waste and hazardous waste), based on WHO classification for developing countries (general waste, sharp waste, infectious waste, chemicals and pharmaceutical waste, other hazardous waste).
- Composition of medical waste: Infectious 5%, Chemical 3%, sharps 1%, General waste 80%, other 1%.



- Potential Risks and Hazards Associated with Medical Waste: Injuries and accidents, Infectious medical waste and the associated risks, hazardous medical waste risk,
- Groups at most risk: (Waste pickers, Waste recyclers, Drug addicts (who scavenge for used needles and disposed medicines) and hospital sweepers and other low-grade hospital staff).
- Medical waste management is the practice of minimizing, identifying, separating, collecting, handling, carrying, storing and treating and finally disposing of medical waste as per policy of the institution or government.
- Apropriate management is required to: Minimize occupational health hazards and develop environmentally friendly medical facility.
- Important Elements for effective in-house waste management:

- *Waste minimization: source reduction*, *stock management, encourage use of Recyclable products*, *control at institution level, c*entralized purchase and monitoring the receipt and supply procedure of medical goods.
- *Waste segregation*: Waste separation/isolation is a key to effective waste management, the waste is segregated on the basis of composition/type of waste, segregation of waste should occur at the point just after its generation, effective segregation ensures that only small quantities rather than large ones are needed for disposal, incorrect segregation leads to contamination of a large volume of non-hazardous waste turning the whole pack into hazardous waste. Waste collection (regular and programmed), Waste collection materials (gloves, apron, boots, trolley), Placement of color bins (where the waste is generated), Labeling (containers must be labeled with some basic information) ,Security (required to prevent scavenging at the generation and disposal sites), health and safety of the cleaner in waste management, personal hygiene (continuous water supply and soap/detergent for hand-washing), response to injury and exposure (need for procedures to deal with accidents), emergency response (trained personnel and necessary equipment)
- *Waste identification*: A good way of identifying the waste is by sorting the different components of waste into different COLOR CODE to facilitate easy and safe handling, transportation and waste treatment.
- *In house transportation*: Moving from site of collection to temporary storage area in-house, there must be equipment for transporting waste containers, the equipment must be easy to clean, load and unload, leak proof, should not be used for any work other than waste transportation
- *Temporary inhouse storage:* The store should be a room, area or building within the healthcare facility- depending on the quantity of waste generated, waste must not be stored for more than 24 hours, should not be accessible to unauthorized persons and animals, must be located away from food preparation, processing and food store, should provide easy access to collectors and collection vehicles
  storage room must be properly ventilated,
- *Record Keeping:* Accurate record keeping is required for effective medical waste management
- Various records related to risks, failures and problems, cost, quality and quantity of waste etc., must be taken

- Treatment and final disposal:
  Incineration: (*High temperature dry oxidation process to reduce organic and combustible waste to inorganic matter)*
  Chemical disinfection: *(Chemicals added to waste to kill/inactivate the pathogens)*
  Rendering inert: *(Mixing waste with cement in order to prevent leaching/migration of toxic substances)*
  Wet thermal treatment -including autoclaving (*Exposure of shredded waste to high temperature and pressure to inactivate micro-organisms before discharge into municipal waste)*
  Microwave irradiation : *The heat generated destroys microorganisms*
  Landfill (Sanitary): *Isolates waste from the environment*
  Encapsulation: *pre-treatment involving filling containers with waste, adding an immobilizing material and sealing the container*

SESSION 19 (DCHA), 16(DA): Water Quality Testing

Presenter

Patrick Hall, The Cadmus Group, The GEMS consortium

Objective

Review water quality testing requirements and procedures for USAID-supported water provision activities.

Key points

- A safe water supply is central to many types of development objectives
    - Community health (e.g., WASH)
    - Agriculture
    - Food processing/manufacturing
    - Health care provision (e.g., hospitals, clinics, etc.)
- Testing is the primary means of understanding water quality and of ensuring provision of a safe supply and environmental health
- Water quality testing helps protect the results and the reputation of the project
- USAID Environmental Procedures address water quality testing through Inclusion of water quality-related risks in the IEE (or EA), EMMP development and implementation, and Regional best practice
- Many testing standards conform with international practices in addition to U.S. law
- USAID-funded projects must also adhere to national water quality standards: Ethiopian water quality standards - The ES 261:2001 Drinking-water – specifications:
    - "was established in 2001 by the Quality and Standards Authority of Ethiopia … largely based on the second edition of the WHO Guidelines for drinking-water quality
    - Includes "maximum permissible levels, as well as methods for testing, for 18 physicochemical parameters that affect the palatability of drinking-water; 24 toxic chemicals (including 11 pesticides); total viable organisms; faecal streptococci; coliform organisms; and E. coli type 1 strain (thermotolerant).*
- The Reg. 216 pre-implementation environmental review process identifies and characterizes potential adverse impacts related to water quality while the EMMP integrates the water quality-related conditions: conditions are "operationalized" through specific mitigation, monitoring, and reporting requirement, IEE conditions may specify need to conduct water quality testing. Based on complexity or risk, specialized compliance documentation may be needed
- USAID 'best practice' approach to testing is using The Water Quality Assurance Plan (WQAP)
    - Preparation of a WQAP is frequently included as an IEE/EA condition to mitigate potential adverse impacts
    - WQAP deals specifically with water quality testing and is prepared by partner and reviewed/approved by USAID; REA approval is frequently required. The WQAP can be attached to—and implemented in parallel with—EMMP, providing detailed guidance for project staff
    - The Water Quality Assurance Plan typically includes: Identification of responsible parties, standards for initial water quality testing, monitoring regime (e.g., contaminants, frequency, method), response Protocol, requirement for Arsenic (As) testing of groundwater from USAID-funded well projects—a USAID priority!
- WQAP will specify test method, sampling, etc.
- Options for testing: Field test kits or Laboratory analysis. - Availability/accessibility are key considerations

Key Discussion Points

There are standards for water quality established by government and they have the capability to analyze these in their laboratories. The question is only about the cost of analysis.

Does USAID have its own standards and consistent with internationally established standards? Yes. Arsenic and fluorides and heavy metals are problems in household drinking water.

The requirements for irrigation water are less stringent

SESSION 20(DCHA): Climate Change in Ethiopia

Presenter

Yitayew Abebe, USAID/Ethiopia, Mission Environmental Officer

Objectives

Explore concerns resulting from global climate change in the country and the region, and the priorities and earmarks of the USAID/Ethiopia Mission.

Key Points

- We are witnessing an increase on the global stress placed on water resources, and the effects of climate change are very clearly present in people's every day lives

Ethiopia

- Agriculture: It is estimated that overall income from the crop sector could drop as much as 20-30% by 2050 and Income from animals could drop 30-40% by 2050
- Energy: Opportunity to generate hydroelectric power: current potential 30,000 megawatts , GTP plan 6,000 to 8,000 MW
- Infrastructure: It is estimated repairing flood damage could increase costs $250-340M per year. General maintenance costs could also increase $20-30M per year from temperature and net rainfall increase.

  The Climate Resilient Green Economy (CRGE) - Price tag of $150 billion over the next twenty-two years (Own source, Private sector, Bilateral and multi lateral)
- Objective: to protect the country from the adverse effects of climate change and to build a green economy that will help realize (Ethiopia's) ambition of reaching middle-income status before 2025.
- CRGE focus sectors : agriculture and livestock; health; natural resources (water, soil, land, forests, biodiversity); energy; and transport.
- So far there is no strong donor coordination on climate change
- Recent development (after Durban): the Tri-Lateral Partnership UKAid /DFID (UK) and NorAd (Norway) with GOE to implement CRGE.
  - Norway: Pledged up to $60m per year for a results-based energy development program
  - DFID: Pledged GBP 15m to the Strategic Climate Institutions Program (SCIP) over the next 4 years,
  - Proposed GBP 30m to the Climate High-Level Program (CHIP) through the CRGE Facility and PSNP.
  - Other donors are able to buy-in to both of these programs.
- Ethiopia's Transformation Accelerated by Strengthening Economic Growth and Resiliency to climate change, Social Well Being and Accountability

  USAID cooperation strategy:
- DO 1: Increased growth with resiliency to climate change in rural Ethiopia
  - Result 1:Performance of the agriculture sector improved (focus on productive areas)

    - Result 2 : Livelihood transition opportunities increased (focus on vulnerable areas)
    - Result 3: Private sector competitiveness improved
    - Result 4 : Resiliency to climate change and protection from shocks and disaster increased
- DO2: Utilization of quality health services produces more resilient and economically active population
- DO3 :Improved education outcomes for a more productive population

- The injustice of the whole issue of global warming and climate change lies in the fact that those who have contributed nothing or very little to its genesis will suffer the most from its consequences because they have the least capacity to adopt these changes. They have the least capacity to adopt because they are poor and do not have the resources to adapt to the changes. However unjust it might be, we have to adapt or die"

Development and Conflict

- Sites in which conflict due to access to resources or planning has been observed: Water supply schemes at shashamane; Diversion site at Leymen (Urgessa); Irrigation canal at Sire; Borehole site location determination; lenche Dima Met station; Jeldessa spring development
- The power of traditional bilaw

Additional SESSION (DCHA): Implementing Partner Program presentations and discussions

Presenters

Spokes persons from Catholic Relief Services, Food for the Hungry, Save the Children, REST and World Vision

Objective

Sharing of lessons learned from the field in program implementation

Panel discussion

Q1: Could you shed more light on the value gained by World Vision on the Carbon credit scheme?

The project was started by World Vision and World Bank which purchased the carbon credits for about 7000ha and calculated the carbon sequestration. The community will use 50% of the timber at the end of the 20years. The project has created jobs for 6000 people while still using the forest products and economic activities like bee keeping. About 1000 households have benefited.

Q2: Who benefits from the sale of the carbon credits?

The community has been organized into forest user groups with by laws and structures. WVE signed an agreement with the Forest User Group. The World Band monitors for leakage effect. $75,000 has already been given to the community which is using it to meet common needs like water.

The audit system is defined in the Kyoto Protocol and has to be followed so if the community cuts the trees they are aware of the consequences

Q3: In the FHE presentation it was indicated that water systems are completed but since water has not been tested yet the community cannot use it. Is that accurate? What then happens if the quality turns out to be unusable after investment of all the funds?

In the event that the water is unusable we may have to treat it. In most cases the boreholes are capped/sealed. However the lowlands are known to have problems with water quality but the wells have been sunk in highlands that rarely have this problem. This is because of lack of knowledge of water quality testing.

Q4: What has been the challenge of public works (PW) on labor mobilization with regard to PSNP?
The principal challenge has been in the social domain. The community feels like it is contributing twice. The community has no time left for activities of livelihood. Therefore there is need to harmonize this so that contribution of labor is seen as payment. It is still a challenge to split the two.

Q5: There seems to be commonality around conflict resolution, what is your experience with respect to this challenge?
CRS
This is a government project, the community was involved in project design therefore there was collaboration between the two making it successful. Issues like site selection for water projects considered both community inputs and technical requirements. The biggest challenge has been reluctance to abide by the government standards probably due to lack of awareness.

FHE
It is true that conflicts are a problem in the country and Africa in general especially with upstream and downstream issues on resource use. Assessment of these issues at design stage considering the approach set by government and development partners will help solve the issue.
Biggest challenge has been that initially at design stage the community when consulted will not indicate resistance but during implementation will start to resist.

Save the Children
The emergency program gives food while development partners give food for work. For sustainability we need to involve community in design.

REST
There is no clear standard, especially in the area of well development, or technical guidelines for different implementing organizations thus conflict arises e.g. distance between wells. When the wells become unproductive the community loses trust in the ability of organizations to provide solutions

Q6: Talked of greening indicators. Could the presenter share on the challenges experienced in the process?
There are standards that have been developed for WFP and WHO. There are minimum standards to be met therefore in implementation they ask partners for minimum standards e.g. for roads development. Therefore the indicators incorporate the government standards resulting in greening.

SESSION 21(DCHA), 18(DA): Parking lot session

DCHA WS

Q1: How do we harmonize ESMF and IEE requirements?

As a requirement all USAID funding has to follow laid down procedures. In the coming week there will be efforts to harmonize reporting between the World Bank and USAID.

Ideally ESMF screens environmental impacts of proposed activities but has no provision for mitigation measures unlike the IEE which requires an EMMP. The IEE is therefore more comprehensive.

The MEO reminded the partners that the EMMP document has to be available on site so that the Environmental Compliance Report is based on an existing document. Unlike USAID, World Bank and other donors release funds on submission of reports whereas for USAID, the environmental documentation and reports are a prerequisite.

Q2: Are IEE and PSNP-ESMF screening forms the same or different? (This has been answered above**)**

Q3: What is the literal translation for 22 CFR 216?

Code of Federal Regulations 216. The number 22 is for identification. It is best to refer to the USAID environmental procedures in general as these include Reg 216, ADS and Best practice.

Regulation 216 is USAID environmental regulations + ADS + Regional

The regulation focuses on pre-implementation planning and design stage of determining impacts and designing mitigation measures, monitoring and reporting procedures.

Q4: Is it mandatory to consider WQAP for future projects or for on -going projects?

The need for water quality testing should be identified at design stage and any requirement identified is then included in the WQAP and will form part of the IEE.

Q5: What are the requirements for fumigation of food aid prescribed under Reg 216?

- Fumigants have the potential to cause environmental impacts. The PEA for food aid is ongoing and the primary concern for USAID is the health and safety of the workers carrying out actual fumigation. Partners therefore must know the appropriate, sustainable procedures with regard to cost, technical aspects and human capacity of the projects.
- One participant shared his experience with the OIG audit team and how they looked at various areas including the actual process of fumigation and transportation mechanism addressing issues of how clean the vehicles were; fuel storage for transportation; road worthiness of the vehicles; workers carrying our fumigation (both government or private companies); chemicals in use whether on the red list or not, suitability of the chemicals; ventilation of the storage warehouses etc.
- Fumigation in Ethiopia is usually carried out by third parties or companies. The workers may not be provided with personal protective equipment. Furthermore, the active ingredient may be unknown, thus suitability cannot be guaranteed. There is therefore need for partners to work only with companies approved by the government where there is control and accountability.
- The need therefore for a PERSUAP is mandatory in order to protect both the workers and the biophysical environment as well as the people that will use the food.
- There is an on-going assessment of this situation at the program level and consultants are working in the field to address this. A lot of human and financial resources have and are been invested in this field-level environmental assessment.

DA WS

Q: Is there a threshold for initiating spraying?

Yes, it is possible to know the level at which the pest is not an issue so that un needed spraying is avoided. Monitoring mechanisms are commonly used in greenhouses to minimize the use of pesticides. A monitoring program is key. Technology has to generated by local research.

Q. Are there any banned pesticides by USAID?

Banned pesticides: Some chemical have been banned in some countries however their use continues and often results in the death of animals in the affected plant's food chain. The case of Dechlophenac is an example. It is used in the livestock industry and has led to the decline of vulture populations at slaughter houses. USAID regulations call for appropriate mechanisms for screening and recommending chemicals for use and this is done using PERSUAP.

Remarks by Yitayew Abebe: Where do we go from here? How do we take lessons learned from the workshop into the future?

- There are some pitfalls in USAID regulation compliance. There are various project stages and failure to identify environmental issues at each stage may create problems down the line.
- A multi-disciplinary approach to program design is required to include environmental considerations from the start to the closeout stage, and to ensure that USAID environmental regulations are adhered to.
- Solicitation: Must demonstrate that environmental requirements are adequately addressed in order for the response to include environmental concerns. Addressing the environmental impacts of activities is a necessity.
- Approval: there are standard procedures used by CORs/AORs. If environmental considerations are not in the solicitation the COR/AOR is only able to approve the activities. When this occurs, the environment is not put in the contract and so it lips between the cracks as there is no mitigation pan or related monitoring and reporting Plan and no allocated budget.
- Close-out : Ip must provide a closeout document to show that there will be no future negative impacts

  Question: What if the current program has already faulted in these realms? What can the project do?
  Start by doing an EEMP for approval by the AOR/COR. It is a requirement, and when presented there would be some negotiation. Better late than never.

SESSION 22(DCHA), 10(DA): Action Plans and Follow UpBringing Curricular to Reality

Facilitator
Yitayew Abebe, USAID/ Ethiopia, MEO

Objective

At the conclusion of each of the two Workshops, participants gathered into strategic groups identified by the MEO to discuss their priority next steps. Afterwards, the groups came back together in a plenary sessions to compare commonalities among the group priorities and develop a country-wide action plan.

Key Outcomes

DCHA WORKSHOP

Food for the hungry action plan

Overarching Goal: **All FH DFAP programmatic undertakings have insignificant impact on the environment due to systematic environmental management system is in place.**

Target	Action Steps	When	Responsible Party	Budget implication
1. Continuous Capacity building training on environmental management (cascading of this training)	a. Staff and partners training on government of Ethiopian's Environmental Protection Policy b. Staff and partners training on USAID environmental procedure at all level C. Staffing at national office level	FY 2013 FY 2013 FY 2014	Regional NRM and EPA expert FH Reg 216 trained personnel (DFAP manager & Infra coord) & Mission EO COP	Capacity building budget is included in the annual plan of DFAP Budgeting during PREP-submission
2. Establish effective M&E system for environmental monitoring	a. Mainstreaming of specific environmental monitoring as one part of organizational monitoring and evaluation system. b. Preparation reporting guideline and regularly reporting on environment in addition to annual ESR. C. Annual Review of environmental challenges, lessons learned and documentation.	FY 2013 Reporting is up to end of the program period	Infrastructure Coordinator, DFAP Manager, DFAP M&E coordinator COP, DFAP manager, Infrastructure Coordinator & Project managers	Annual Quarterly and annual review meeting budget allocated in DFAP annual budget
3. Strengthen accountability mechanism on environmental	a. Staff assigned to work on environment related activities job description should reflect about environmental consideration. b. Performance evaluation of staff should reflect environmental issues especially for DFAP field level staff.	FY 2014 Starting from FY 2014	HR manager, COP, DFAP manager	Doesn't require budgeting
4. Review of existing IEE and program document	a. Based on this capacity building the current IEE and DFAP document will be reviewed and amendments will be made, if necessary.	FY 2013	Mission EO, COP, DFAP manager, infra coord	Doesn't require budgeting

CRS action plan

Result	Activity	When	Responsible Party
1. Staffs have improved undrstanding, knowledge, and skill in environmental issues.	a. Organize workshop on environmental issues	End of Decemeber	CRS, Implementing partners
	b. Share all environmental doucments to relevant partener and CRS satff	Mid-December	CRS
2. Environment complaince Report Produced	a. Conduct regular monitoring	quarterly	CRS, Implementing partners
	b. Develop monitoring checklist contains environmental issues	First week of January	CRS, Implementing partners
	C. Review minimum technical standars to monitor the implementation	On going	CRS, Implementing partners
3. Environment mainsteaming in new projects	a. Awareness creation for staff	during design	CRS, Implementing partners
	b. Incorporate environmental language in proposal and concept note documents	during design	CRS, Implementing partners
	c. Recruit environment officer	Mid-January	CRS

Rest action plan

Organization: REST

Overarching Goal: Ensure sustainable environmental management in DFAP projects

Accomplishment (target)	Action Steps	When	Responsible Party

1. Ensure that environmental consideration at all level	A) Awareness creation and training on environment issues for stakeholders including technical and management bodies at all level b) Identify existing environmental related gaps c)Allocate appropriate budget for mitigation measure d) Report	2013 onwards January 2013 2013, 2014 Bi-annual and annual	REST REST implementing bodies and Regional NRM REST
2. Ensure stronglinkage and involvement of stakeholders towards achieving sound environmental management	a) Strengthen participate relevant stakeholders at all stage of the program	January 2013 onwards	REST with respective stakeholders
3. Strengthen the Institution set up on environmental management	a) review and strengthen the existing M&E system both during and post of the project	• January 2013	• REST

Save the Children Ethiopia

Overarching Goal**: Ensure communities that are food secured and Shock resilient, that can also manage their environment in sustainable ways.**

Accomplishment /Out come	Action Steps	When	Budget	Responsible Party
1. Lessons on environmental impacts and measures from past practice	a. Auditing title II activities of SC by assessing its possible adverse impacts on the environment to recommend possible mitigation measures b. Assess and analyze the audit findings with the initiated environmental compliances c. Document and disseminate lessons learnt and best practices with stakeholders	Jan. 2013	Already approved by USAID	DFAP management team
2. Projects planned and implemented using ESDM	a) Cascade the ESDM training to technical staffs of SC and government b) Prepare IEE report for	January	7,000 USD	Trained team of DFAP

	2012/13 project activities c) Develop EMMP for title II project activities o 2012/13	2013		
3. Skill developed and understanding to exercise ESDM for project activities in a sustainable manner ensured	a. Capacity building on environmental management for communities and government sector offices b. Coordination and integration of development efforts among stakeholders towards environmental sound design and management	April 2013	10, 000 USD	DFAP Management

DCHA WORKSHOP

Group 1

- All new AOR/COR/AM should work with the MEO on their respective projects
- For existing projects make sure that IEE, EMMP is in place
- Bring environmental issues into the attention of the mission management and our respective cluster
- Capacity building for local investors and GOE
- MEO should get access to partner's reports so that he can read and report/ comment
- Monitor even categorical excluded
- AOR/COR/AM shall work with their respective partners to insure that documentation of the status of the project even if categorically excluded, is developed
- Integrate Env. Issues:
  - Conduct Site visits
  - Develop Work plan, PMP
  - Ensure Reporting
  - Up date PERSUAP and work plan EMMP
  - Update our staff in the mission

Group 2

- Ensure staff understanding of Reg 216 by reading USAID's online resources
- Brief colleagues, Mgt team and partners about what was learnt in the training
- Assign a team individual to follow up on environmental issues
- Develop and or share EMMP to implementing staff
- Incorporate environmental compliance issues in our quarter/annual reports
- Review the already developed EMMPs and update
- Modify our monitoring formats to incorporate env'tal issues
- USAID's level of influence should be expanded beyond its projects/gov't other NGOs , Donors)
- Mainstream env'tal issues in every project activities

Group 3

- Reporting to respective organizations
- Orientation of staff using different opportunities
- Documentation review
- Review and compile relevant document /IEE, Workplan/
- Formal discussion with COP/CR
- Development of EMMP

- Allocation of budget /where needed/
- Develop EMMP
- Implement the approved EMMP
- Compliance report

Group 4

Short term plans and long term plans

Short-term:

- Debriefing/
- Orientation
- capitalize on existing EEMPs
- Training document sharing to staff
- Assessment of Indicators whether they are environmentally friendly

Long-term

- Integrate environmental indicators into all M&E tools
- Mainstreaming environment-related issues in other trainings
- encourage participating other exporters in issues related to the environment
- Central incinerators should be built at regional and national levels

6. Participant Evaluations

Participants were requested to complete an honest and frank evaluation at the end of each day and an additional, overall evaluation on Friday. Through these evaluations, the participants rated the overall quality of the five day training and each individual workshop session on a scale of 1 to 5, 5 being the most favourable. This documentation also allowed workshop participants to suggest improvements that could be incorporated into the remainder of the current Workshop and for future workshops.

In general, participants expressed an increased knowledge and determination to incorporate environmental considerations and USAID regulations into development projects. They felt motivated and excited to share the environmental regulations information with their colleagues. Although participants were content with the facilitation and technical level of the event, they would have liked more attention given to relevant experiences and a clearer picture of environmental compliance for socio-environmental design.

Participants would have appreciated more guidance from the facilitators during the field visits and would have liked more time in the field. They also voiced a need for better orientation to the exercises and group work. There were comments thanking the facilitators for good presentations and appropriate field visits. They expressed that they would have been more comfortable with the content if the facilitators would have spoke at a more appropriate speed for non-native speakers.

Overall, participants were satisfied with the capacity building initiative and the knowledge and experience gained.

The matrix below shows the average score on different components of the each of the two workshops.

DCHA Workshop: November 26 – 30, 2012

	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Quality of methodology used during the day	4,4	4,8	4,4	4,4	4,4	4,5

General usefulness of this day´s theme for your organization	4,9	4,9	4,7	4,8	4,5	4,8
Quality of the information presented today	4,4	4,6	4,4	4,6	4,1	4,4
Satisfaction with the hotel, room and food	4,6	4,6	4,2	4,6	4,2	4,4
Satisfaction with the workshop organization	4,7	4,8	4,6	4,6	4,6	4,7

DA Workshop: December 3 – 6, 2012

	Monday	Tuesday	Wednesday	Thursday	Total
Quality of methodology used during the day	4,4	4,5	4,8	4,4	4,5
General usefulness of this day´s theme for your organization	4,5	4,3	4,8	4,4	4,5
Quality of the information presented today	4,4	4,4	4,6	4,3	4,4
Satisfaction with the hotel, room and food	3,2	4,1	4,3	3,7	3,8
Satisfaction with the workshop organization	3,6	4,1	4,5	4,0	4,1

7. Information Sheet

USAID/Ethiopia is pleased to invite you to the

"USAID Environmental Compliance-Environmentally Sound Design and Management Workshop, for DCHA- and DA-funded partners"

Adama, Ethiopia

November 26 – 30 and December 3 - 6, 2012

Objectives

- Strengthen the capacity of USAID/Ethiopia staff and partners to incorporate the principles of Environmentally Sound Design and Management (ESDM) into current and future development and relief program designs and budgets.
- Improve the ability of USAID/Ethiopia staff and partners_ to consistently apply and comply with USAID Environmental Procedures (including Regulation 216), and to generate high-quality environmental analysis and Environmental Mitigation and Monitoring Plans (EMMPs).

Background

These environmental workshops are hosted by USAID/Ethiopia, and the USAID Bureau for Democracy, Conflict and Humanitarian Assistance (DCHA) and the USAID Bureau for Africa, and will be implemented through the Global Environmental Management Support (GEMS) program. The workshops offer training on tangible skills and products for use in existing and future development initiatives in Ethiopia. The training will also provide the opportunity for organizations to share lessons-learned and advance intra-Agency collaboration.

Participants

Workshop participants will consist of USAID staff and representatives of USAID Implementing Partners (IPs). These individuals are positioned to improve the design, environmental soundness, and monitoring and evaluation systems of USAID-supported projects and programs in Ethiopia. Representatives from the government of Ethiopia will also be invited to participate.

Training focus and methodology

The focus of these workshops will be on environmental best practice in project planning, design, implementation and evaluation. The training methods used will be highly participatory. Each participant is viewed as both teacher and student, and will participate in classroom lectures, project analysis, operational fieldwork and small group exercises. Technical specialists from USAID and the GEMS Team will provide materials and serve as the principal facilitators of discussions on the environmental implications of project design and good practice strategies. The workshop methodology will consist of plenary sessions, small group exercises, panel discussions, question and answer sessions and ample time in the field.

Prior to the workshops participants will receive reading materials to prepare for the training. The information in these selected documents will greatly advance participants´ awareness of and

preparations for the training sessions. Those participants who demonstrate the most familiarity with the material during the workshop may be rewarded.

English will be the spoken language during training delivery and all materials and training content will be prepared in English.

Logistics and Planning Information

Workshop Dates & Times: The workshop for USAID staff and DCHA-funded (Title II) partners will commence on Monday, 26 November 2012 at 8:30 a.m. and conclude mid-day on Friday, 30 November 2012.

The workshop for USAID staff and DA-funded partners will commence on Monday, 3 December at 8:30 a.m. and conclude mid-day on Thursday, 6 December 2012.

Workshop Location: The workshops will take place at Dire International Hotel in Adama, Ethiopia.

Costs: There is no cost to participants to attend the workshop. Participants and their sponsoring organizations are responsible for workshop-related travel, lodging and per diem costs.

More detailed logistical and planning-related information will be provided to participants following receipt of the attached registration form.

Workshop Planning Team contact information:
For more information, feel free to contact the workshop organizers below:

Fiona Littlejohn-Carrillo	Lead Workshop Coordinator GEMS Project Team	flittlejohnc@smtn.org	(+ 593) 22922625
Patrick Hall	Workshop Coordinator, GEMS Project Team	Patrick.Hall@cadmusgroup.com	(+1) 617 673-7124
Yitayew Abebe	Mission Environmental Officer (MEO) USAID/Ethiopia	yabebe@usaid.gov	00 (251) 1113 06002 Ext. 6601

8. Agenda DCHA WS

USAID/Ethiopia Life of Project Environmental Compliance and Environmentally Sound Design and Management Workshop

Adama, Ethiopia

November 26-30, 2012

Training Objectives:

4. Strengthen the capacity of USAID staff and implementing partners to incorporate environmentally sound design and management (ESDM) practices into existing and upcoming development and relief program planning and budgets.
5. Improve the ability of USAID staff and implementing partners to consistently apply and comply with USAID procedures, Regulation 216 and to generate high-quality environmental analysis.
6. Enhance collaboration, networking, exchange of new strategies and technical solutions for development efforts between USAID, implementing partners and government of Ethiopia entities.

Key Activities:

Day 1. Overview of environmental analysis and USAID environmental processes and procedures.

Day 2. Cover topics including principles of environmental monitoring and environmental compliance reporting, and prepare for the following day's field visits.

Day 3. Carry out project field visits, compile results into the EMMP format and present case study conclusions.

Day 4. Special sessions including medical waste management, conflict resolution, climate change, environmental monitoring, among others.

Day 5. Address any unresolved issues and develop ideas on how to operationalize lessons learned from the workshop.

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
Day 1	**Motivation, Core Skills, Overview of USAID Environmental Compliance over Life-of-Project**		
8:00-8:30	Participant Registration		
8:30-8:50	Welcome and Opening Statements	Highlight the value of workshop content and expected results.	USAID/Ethiopia Mission
8:50-9:30	**Session 1:** Workshop Objectives, Logistics and Participant Introductions	Articulate workshop plans, objectives, goals, and participants' introductions and expectations. Review the agenda and logistics.	Fiona Littlejohn-Carrillo, GEMS

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
9:30-10:30	**Session 2a:** Environmental Compliance for Environmentally Sound Design and Management (ESDM) *Technical presentation and dialogue*	Achieve a common understanding of "environment." Introduce USAID Environmental Procedures and summarize the legal basis of the procedures and the life-of-project requirements they establish. Motivate the need to systematically address environmental considerations in design and management of development activities.	Scott Solberg, GEMS
10:30-10:45	Break		
10:45-11:10	**Session 2b:** "Environmental Considerations: Toward a Sustainable Future" *Video and discussion*	Video showing with follow-on facilitated discussion of ESDM challenges and opportunities for USAID/Ethiopia and its Partners.	Fiona Littlejohn-Carrillo, GEMS
11:10-12:00	**Session 3**: Fundamental Skills of Environmental Impact Assessment (EIA) *Technical presentation and dialogue*	Define key terms—baseline, impact, activity—and learn essential classroom theory for baseline characterization, impact identification & mitigation design and how they apply in the EIA framework; the EIA framework is the basis for USAID Environmental Procedures.	Patrick Hall, GEMS
12:00-12:30	**Session 4a:** Transect Walk Classroom Preparation	Receive instruction on the methodology and the objectives of the Transect Walk. Understand the general baseline of the space to be analyzed. Divide into small groups for the exercise.	Fiona Littlejohn-Carrillo, GEMS
12:30-13:30	Lunch		
13:30-14:30	**Session 4b:** Transect Walk *Practical exercise*	Practice observation skills needed to characterize the baseline situation and identify impacts/issues of concern.	Fiona Littlejohn-Carrillo, GEMS
14:30-15:00	**Session 4c:** Transect Walk Synthesis *Group work and presentation*	Synthesize field observations and prioritize impacts/issues of concern; discuss possible approaches for limiting adverse effects on the environment.	Fiona Littlejohn-Carrillo, GEMS
15:00-15:45	**Session 5**: Environmental Impact Assessment and USAID Environmental Procedures: the Initial Environmental Examination (IEE) and Beyond *Technical presentation and dialogue*	Review USAID's implementation of the Environmental Impact Assessment (EIA) process and the preparation of USAID´s environmental compliance documents. Understand how these documents establish environmental management criteria for USAID-funded activities. and receive a briefing of the Initial	Patrick Hall, GEMS

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
		Environmental Examination (IEE) and other types of USAID environmental documentation.	
15:45-16:00	Break		
16:00-16:30	**Session 6:** Introduction to the USAID Africa Environmental Guidelines *Group dynamic*	Deepen familiarity with environmental resources and guidelines, particularly the Environmental Guidelines for Small-Scale Activities in Africa (EGGSSA) through a small group dynamic.	Scott Solberg, GEMS John Azu, GEMS
16:30-17:15	**Session 7**: The Environmental Mitigation and Monitoring Plan (EMMP) *Technical presentation and dialogue*	Understand the EMMP concept and formats: Who develops them. Their role in "operationalizing" key elements of USAID Environmental Procedures and establishing and maintaining project environmental compliance. Introduce key guidance: *EMMP Factsheet.*	Patrick Hall, GEMS
17:15-17:30	Evaluations and Announcements		
19:00	Dinner		

Day 2	**Motivation, Core Skills, Overview of USAID Environmental Compliance over Life-of-Project.**		
8:30-8:40	Day 1 review & Day 2 prospectus		
8:40-9:30	**Session 8:** Principles of Environmental Monitoring *Technical presentation and dialogue*	Review key aspects of monitoring to ensure that project environmental compliance requirements are met and potential adverse impacts effectively mitigated; highlight the selection of clear and cost-effective monitoring indicators.	Fiona Littlejohn-Carrillo, GEMS
9:30-10:30	**Session 9:** Indicators Exercise *Group work and report out*	Build and apply indicator selection skills (a key constituent skill for EMMP development) in a scenario-based small-group exercise centered on the Visual Field Guides.	John Azu, GEMS
10:30-10:45	**Break**		
10:45-11:30	**Session 10:** The PIM and its Application in regards to the Sustainability of PSNP Public	Gain a better understanding of environmental related standards as found in the PIM (Program Implementation Manual), as well as discuss the operations and implications of	Samson Aberha, REST Gebrehiwoit Hailu, REST

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
	Works *Technical presentation and dialogue*	project design criteria and operations and maintenance of Public Works within the PSNP (Productive Safety Net Program).	
11:30-12:00	**Session 11:** Environmental Compliance Reporting *Technical presentation and dialogue*	Guidance on EMMP-related and other environmental compliance reporting, including integration with broader project M&E and PMP reporting requirements.	Patrick Hall, GEMS
12:00-13:00	**Lunch**		
13:00-14:15	**Session 12:** Environmental Compliance/ESDM *Knowledge game*	Reinforce key "core session" content in a small-group competition.	Patrick Hall, GEMS
14:15-15:30	**Session 13:** Environmental Priorities for USAID Activities in Ethiopia *Panel discussion*	With core classroom content completed, turn our focus to practice and application, by sharing the perspectives of the participating organizations on environmental priorities and challenges for USAID activities in Ethiopia.	Facilitator, Scott Solberg, GEMS Panel Participants: Yitayew Abebe, USAID/Ethiopia David Kinyua, USAID TBD USAID Representatives
15:30-15:45	Break		
15:45-16:15	**Session 14a:** Field site briefing *Group work*	Gain a general awareness of the case study projects that will be visited in the field on day 3. Divide participants into groups according to their thematic interests. Distribute field guides.	Group Facilitators
16:15-17:15	**Session 14b:** EMMP development *Group work*	Discuss potential adverse impacts of the case study project. Translate general IEE conditions into specific mitigation measures.	Group Facilitators
17:15-17:30	Evaluations and Announcements		
19:00	Dinner		

Day 3	**Carry out project field visits and develop EMMPs**		
8:30-13:30	**Session 14c**: Field Visits: Experiential Practice	Build and apply the core Environmental Analysis skills briefed	Group Participants

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
(lunch in the field)	Using the EMMP *Field visit* Technical Areas: 1. Watershed Project 2. Pulp and Paper Factory 3. Spate Irrigation 4. Tannery	in day 1 and day 2 via a field visit and follow-up group work to (1) synthesize field observations, and (2) identify possible mitigation measure for issues of concern, with reference to the Africa Environmental Guidelines.	
13:30-14:00	Freshen up		
14:00-16:15 (groups take tea break at their leisure)	**Session 14d:** EMMP & presentation development *Small group work*	Advance discussions and compilation of field visit results into an EMMP format and a group presentation. Conclude with suggestions for improving environmental field tools.	Group Participants
16:15-17:15	**Session 14e**: Case Study Conclusions *Group presentations in plenary*	Articulate field visit findings, analysis, and EMMP development.	Group Participants
17:15-17:30	Evaluations and Announcements		
19:00	Dinner		

Day 4			
8:30-8:40	Day 3 review & Day 4 prospectus		
8:40-9:40	**Session 14e**: Case Study Conclusions (Continuation) *Group presentations in plenary*	Continue group presentations from the previous day on field visit findings, analysis, and EMMP development..	Group Participants
9:40-10:30	**Session 15:** Pesticide Risks, Safer Use & Compliance *Technical presentation and dialogue*	Brief the environmental, economic and human-health concerns attendant to pesticide use; achieve a common understanding of the special environmental compliance requirements that apply to pesticide use and procurement, and of the key elements of safer pesticide use.	David Kinyua, USAID

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
10:30-10:45	Break		
10:45-12:15	**Session 16** :Critical Tools and New Guidance to Improve Environmental Management of Food Security Programs *Technical presentation and dialogue*	Gain a better understanding of the tools used in environmental management of Food Security Programs, Address other relevant topics in environmental management, including the following: *A. Results Framework and EMMP Greening* *B. Environmental Budgeting: Guidance and Best Practices* *C. Feedback on Cross-Cutting Indicators*	Scott Solberg, GEMS John Azu, GEMS
12:15-13:15	**Lunch**		
13:15-14:00	**Session 17:** Recommended Best Practice for EMMP Development and Application/Monitoring and Evaluation *Knowledge game*	Improve understanding of the EMMP procedures and technical content.	Scott Solberg, GEMS
14:00-15:00	**Session 18**: Medical Waste Management *Technical presentation and dialogue*	Develop capacity to environmentally manage programs that directly or indirectly contribute to the generation of medical waste.	John Azu, GEMS
15:00-15:45	**Session 19:** Water Quality Testing *Technical presentation and dialogue*	Review the requirements and procedures involved with water quality testing in development programs.	Patrick Hall, GEMS
15:45-16:00	**Break**		
16:00-16:45	**Session 20:** Conflict Resolution *Technical presentation and dialogue*	Analyze the current situation in Ethiopia and discuss tactics to improve initiatives in conflict resolution.	USAID Representative
16:45-17:45	**Session 21:** Climate Change *Technical presentation and dialogue*	Brief the concerns resulting from global climate change in the country and the region, and the priorities and earmarks of the USAID/Ethiopia Mission.	Yitayew Abebe, USAID/Ethiopia
17:45-18:00	Evaluations and Announcements		
19:00	**Dinner**		

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
Day 5	**Way Forward**		
8:30-8:40	Day 4 review & Day 5 prospectus		
8:40-9:45	**Session 23**: Parking Lot Session *Plenary session*	Address unresolved questions or issues and summarize information presented throughout the training. • Base Camp introduction • Carbon neutral event • Tour through the participant flash drive	Patrick Hall, GEMS Scott Solberg, GEMS
9:45-10:00	**Break**		
10:00-11:00	**Session 24**: Bringing Curricula to Reality *Plenary discussion and individual action plans*	Identify lessons learned and practical actions that can be operationalized in future planning. • Training of Trainers • Coordination with other partners • Follow-up, spin-off workshops in 2013	John Azu, GEMS
11:00-12:00	Closing Ceremony	Conclude workshop and distribute certificates.	USAID/Ethiopia Mission

9. Agenda DA WS

Training Objectives:

7. Strengthen the capacity of USAID staff and implementing partners to incorporate environmentally sound design and management (ESDM) practices into existing and upcoming development and relief program planning and budgets.
8. Improve the ability of USAID staff and implementing partners to consistently apply and comply with USAID Environmental Procedures and to generate high-quality environmental analysis.
9. Enhance collaboration, networking, exchange of new strategies and technical solutions for development efforts between USAID, implementing partners and government of Ethiopia entities.

Key Activities:

Day 1. Overview of ESDM, environmental impact assessment (EIA) and USAID Environmental Procedures.

Day 2. Continuation of core technical content, presentation of special topics, and preparation for the following day's field visits.

Day 3. Complete field visits, compile results into the EMMP format and begin presenting case study conclusions.

Day 4. Address any unresolved issues and develop ideas on how to operationalize lessons learned from the workshop.

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
Day 1	**Motivation, Core Skills, Overview of Environmental Compliance over Life of Project**		
8:00-8:30	Participant Registration		
8:30-8:50	Welcome and Opening Statements	Highlight the value of workshop content and expected results.	USAID/Ethiopia Mission
8:50-9:30	**Session 1:** Workshop Objectives and Logistics; Participant Introductions	Establish workshop objectives; brief the agenda and learning approach. Review logistics. Introduce participants; articulate expectations.	Fiona Littlejohn-Carrillo, GEMS
9:30-10:30	**Session 2:** Environmentally Sound Design & Management (ESDM) as a Foundation for Environmental Compliance *Presentation and dialogue** **includes brief video "Environmental Considerations: Toward a Sustainable Future"*	Understand linkage between ESDM and project success, consider examples from Ethiopia. Motivate the need to systematically address environmental considerations in development activities. View this process in the context of environmental compliance.	Yitayew Abebe, USAID/Ethiopia Scott Solberg, GEMS

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
10:30-10:45	Break		
10:45-11:30	**Session 3**: Fundamental Skills of Environmental Impact Assessment (EIA) *Technical presentation and dialogue*	Define key terms—baseline, impact, activity—and learn essential classroom theory for baseline characterization, impact identification & mitigation design and how they apply in the EIA framework; the EIA framework is the basis for USAID Environmental Procedures.	Patrick Hall, GEMS
11:30-12:00	**Session 4a:** Site Assessment – Classroom Prep. *Presentation*	Receive instruction on the methodology and objectives of the Site Assessment. Understand the proposed activity and baseline conditions to be assessed. Divide into small groups for the exercise.	Fiona Littlejohn-Carrillo, GEMS
12:00-12:30	**Session 4b:** Site Assessment *Practical exercise*	Practice observation and assessment skills needed to characterize the baseline situation and identify impacts/issues of concern.	Small-group Exercise
12:30-13:30	Lunch		
13:30-14:30	**Session 4c:** Site Assessment – Synthesis and Report-out *Group work and presentation*	Synthesize field observations and prioritize impacts/issues of concern; discuss possible approaches for limiting adverse effects on the environment. Small groups present and discuss findings.	Scott Solberg, GEMS
14:30-15:30	**Session 5**: Environmental Impact Assessment and "USAID Environmental Procedures": the Initial Environmental Examination (IEE) and Beyond *Technical presentation and dialogue*	Review USAID's implementation of the EIA process and the preparation of project environmental compliance documents; understand how these documents establish environmental management criteria for USAID-funded activities.	Patrick Hall, GEMS
15:30-15:45	Break		
15:45-16:15	**Session 6:** ESDM and USAID Forward *Presentation and dialogue*	Discuss ESDM in the context of the USAID Forward initiative.	Walter Knausenberger, USAID/DC
16:15-17:00	**Session 7:** Principles of Environmental Monitoring *Technical presentation and dialogue*	Review key aspects of monitoring to ensure that project environmental compliance requirements are met and potential adverse impacts effectively mitigated; highlight the selection of clear and cost-effective monitoring indicators.	Fiona Littlejohn-Carrillo, GEMS
17:00	Close of Day *Announcements and feedback*		Fiona Littlejohn-Carrillo, GEMS

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
Day 2	**Motivation, Core Skills, Overview of Environmental Compliance over Life of Project**		
8:30-8:40	Day 1 review & Day 2 program		Patrick Hall, GEMS
8:40-9:30	**Session 8**: The Environmental Mitigation and Monitoring Plan (EMMP) *Technical presentation and dialogue*	Understand the EMMP concept and formats: Who develops them. Their role in "operationalizing" key elements of USAID Environmental Procedures and establishing and maintaining project environmental compliance. Introduce key guidance: *EMMP Factsheet.*	Patrick Hall, GEMS
9:30-10:30	**Session 9:** Indicators Exercise *Group work and report out*	Build and apply indicator selection skills (a key constituent skill for EMMP development) in a scenario-based small-group exercise	John Azu, GEMS
10:30-10:45	Break		
10:45-11:30	**Session 10: Medical Waste Management** *Technical presentation and dialogue*	Develop capacity for the environmental management of programs that directly or indirectly contribute to the generation of medical waste.	John Azu, GEMS
11:30-12:00	**Session 11:** Environmental Compliance Reporting *Technical presentation and dialogue*	Guidance on EMMP-related and other environmental compliance reporting, including integration with broader project M&E and PMP reporting requirements.	Patrick Hall, GEMS
12:00-13:00	Lunch		
13:00-14:15	**Session 12:** Environmental Compliance/ESDM Knowledge game *Small-group competition*	Reinforce key "core session" content in a small-group competition.	Patrick Hall, GEMS
14:15-15:15	**Session 13:** Environmental Priorities for USAID Activities in Ethiopia *Panel discussion*	With core classroom content completed, turn our focus to practice and application, by sharing the perspectives of the participating organizations on environmental priorities and challenges for USAID activities in Ethiopia.	Facilitator: Scott Solberg, GEMS Panel Participants: YitayewAbebe, USAID/Ethiopia Walter Knausenberger, USAID/DC
15:15-15:30	Break		
15:30-16:00	**Session 14:** Introduction to the USAID *Environmental Guidelines for Small-Scale Activities in Africa* *Group dynamic*	Deepen familiarity with environmental resources and guidelines, particularly the *Environmental Guidelines for Small-Scale Activities in Africa* (EGGSSA)	Scott Solberg, GEMS John Azu, GEMS

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
16:00-16:15	**Session 15a:** Field visit – briefing *Presentation*	Gain a general awareness of the case study sites that will be visited in the field on Day 3. Divide participants and distribute field guides.	YitayewAbebe USAID/Ethiopia Fiona Littlejohn-Carrillo, GEMS
16:15-17:00	**Session 15b:** Field visit – small-group prep. *Group work*	Discuss potential adverse impacts of the case study sites. Review background and reference materials and discuss approach for EMMP development.	Group Facilitators
17:00	Close of Day *Announcements and feedback*		Fiona Littlejohn-Carrillo, GEMS
Day 3	**Complete field visits and develop EMMPs**		
8:00-12:00 (includes return from field)	**Session 15c**: Field visits: Experiential Practice Using the EMMP *Field visit* Technical Areas: 5. TB & HIV Testing and Counseling Center 6. Adama Referral Hospital 7. Health Clinic Construction 8. Tannery	Build and apply the core Environmental Analysis skills briefed in Day 1 and Day 2 via a field visit and follow-up group work to: 1) synthesizefieldobservations; and 2) identifypossiblemitigationmeasureforissues of concern, withreferencetothe EGSSAA.	Group Participants
12:00-13:00	Refresh and lunch		
13:00-16:00 (tea break taken at leisure)	**Session 15d:** EMMP development and presentation development *Small group work*	Advance discussions and compilation of field visit results into an EMMP format and a group presentation. Conclude with suggestions for improving environmental field tools.	Group Participants
16:00-17:00	**Session 15e**: Case Study Conclusions *Group presentations in plenary*	Articulate field visit findings, analysis, and EMMP development.	Group Participants
17:00	Close of Day* *Announcements and feedback*		Fiona Littlejohn-Carrillo, GEMS
19:00	Dinner		
Day 4	**Way Forward**		
8:30-8:40	Day 3 review & Day 4 program		Fiona Littlejohn-Carrillo, GEMS

Day/Time	Module	Objective/Content Summary	Presenter/Facilitator
8:40-9:40	**Session 15e (continued)**: Case Study Conclusions *Group presentations in plenary*	Articulate field visit findings, analysis, and EMMP development.	Group Participants
9:40-10:00	**Session 16:**Water Quality Testing *Technical presentation and dialogue*	Review the requirements and procedures involved with water quality testing of USAID-funded activities.	Patrick Hall, GEMS
10:00-10:15	Break		
10:15-11:00	**Session 17:** Pesticide Risks, Safer Use & Compliance *Technical presentation and dialogue*	Brief the environmental, economic and human-health concerns attendant to pesticide use; achieve a common understanding of the special environmental compliance requirements that apply to pesticide use and procurement, and of the key elements of safer pesticide use.	Walter Knausenberger, USAID
11:00-11:30	**Session 18**: Parking lot session *Plenary session*	Address unresolved questions or issues and summarize information presented throughout the training.	Patrick Hall, GEMS
11:30-12:45	**Session 19:** Bringing Curricula to Reality *Plenary discussion and individual action plans*	Identify lessons learned and practical actions that can be operationalized in future planning.	YitayewAbebe, USAID/Ethiopia Scott Solberg, GEMS
12:45 – 13:00	Workshop Final Evaluations	Participants complete evaluation form	Patrick Hall, GEMS
13:00	Closing Ceremony	Conclude workshop and distribute certificates.	USAID/Ethiopia Mission