Coastal City Adaptation Project (CCAP) Agreement No. AID-656-C-14-00001

Environmental Mitigation and Monitoring Plan (EMMP)

October 2015

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CONTENTS

ANNEXES

ACRONYMS

AOR	Agreement Officer's Representative
CBNRM	Community-based natural resource management
CCA	Climate change adaptation
CCAP	Coastal City Adaptation Project
DRR	Disaster risk reduction
EMMP	Environmental Mitigation and Monitoring Plan
ERF	Environmental Review Form
GDP	Gross Domestic Product
GOM	Government of Mozambique
GUC	grant under contract
IEE	Initial Environmental Examination
INGC	National Disasters Management Institute (*Instituto Nacional de Gestão de Calamidades*)
IR	Intermediate Result
IUCN	International Union for Conservation of Nature
NGO	Non-Governmental Organization
SMS	Short message service

Cover Photo: Sign at Pemba's Chibabuare neighborhood indicating that building homes and planting fields is not allowed on those slopes.

1. Introduction

The purpose of an Environmental Mitigation and Monitoring Plan (EMMP) is to implement the conditions of a project's Initial Environmental Examination (IEE) or Environmental Assessment. This EMMP is a contractual obligation of the Coastal City Adaptation Project (CCAP). It fulfills the conditions of the Initial Environmental Examination (IEE) for CCAP approved on June 22, 2015.[1] As such, it:

- Specifies the mitigation measures that will be taken to satisfy the IEE.
- Sets out the indicators or criteria that will be used to monitor:
    - whether the mitigation actions have been implemented, and
    - whether they are effective and sufficient.
- Establishes a schedule for implementation of the mitigation measures and associated monitoring.
- Identifies the parties responsible for implementing the mitigation and monitoring requirements.

2. Overview of CCAP Mozambique

Background

Mozambique's coastal cities serve as economic hubs and primary drivers of the country's development. These coastal cities house much of the country's key infrastructure and productive workforce, which are vital to sustaining the strong economic growth levels Mozambique has enjoyed over the past few years. But they are also vulnerable to sea level rise and projected changes in extreme climate events. Due to their exposure to climate change and a generalized lack of access to resources for adaptation, the Government of Mozambique's (GOM) National Institute for Disaster Management (INGC) and international development agencies have identified Mozambique's coastal cities as among the most vulnerable in Africa.

Extreme climate events such as cyclones and tropical storms already impose large costs on Mozambican coastal cities. Climate change will worsen the toll by causing sea levels to rise, inundating unprotected low-lying areas. Climate change is also likely to increase the frequency and severity of high-rainfall storms and the most intense cyclones, leading to more destructive floods and damaging or destroying coastal ecosystems and livelihoods. These recurring events will have serious impacts on urban infrastructure and the health of local populations and biodiversity.

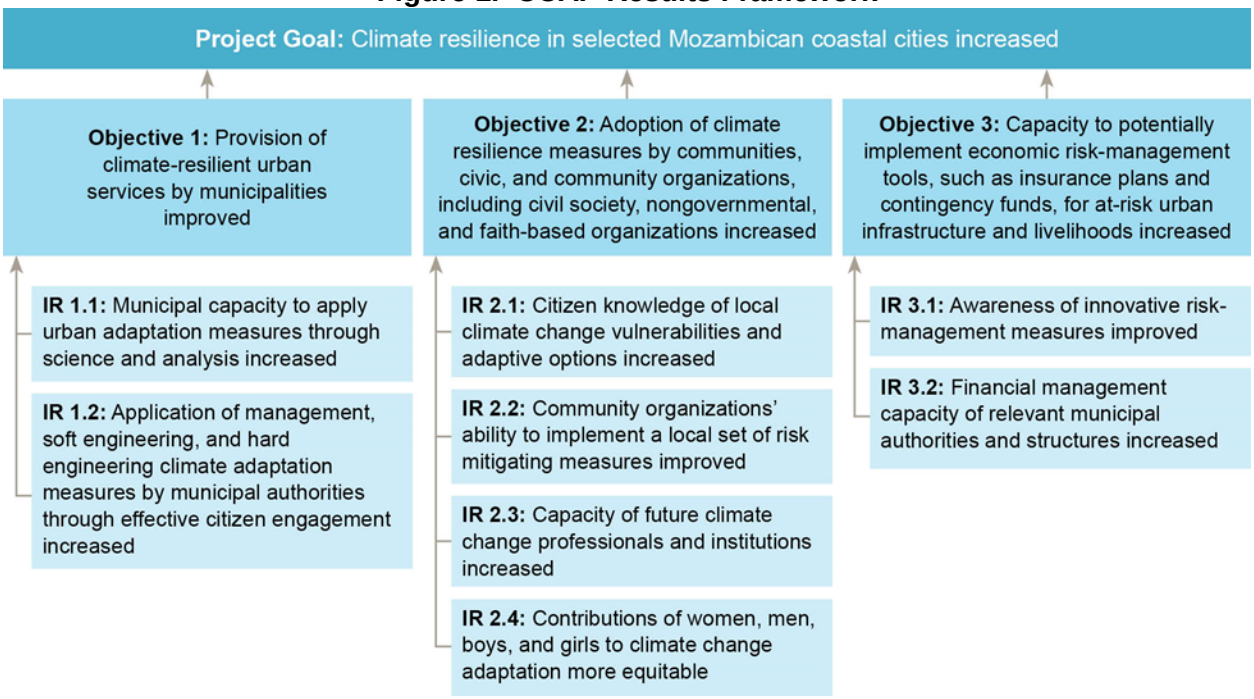
The CCAP is a 5-year, $15 million USAID-funded project with the goal to increase climate resilience in selected Mozambican coastal cities by assisting vulnerable coastal cities to incorporate climate change projections into their planning processes and to undertake adaptive measures. CCAP focuses its initial interventions in two municipalities: Pemba and Quelimane. In the future, CCAP may identify a few key, very successful interventions and scale them in additional cities along the Mozambican coast with similar conditions and climate change adaptation needs as those in Pemba and Quelimane.

[1] Mozambique_CCAP_IEE_062215.doc, http://gemini.info.usaid.gov/egat/envcomp/repository/pdf/43811.pdf

Description of Activities

The CCAP Results Framework is presented in Figure 1. The following sub-sections describe the specific activities that will be implemented under each Intermediate Result (IR).

Figure 1. CCAP Results Framework



<u>Objective 1: Provision of climate-resilient urban services by municipalities improved.</u>

IR 1.1: Municipal capacity to apply urban adaptation measures through science and analysis increased

Specific activities include:

- Conduct baseline assessments in order to design and implement effective training, technical assistance, and community outreach interventions for municipal CCA and DRR.
- Design and implement a training program on CCA and DRR for municipalities, which will include workshops, seminars, conferences and study tours.

IR 1.2: Application of management, soft engineering, and hard engineering climate adaptation measures by municipal authorities through effective citizen engagement increased

Specific activities include:

- Set up an Adaptation Planning and Management Unit in each municipality.
- Establish in each municipality a participatory steering committee for adaptation planning, coordination, and sustainability.
- Design and implement multidisciplinary technical assistance and "on-the-job" training plan for each municipality covering such areas as:
    - financial management and fundraising,
    - coastal zone management,
    - soft engineering adaptation measures,
    - urban planning,

    - land use management,
    - GIS technology,
    - vulnerability and damage cost assessment, and
    - risk transfer options.
- Provide technical assistance in the development of plans and strategies for climate adaptation.
- Provide technical assistance for the development of policies and regulations to implement climate change adaptation measures.
- Provide technical assistance or grants under contract (GUCs), sub-contracts and other funding mechanisms for technical assistance to develop proposals to financing facilities for funding hard-engineered defense structures (sea walls, storm surge barriers, etc.) and/or other large-scale engineered adaptation measures (roads, bridges, drainage systems, etc.).
- Design and implement a short message service (SMS) early warning system for dangerous meteorological events.
- Plan, implement, and manage GUCs, sub-contracts and other funding mechanisms that provide financial, technical and capacity support to the targeted municipalities. These funds will be for development of the technical capacity of the municipality, and not for construction of climate adaptation measures.

<u>Objective 2: Adoption of climate resilience measures by communities, civic and community organizations, including civil society, NGOs, and faith-based organizations increased.</u>

IR 2.1: Citizen knowledge of local climate change vulnerabilities and adaptive options increased

Specific activities include:

- Design a public awareness and behavior change strategy.
- In cooperation with local universities, develop and implement CCA and DRR seminars for delivery to local business and municipal/ provincial staff.
- Support the establishment of the Climate Change Knowledge Center.

IR 2.2: Community organizations' ability to implement a local set of risk mitigating measures improved

Specific activities include:

- Support the development of local committees to serve as first responders, disaster risk managers, and community outreach specialists.
- Train university students through an interactive, online platform to develop and implement low-cost, demand-driven risk-mitigating measures.
- Plan, implement, and manage GUCs, sub-contracts and other funding mechanisms that provide financial, technical and capacity support to local universities, students, and NGOs. Grants/sub-contracts will be used to support:
    - priorities identified as part of the institutional assessments under IR 1.1;
    - public awareness activities;
    - technical assistance and training services; and
    - small-scale climate adaptation measures such as:
        - improved house construction so they provide more effective, climate-resilient shelter to the most vulnerable communities (e.g., elevated housing to resist flooding and cyclone resistant housing to resist high winds);
        - improved sanitation by:

        - reducing open air defecation and water contamination through construction of site-appropriate latrines, and
        - reducing solid waste accumulations through application of appropriate, community-based technologies for solid waste management;
    - cost-effective potable water solutions, primarily focusing on rainwater harvesting systems,
    - green infrastructure such as mangrove protection and restoration and dune stabilization, and
    - other small-scale adaptation measures as appropriate for community-based implementation, but not to include hard-engineered defenses or large-scale construction. These activities may include larger scale climate-resilient construction such as for schools or community spaces (clinics, churches and mosques).

At this point in time it is not anticipated that any hard engineering defenses (sea walls, storm surge barriers, etc.) or large-scale construction projects (drainage systems, roads, bridges, etc.) will be funded by CCAP.

IR 2.3: Capacity of future climate change professionals and institutions increased

Specific activities include:

- Facilitate an initial round of partnerships between U.S./regional universities and Mozambican climate change universities and professionals.
- Design and implement internship programs for municipal offices and relevant private sector firms.

IR 2.4: Contributions of women, men, boys, and girls to climate change adaptation more equitable

Specific activities include:

- Organize outreach activities aimed at increasing the participation of women and youth.

Objective 3: Local awareness of economic risk-management tools, such as insurance plans and contingency funds, for at-risk urban infrastructure and livelihoods increased.

IR 3.1: Awareness of and capacity to potentially implement innovative risk management measures improved

Specific activities include:

- Include in the organizational capacity assessments under IR 1.1 a determination of the utilization of insurance or contingency funds at municipal level.
- Conduct data collection, modeling, and feasibility for risk-management tools.
- Conduct annual workshop on financial risk-management measures.

IR 3.2: Financial management capacity of relevant municipal authorities and structures increased

Specific activities include:

- Provide technical assistance to GOM on fiscal disaster risk financing options
- Design and develop financial management seminar on contingency/disaster response funds.

3. Results of IEE

Threshold Determinations

The IEE for CCAP was approved on June 22, 2015. A summary of the threshold determinations are shown in Table 1. As can be seen in the table, all but seven activities received Categorical Exclusions. The other seven activities received Negative Determinations with conditions.

Table 1. Summary of Threshold Determination in CCAP IEE

Activity	Recommended Threshold Determination				
	Categorical Exclusion	Negative Determination	Negative Determination w/conditions	Positive Determination	Deferral
Objective 1: Provision of climate-resilient urban services by municipalities improved					
Conduct baseline assessments	✓				
Design and implement a training program on Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR)	✓				
Set up an Adaptation Planning and Management Units	✓				
Establish participatory steering committees for adaptation	✓				
Design and implement technical assistance and training plan	✓				
Provide technical assistance for development of adaptation • plans and strategies, • policies and regulations, and • proposals to financing facilities for hard-engineered defenses			✓		
Design and implement SMS early warning system	✓				
Plan, implement and manage funding mechanisms that provide financial, technical and capacity support to the municipalities	✓				
Objective 2: Adoption of climate resilience measures by communities, civic and community organizations; including civil society, NGOs, and faith-based organizations increased					
Design a public awareness and behavior change strategy	✓				
Develop and implement CCA and DRR seminars	✓				
Support establishment of Climate Change Knowledge Center	✓				
Support development of local committees as first responders, disaster risk managers and community outreach specialists	✓				
Train university students to develop and implement low-cost, adaptation	✓				

Activity	Recommended Threshold Determination				
	Categorical Exclusion	Negative Determination	Negative Determination w/conditions	Positive Determination	Deferral
Plan, implement and manage funding mechanisms that provide financial, technical and capacity support to local universities, students and NGOs	✓				
Support local universities, students and NGOs for small-scale climate adaptation measures such as:					
• Improved house construction			✓		
• Latrine construction			✓		
• Solid waste management			✓		
• Potable water solutions			✓		
• Green infrastructure			✓ (w/ERF in some cases)		
• Other small-scale, community-based adaptation measures			✓ (w/ERF in some cases)		
Facilitate partnerships between U.S./regional universities and Mozambican universities	✓				
Design and implement public and private internship program	✓				
Organize outreach activities for participation of women and youth	✓				
Objective 3: Local awareness of economic risk-management tools, such as insurance plans and contingency funds, for at-risk urban infrastructure and livelihoods increased					
Determination of the municipal utilization of insurance or contingency funds	✓				
Conduct data collection, modeling and feasibility for risk-management tools	✓				
Conduct annual workshop on financial risk-management measures	✓				
Provide technical assistance to GOM on fiscal disaster risk financing options	✓				
Design and develop financial management seminar on contingency/disaster response funds	✓				

Potential Environmental Impacts of Activities Receiving a Negative Determination with Conditions

One category of activity that will be supported by CCAP was determined by the IEE to have potential indirect environmental impacts – the provision of technical assistance to municipal governments for adaptation planning and management. Within this category are three specific activities:

- Provide technical assistance in the development of plans and strategies for climate adaptation.
- Provide technical assistance for the development of policies and regulations to implement climate change adaptation measures.
- Provide or support technical assistance to develop proposals to financing facilities for funding hard-engineered defense structures and/or other large-scale engineered adaptation measures.

These activities are essentially desktop exercises and do not have direct environmental impact. However, the plans, policies, regulations and proposals, if implemented, could have significant environmental impacts, even though they are intended to safeguard lives, property and the economic base from the adverse effects of climate change: For instance:

- Identification of accept and retreat areas may result in the relocation of residents and loss of economic opportunities in those areas.
- Major adaptation construction projects such as hardening or relocating infrastructure and hard-engineered coastline defenses can have significant adverse environmental impacts during and after their construction.

USAID is not the decision-making authority, but USAID's hope is that USAID-funded technical assistance in these areas will have a significant influence over long-term municipal adaptation response, including responses that have potential for significant adverse environmental impacts.

The other six activities for which the IEE made Negative Determinations with conditions have the potential to have both direct and indirect environmental impacts. Through these activities CCAP will plan, implement, and manage GUCs, sub-contracts and other funding mechanisms to support local universities, students, and NGOs for implementation of small-scale climate adaptation measures. The measures that may be supported by CCAP include:

- Climate-resilient house construction (e.g., elevated housing to resist flooding and cyclone resistant housing to resist high winds).
- Construction of site-appropriate latrines.
- Community-based solid waste management.
- Cost-effective potable water solutions, primarily focusing on rainwater harvesting systems.
- Green infrastructure such as mangrove protection and restoration and dune stabilization.
- Other small-scale adaptation measures as appropriate for community-based implementation, but not to include hard-engineered defenses or large-scale construction.

The potential environmental impacts associated with these activities are identified in the following sub-sections.

<u>Climate-Resistant House Construction</u>

All of these activities are expected to be under USAID's definition of small-scale construction (10,000 square feet [930 m^2] and less than $200,000 total cost). As such, they are unlikely to

cause significant adverse environmental impacts. The activities will be implemented within existing households, on land already used for housing, and requiring no relocation. The construction will be done by the owners and local builders, leading to no influx of construction workers.

This activity will have positive social and environmental impacts by raising living areas above flood levels or reducing wind damage from cyclones. This will improve the socio-economic situation of the inhabitants and reduce the risk of pollution associated with flooding and wind damage.

The types of negative impacts that may be associated with this activity include:

- alteration of drainage patterns,
- sedimentation,
- contamination of soil and water by toxic construction materials (paints, solvents, fuels, etc.),
- disturbance of neighbors by noise and dust,
- health and safety risks to construction workers, and
- use of construction material from unsustainable sources.

Construction of Site-Appropriate Latrines

CCAP will develop and implement a program for construction of latrines in flood prone areas, designed to provide sanitation without contaminating the groundwater or surrounding land. This may include a number of site-appropriate latrine designs for areas with high water tables.[2] This activity will improve public health, reduce groundwater and marine water contamination, and reduce the level of human waste on open terrain associated with open defecation and periodic flooding of existing latrines. However, latrine construction can also have negative impacts if not properly designed and implemented.

Latrine construction is small-scale construction, so it can have the same negative impacts as those identified in for Climate-Resistant House Construction. In addition, the impacts may include:

- increased transmission of vector-borne diseases,
- contaminated groundwater, and
- increased disease transmission associated with excreta.

Community-Based Solid Waste Management

CCAP anticipates that the community-based solid waste management activities will be focused on collection, storage and recycling of solid waste in the communities, with ultimate disposal of non-recyclables at off-site facilities designated by the municipality. The activity is expected to have several positive environmental impacts at the residential level, including:

- decreasing transmission of vector-borne diseases by removing habitat for rats and flies,
- reducing contamination of groundwater and marine water/ecosystems,
- reducing flooding by removing solid waste from drainages,
- improving the aesthetics of the communities,
- improving air quality by reducing the in-community burning of solid waste, and

[2] Examples of such latrines are presented at www.unicef.org/eapro/unprotected-EDEchapter6.pdf and http://www.lboro.ac.uk/well/resources/fact-sheets/fact-sheets-htm/lcsahgt.htm#Raised latrines.

- reducing contact with co-mingled hazardous wastes (particularly by animals and children).

Achieving these positive benefits depend upon properly managed solid waste. The environmental impacts of a poorly managed community-based solid waste management programs include:

- increased transmission of vector-borne diseases from improperly designed and managed collection, separation and transportation,
- public nuisance from separation activities, and
- health and safety risks to workers.

Although both Pemba and Quelimane have plans to build engineered sanitary landfills, they currently dispose of collected solid waste in open dumps. Improving waste management in the communities that CCAP works with will result in more waste going to these dumps. Although improving the current waste dumping practices is beyond the scope of CCAP, the project will endeavor to support the municipalities in improving solid waste management in the project's target communities. The waste management activities, if properly designed and operated will remove some wastes from the waste-stream (recyclables) and reduce overall impacts on individuals (as the current dump sites are located away from residential areas, whereas the current waste management practices in the communities allow wastes to accumulate in the residential areas).

Cost-Effective Potable Water Solutions

This activity is designed to improve public health by providing a clean source of drinking water and improve socio-economic conditions by reducing time and money spent in securing and transporting drinking water. The activity involves constructing gutters and holding tanks on existing tin roofed houses.[3] These are basic construction activities, and as such will have the same potential impacts as those reported for Climate-Resistant House Construction. These impacts can be mitigated to the point that they cause no significant impacts by application of USAID small-scale construction guidelines.

Water from roof-harvested rainwater can contain contaminants (most commonly microbiological contaminants[4]) from collection as well as storage. The level of contamination is influenced by the season, the number of preceding dry days, animal activities in close proximity to the roof and rainwater tanks, system management, and system maintenance. The activity could increase gastro-intestinal disease if the systems are not designed, managed and monitored correctly.

Green Infrastructure

This activity will primarily have positive environmental impacts in that it will stabilize sand dunes and reforest cutover mangrove areas. Mangroves provide a multitude of uses to local communities including firewood, medicines and material for construction. In addition, mangroves provide many ecosystem and economic services:

- They provide physical protection from cyclones, winds, waves and storm surges.
- They trap and hold sediment and thereby build land.

[3] Asbestos roofing material is not used in the communities, so there will be no concern with asbestos contamination associated with these systems.

[4] Ahmed, W., T. Gardner, and S. Toze. 2011. Microbiological Quality of Roof-Harvested Rainwater and Health Risks: A Review. J. Environ. Qual. 40:1–9.

- They serve as nurseries and refuges for hundreds of birds, fish and invertebrate species.
- They are essential to the productivity and health of artisanal and offshore fisheries.
- They sequester carbon from the atmosphere, thus mitigating greenhouse gas emissions from fossil fuels and other sources.

Mangrove restoration is needed in many places, but the silvicultural science of how to restore each of the main species (there are nine species in Mozambique) in its proper intertidal zone is not complete. More pilot work on mangrove restoration needs to be done, and to be linked with community-based natural resource management (CBNRM) in coastal communities of fishers-farmers.

Dune stabilization and mangrove planting, however, could create negative environmental impacts if not properly implemented. These impacts include:

- introduction of invasive, exotic species; and
- release of fine sediments in plumes that can degrade nearby aquatic habitat.

Other Small-Scale Adaptation Measures

These activities have not been specifically identified in the project description, but they may include activities such as:

- Climate-resilient construction for public structures (markets, community centers, etc.).
- Climate-resilient construction for large community structures that can serve as shelter during dangerous meteorological events.

It is anticipated that these activities would involve some form of construction, so the associated impacts will be the same as those identified for Climate-Resistant House Construction.

Conditions for Ensuring that Potential Environmental Impacts are Mitigated

The first column in the EMMP Tables presented in the Section 4 of this EMMP present the conditions specified in the IEE for the activities receiving Negative Determinations with conditions.

4. EMMP Tables

The following pages contain the tables that make up the core of the EMMP. There is a table for each activity that received a Negative Determination with conditions in the IEE. Each table lists the conditions for the activity and the associated mitigation measures. The table then identifies the type of monitoring required to insure the mitigation measure is implemented and/or effective, the timing of the monitoring, and the responsible party for the monitoring.

In some cases there are requirements for conducting inspections using prescribed monitoring logs. These monitoring logs are included in this EMMP as annexes. The logs in the annexes are “masters” for the monitoring logs, i.e., they can be directly copied and reproduced for use in the field.

Overall responsibility for implementation of the EMMP rests with the CCAP Deputy Chief of Party for Programs.

Activity 1: Provide technical assistance in the development of plans and strategies for climate adaptation

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The assistance provided shall include: • Analysis of the possible environmental effects of implementation of the plan, strategy, policy or regulation • Recommendations to mitigate, offset or manage those effects	Include the IEE Condition language in the Consultant Agreement Scope of Work	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee
	Ensure that these activities are represented in deliverables	Review and approval of deliverables	Oversight of consultant activities Receipt of deliverables	Deputy Chief of Party for Programs or designee
These findings and recommendations must be actively communicated to the municipality, which shall be encouraged to implement them where feasible	Include the IEE Condition language in the Consultant Agreement Scope of Work	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee
	Ensure that the findings and recommendations are presented to the municipality	Attendance at presentations to the municipality and conversations with municipal authorities	Oversight of consultant activities	Municipal Advisor
	Include findings and recommendations in municipal plans and strategies for climate adaptation	Review of municipal plans and strategies for climate adaptation	When plans and strategies are in draft form as well as when they are finalized	Deputy Chief of Party for Programs or designee
These analyses must be maintained in municipality project files, and summarized in project reporting to USAID	Include environmental analysis, findings and recommendations in municipal files	Review of municipal files	When plans and strategies are in draft and final forms	Municipal Advisor
	Summarize environmental analysis, findings and recommendations in regular project performance reporting to USAID	Prepare summaries for reporting documents	At end of reporting periods	Deputy Chief of Party for Programs or designee
		Include summaries in reporting documents		M&E Specialist Chief of Party
Direct USAID support for the development of plans and measures whose implementation will entail other than very small-scale resettlement requires that: (1) a scoping-level analysis of social and environmental impacts be conducted concurrent with plan/measure development,	Review proposed technical assistance and identify if it will involve development of plans or measures whose implementation will entail other than very small-scale resettlement	Review and approval of proposed technical assistance	Receipt of proposal for technical assistance	Deputy Chief of Party for Programs or designee
	Include language in the Consultant Agreement Scope of Work requiring that the Consultant inform CCAP immediately if it appears that the plans or measures being supported may entail other than very small-scale resettlement	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
(2) this analysis be used to assure that municipal authorities are informed of all the implications of resettlement and its legal obligations according to Mozambican regulations and (3) that USAID must have satisfactory assurances that an EA level analysis, or equivalent, of these impacts will be conducted and duly considered prior to implementation of any such plans	If CCAP identifies that technical assistance is or will be provided for development of plans or measures whose implementation will entail other than very small-scale resettlement, either from its review of proposed technical assistance or from notification from the Consultant, it will initiate a scoping-level analysis of social and environmental impacts be conducted concurrent with plan/measure development	Identify a mechanism for the analysis and prepare appropriate terms of reference	When CCAP becomes aware that technical assistance will be provided for development of plans or measures whose implementation will entail other than very small-scale resettlement	Deputy Chief of Party for Programs or designee
	Present scoping-level analysis to the municipality and secure satisfactory assurances that an EA-level analysis or equivalent will be conducted and duly considered prior to implementation of any such plans	Attendance at presentations to the municipality and conversations with municipal authorities	Oversight of consultant activities	Municipal Advisor
		Written assurances from municipal authorities	After presentation of scoping results	

Activity 2: Provide technical assistance in the development of policies and regulations to implement climate adaptation measures

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The assistance provided shall include: • Analysis of the possible environmental effects of implementation of the plan, strategy, policy or regulation • Recommendations to mitigate, offset or manage those effects	Include the IEE Condition language in the Consultant Agreement Scope of Work	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee
	Ensure that these activities are represented in deliverables	Review and approval of deliverables	Oversight of consultant activities Receipt of deliverables	Deputy Chief of Party for Programs or designee
These findings and recommendations must be actively communicated to the municipality, which shall be encouraged to implement them where feasible.	Include the IEE Condition language in the Consultant Agreement Scope of Work	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee
	Ensure that the findings and recommendations are presented to the municipality	Attendance at presentations to the municipality and conversations with municipal authorities	Oversight of consultant activities	Municipal Advisor
	Include findings and recommendations in municipal policies and regulations for climate adaptation	Review of municipal policies and regulations for climate adaptation	When policies and regulations are in draft form as well as when they are finalized	Deputy Chief of Party for Programs or designee
These analyses must be maintained in municipality project files, and summarized in project reporting to USAID.	Include environmental analysis, findings and recommendations in municipal files	Review of municipal files	When policies and regulations are in draft and final forms	Municipal Advisor
	Summarize environmental analysis, findings and recommendations in regular project performance reporting to USAID	Prepare summaries for reporting documents	At end of reporting periods	Deputy Chief of Party for Programs or designee
		Include summaries in reporting documents		M&E Specialist Chief of Party

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
Direct USAID support for the development of plans and measures whose implementation will entail other than very small-scale resettlement requires that: (1) a scoping-level analysis of social and environmental impacts be conducted concurrent with plan/measure development, (2) this analysis be used to assure that municipal authorities are informed of all the implications of resettlement and its legal obligations according to Mozambican regulations and (3) that USAID must have satisfactory assurances that an EA level analysis, or equivalent, of these impacts will be conducted and duly considered prior to implementation of any such plans	Review proposed technical assistance and identify if it will involve development of plans or measures whose implementation will entail other than very small-scale resettlement	Review and approval of proposed technical assistance	Receipt of proposal for technical assistance	Deputy Chief of Party for Programs or designee
	Include language in the Consultant Agreement Scope of Work requiring that the Consultant inform CCAP immediately if it appears that the plans or measures being supported may entail other than very small-scale resettlement	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee
	If CCAP identifies that technical assistance is or will be provided for development of plans or measures whose implementation will entail other than very small-scale resettlement, either from its review of proposed technical assistance or from notification from the Consultant, it will initiate a scoping-level analysis of social and environmental impacts be conducted concurrent with plan/measure development	Identify a mechanism for the analysis and prepare appropriate terms of reference	When CCAP becomes aware that technical assistance will be provided for development of plans or measures whose implementation will entail other than very small-scale resettlement	Deputy Chief of Party for Programs or designee
	Present scoping-level analysis to the municipality and secure satisfactory assurances that an EA-level analysis or equivalent will be conducted and duly considered prior to implementation of any such plans	Attendance at presentations to the municipality and conversations with municipal authorities	Oversight of consultant activities	Municipal Advisor

Activity 3: Provide or support technical assistance to develop proposals to financing facilities for funding hard-engineered defense structures and/or other large-scale engineered adaptation measures

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The technical assistance shall include consideration and promotion of social and environmental impacts, as well as analysis of alternatives of proposed hard-engineered or large-scale engineered adaptation measures as relevant decision-making criteria.	Include the IEE Condition language in the Consultant Agreement Scope of Work	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee
	Ensure that social and environmental impacts have been promoted by the consultant and considered by the municipality during development of proposals	Review and approval of consultant deliverables Attendance at presentations to the municipality and conversations with municipal authorities	Oversight of consultant activities	Municipal Advisor
The technical assistance shall include ensuring that financing proposals reflect the costs of environmental review and proposed environmental/social mitigation and management measures	Include the IEE Condition language in the Consultant Agreement Scope of Work	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee
	Ensure that financing proposals developed with CCAP technical assistance reflect the costs of environmental review and proposed environmental/social mitigation and management measures	Attendance at presentations to the municipality and conversations with municipal authorities	Oversight of consultant activities	Municipal Advisor
		Review and approval of deliverables	Receipt of deliverables	
The technical assistance shall include development of language for inclusion in the proposals calling for full environmental assessment of the proposed adaptation measures.	Include the IEE Condition language in the Consultant Agreement Scope of Work	Put the language in the Scope of Work	Consultant Agreement development	Deputy Chief of Party for Programs or designee
	Ensure that the required language is included in the deliverables	Review and approval of deliverables	Oversight of consultant activities	Deputy Chief of Party for Programs or designee
			Receipt of deliverables	
If CCAP plans to engage in detailed technical design of any hard- or large-scale engineered adaptation measures, it must consult with the MEO and REA prior to implementing the activity to determine whether an amendment to this IEE is necessary.	Consult with AOR and MEO if screening indicates that detailed technical design may be proposed	Meeting with AOR and MEO	Development of work plan	Chief of Party
	Consult with REA regarding proposed detailed technical design	Consultation with REA	After meeting of Chief of Party, AOR and MEO	AOR & MEO

Activity 4: Provide support to local universities, students, and NGOs for climate resilient house construction

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The implementing partner shall secure the necessary permits from the municipal authorities prior to construction.	Determine if permit is necessary	Consultation with municipal authorities	Before construction commences	Municipal Advisor
	Post permit number on construction premises	Site inspection using the Monitoring Log for Construction Activities (Annex A of this EMMP)	Weekly	Municipal Advisor
The activity shall be designed and implemented using the principles and good construction practices provided in USAID's Sector Environmental Guidelines for Small-Scale Construction.[5] These principles must be specified in the EMMP. Improved house construction must, at a minimum, prevent sediment-heavy run-off from cleared site or material stockpiles to any surface waters or fields with berms, by covering sand/dirt piles, or by choice of location. (Only applies if construction occurs during rainy season.); (2) Construction must be managed so that no standing water on the site persists more than 4 days; (3) fill, sand and	Prohibit construction on sites that are not already used or designated for residential housing or community buildings.	Review and approval of proposed construction activities including a site visit	Receipt of proposal or contract/grant request	Municipal Advisor
	Certify that fill, sand and gravel is not excavated from ecologically sensitive areas.	Put the language in the grant or contract	Grant or contract development	Grants/Sub-contracts Manager
	Identify and implement any feasible measures to increase the probability that lumber is from legal, well-managed sources.			
	Include the conditions in the remainder of this section in the grant or contract for the activity			
	Mark construction site boundary and control access.	Site inspection using the Monitoring Log for Construction Activities (Annex A of this EMMP)	Weekly	Municipal Advisor
	Establish, announce to nearby residents, and adhere to construction timetables that minimize disruption to the normal activities in the construction area and the surrounding community.			
	Concentrate noisiest types of work into as short a period as possible and during least disruptive times of the day.			
	Take measures to keep dust to a minimum.			
	Manage water use and runoff at the construction site so that no on-site standing water persists more than 4 days.			
	Develop and implement appropriate sanitation, occupational health and worker safety measures during construction, including at least the following: • Provide all workers with a safety and health induction that explains safe work practices and the proper use of personal protective equipment.	Review of proposed measures and training plan with implementing partner	Before construction commences	Municipal Advisor

[5] USAID. 2014. Sector Environmental Guidelines: Small-Scale Construction. http://www.usaidgems.org/Sectors/construction.htm

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
gravel must not be extracted from waterways or ecologically sensitive areas, nor knowingly purchased from vendors who do so; (4) IPs must identify and implement any feasible measures to increase the probability that timber is procured from legal, well-managed sources. No complicating factors: The site is not within 30m of a permanent or seasonal stream or water body, will NOT involve displacement of existing settlement/inhabitants, has an average slope of less than 5% and is not heavily forested, in an otherwise undisturbed local ecosystem, or in a protected area. Sites violating one or more of these criteria are subject to the conditions below. For construction in the presence of complicating factors, the formal AFR subproject/subgrant	• Develop and implement an internal system for (1) regular self-inspection of site against occupational health and worker safety standards and (2) tracking violations and accidents.	Review of proposed system with implementing partner	Before construction commences	Municipal Advisor
		Review tracking records during site inspections	Weekly	Municipal Advisor
	• Provide all workers with appropriate personal protective equipment. • Prohibit or restricted smoking to designated smoking area well away from flammable materials. • Provide a first aid kit on-site, as well as someone familiar with its use and trained in basic first aid. • Provide workers with drinking water and sanitary facilities, including a hand-wash station. • Ensure that all workers have an up-to-date tetanus vaccination.	Site inspection using the Monitoring Log for Construction Activities (Annex A of this EMMP)	Weekly	Municipal Advisor
	Avoid subsidence and building stabilization problems through proper foundation excavation, fill placement and borrow pit management. • Maintain spoils at least 1 meter back from the edge of any excavation. • Shore up or slope back the wall of any excavation 1.75 meters or deeper and provide a means of exit (ladder, stair, ramp) at least every 10 meters. • Use well graded material for fill, avoid pockets of segregated materials in fill, and ensure that fill is compacted to recognized standards.	Site inspection using the Monitoring Log for Construction Activities (Annex A of this EMMP)	Weekly	Municipal Advisor
	If construction will occur during the rainy season: • Install temporary drainage, erosion control and sediment retention measures to avoid fouling or flooding public by-ways and adjacent properties or contaminating waterways. • Cover stockpiled construction materials.			
	Solid waste management: • Provide on-site containers for solid waste. • Segregate waste which can be salvaged, re-used or recycled. • Take waste materials to appropriate, designated local disposal areas. • Prohibit burning of waste on-site.			

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
review process, as set out by the AFR Environmental Review Form[6] must be completed and approved by the COR/AOR, MEO and REA prior to construction.	Construction materials management: • Place solvents, lubricants, oils, and other hazardous liquids over a lined area with appropriate secondary containment (e.g., bermed perimeter) to contain spillage. • Build appropriate containment structures around bulk storage tanks to prevent contamination of soil and water. • Handle, store, use and process branded materials in accordance with manufacturer's instructions and recommendations. • Avoid the use of materials containing asbestos. • Use lead-free paint, primers, varnishes, stains, sealants and glazing. • Use water-based paints wherever practical. • Certify that fill, sand and gravel is not excavated from ecologically sensitive areas. • Identify and implement any feasible measures to increase the probability that lumber is from legal, well-managed sources.	Site inspection using the Monitoring Log for Construction Activities (Annex A of this EMMP)	Weekly	Municipal Advisor
	Backfill and/or restore borrow areas before abandonment unless alternative uses for those sites are planned.	Final inspection	Conclusion of construction	Municipal Advisor
	Return drainage patterns disturbed during construction to their original (or better) condition.			

[6] Available at http://www.usaidgems.org/Documents/ComplianceForms/AFR/AFR-EnvReviewForm-20Dec2010.doc

Activity 5: Provide support to local universities, students, and NGOs for latrine construction

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The activity shall be designed and implemented using the principles and best practices provided in USAID's Sector Environmental Guidelines for Water Supply and Sanitation.[7] These principles must be specified in the EMMP. Latrine design/ construction must include provisions to prevent contamination of water supplies, appropriate choice of latrine type given local environmental conditions	**Planning and Design** <u>All Types of Latrines</u> • Devote adequate attention to identifying and addressing social barriers to using latrines including social, cultural and religious factors as well as user customs and preferences that may influence use. • Design latrines to match demand, climate, and availability of water. <u>Pit Latrine</u> • Site open-bottom latrines at least: o 30 meters from water wells, and o 1.5 meters above the high water table. • Use the ventilated improved pit latrine design that traps insect vectors. <u>Composting Toilets</u> • Allow at least 12 months residence time in mature chamber. • Design sealed vaults to hold composting material.	Review and approval of proposed latrine project	Receipt of proposal or contract/grant request	Deputy Chief of Party for Programs or designee
	Construction <u>All Types of Latrines</u> • Accompany all latrines with a hand washing station	Site inspection using the Monitoring Log for Latrines (Annex B of this EMMP)	Conclusion of construction	Municipal Advisor

[7] USAID. 2014. Sector Environmental Guidelines: Water Supply and Sanitation. http://www.usaidgems.org/Sectors/watsan.htm

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
(e.g. pit latrines are rarely suitable in locations where the water table is high), provision of handwash stations, and development and implementation of a system for ongoing latrine cleaning and maintenance.	**Operation and Maintenance** All Types of Latrines • Develop and implement a socially and culturally appropriate hygiene promotion strategy that promotes hand washing, proper latrine use, and latrine cleaning and maintenance requirements.	Review of proposed promotion strategy	Before promotion commences	Municipal Advisor
		Attendance at a sample of promotional activities	During promotion campaign	
		Site inspection and reporting using the Monitoring Log for Latrines (Annex B of this EMMP)	Semi-annually	Municipal Advisor initially and then transfer responsibility to Implementing Partner, including the responsibility to report to the Municipal Advisor on inspection results
	• Ensure the use of a reliable system for safely emptying latrines and transporting the collected material off-site. Pit Latrine • If material is collected from latrines, ensure that it is adequately treated and not directly applied to fields or otherwise disposed of improperly. • Properly decommission pit latrines. Do not leave pits open. Fill in unused capacity with rocks or soil.	Review and approval of proposed latrine project	Receipt of proposal or contract/grant request	Deputy Chief of Party for Programs or designee
		Site inspection and reporting using the Monitoring Log for Latrines (Annex B of this EMMP)	Semi-annually	Municipal Advisor initially and then transfer responsibility to Implementing Partner, including the responsibility to report to the Municipal Advisor on inspection results
	Composting Toilets (all) • Test samples from mature chamber after fallow period for Ascaris eggs and fecal coliforms to assess level of sterilization.	10% sample of mature chambers	After 12 months retention	
	• Allow at least 12 months residence time in mature chamber • Ensure that the systems will be properly operated and maintained so that the soil amendment taken out after the treatment period is truly sanitized.	Site inspection using the Monitoring Log for Latrines (Annex B of this EMMP)	Semi-annually	

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
	Composting Toilets (non-urine diverting) • Maintain humidity of composting material above 60% and supplement excreta with generous quantities of carboniferous material (dry leaves, straw, etc.). • If using movable-batch systems check removable containers for leaks before installing. Composting Toilets (urine diverting) • Maintain humidity of composting material below 20% and supplement excreta with alkaline material (ashes or lime) to increase pH.	Site inspection using the Monitoring Log for Latrines (Annex B of this EMMP)	Semi-annually	Municipal Advisor initially and then transfer responsibility to Implementing Partner, including the responsibility to report to the Municipal Advisor on inspection results

Activity 6: Provide support to local universities, students, and NGOs for community-based solid waste management

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The activity shall be designed and implemented using the principles and best practices provided in USAID's Sector Environmental Guidelines for Solid Waste Generation, Handling, Treatment, and Disposal.[8] Solid waste management activities should at a minimum: promote composting/anaerobic digestion of organic material; use of appropriate trucks/vehicles for waste collection based on local conditions; and segregation, safe handling, and training on management of hazardous waste.	Using a participatory planning approach and USAID and UNEP guidelines[9], design and implement an integrated solid waste management plan for the community.	Review and approval of proposed solid waste management project	Receipt of proposal or contract/grant request	Deputy Chief of Party for Programs or designee
	Secure a sustainable source of funding for implementation of the solid waste management plan.			
	Establish sound, transparent fiscal and administrative management.			
	Where technically and economically feasible, minimize the quantity of waste that must be disposed through elimination, recovery, reuse, recycling, remanufacturing, composting and similar methods.	Attendance at a sample of planning activities	During solid waste management planning phase	Community Advisor
	Select appropriate collection technology for the community.			
	Integrate already-established informal sectors into the waste collection process.			
	Introduce transfer points where local waste is separated (i.e., material that can be economically reused, recycled, remanufactured or composted are removed) before being transported to the disposal site.	Review and approval (if the IP is seeking support for implementation) of solid waste management plan	End of the planning phase	Deputy Chief of Party for Programs or designee
	Design and implement a public awareness strategy to promote proper solid waste management and inform the residents of their responsibilities for implementation of the solid waste management plan.	Review and approval of proposed latrine project	Receipt of proposal or contract/grant request	Deputy Chief of Party for Programs or designee
		Attendance at a sample of promotional activities	During promotion campaign	Community Advisor
	Manage non-hazardous wastes and special or hazardous wastes separately.	Review and approval (if the IP is seeking support for implementation) of solid waste management plan	End of the planning phase	Deputy Chief of Party for Programs or designee
	If communal bins are used for collection, ensure that the bins have lids to exclude animals, insects, and rain.			
	Collect and transport all waste effectively and efficiently.			
	Transport to and dispose of waste in a disposal site designated by the Municipality.			

[8] USAID. 2014. Sector Environmental Guidelines: Solid Waste Generation, Handling, Treatment, and Disposal. http://www.usaidgems.org/Sectors/solidWaste.htm

[9] UNEP. 2005. Solid Waste Management. http://www.unep.org/ietc/InformationResources/Publications/SolidWasteManagementPublication/tabid/79356/Default.aspx

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
	Site and manage transfer points so as not to cause a public nuisance for nearby residents.	Site inspection using the Monitoring Log for Solid Waste Management (Annex C of this EMMP)	Quarterly	Municipal Advisor initially and then transfer responsibility to Implementing Partner, including the responsibility to report to the Municipal Advisor on inspection results

Activity 7: Provide support to local universities, students, and NGOs for construction of roof-harvested rainwater systems

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The activity shall be designed and implemented using the principles and good construction practices provided in USAID's Sector Environmental Guidelines for Small-Scale Construction[10] and using best practices for roof-harvested rainwater, such as those of UNEP/OAS and IRD.[11]	Same as for Small-Scale Construction for Activity 4, Climate Resilient House Construction	Same as for Small-Scale Construction for Activity 4	Same as for Small-Scale Construction for Activity 4	Same as for Small-Scale Construction for Activity 4
	Planning and Design • Conveyance systems shall be appropriately sized for the area of the collection surface and rainfall patterns, and be constructed of an inert material. • Tank designs shall be appropriately sized for the area of the collection surface, rainfall patterns and anticipated consumption needs, constructed of an inert material and include: o A solid secure cover. o A coarse inlet filter. o An overflow pipe. o A manhole, sump, and drain to facilitate cleaning. o An extraction system that does not contaminate the water; e.g., a tap or pump. o A soakaway to prevent spilled water from forming puddles near the tank. • Catchment surfaces shall be made of nontoxic material. Painted surfaces should be avoided if possible, or, if the use of paint is unavoidable, only nontoxic paint should be used (e.g., no lead-, chromium-, or zinc-based paints). • Overhanging vegetation should be avoided.	Review and approval of proposed roof-harvested rainwater project	Receipt of proposal or contract/grant request	Deputy Chief of Party for Programs or designee
	Operation and Maintenance Develop and implement: • A procedure for diverting from the storage tank the "foul flush"	Review and approval of proposed roof-harvested rainwater project	Receipt of proposal or contract/grant request	Deputy Chief of Party for Programs or designee

[10] USAID. 2014. Sector Environmental Guidelines: Small-Scale Construction. http://www.usaidgems.org/Sectors/construction.htm

[11] UNEP/OAS. 1998. Rainwater harvesting from rooftop catchments. In: Sourcebook of Alternative Technologies for Freshwater Augmentation in Latin America and the Caribbean. http://www.oas.org/dsd/publications/unit/oea59e/ch10.htm and
International Relief and Development (IRD). 2013. Roof-Top Rainwater Harvesting Best Practices Guide. USAID-funded. http://www.ird.org/uploads/IRD_RWH_Guide_10June13.pdf

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
	(the water captured during the first 10 minutes of the first rainfall after a long dry spell). • Periodic inspection and cleaning of the storage tank, including scrubbing of the inner walls and floors with a chlorine solution followed by thorough rinsing. • Periodic inspection and cleaning of gutters and downpipes • Maintenance of a secure cover on the storage tank. • Treatment of collected water before using it for drinking water. • Periodic maintenance on any pumps used to lift water out of the storage tank.	Site inspection using the Monitoring Log for Roof-Harvested Rainwater Systems (Annex D of this EMMP)	Semi-Annually (at least once per year shortly after the first rainfall after a long dry spell)	Municipal Advisor initially and then transfer responsibility to Implementing Partner, including the responsibility to report to the Municipal Advisor on inspection results
	Each community system (those on schools, markets or other public structures) shall include establishment (or designation) and training of a community organization to maintain the system. If an existing community organization is designated, a written acceptance of the designation shall be secured.	Review and approval of proposed roof-harvested rainwater project Written acceptance of maintenance responsibility from existing community organization (if so identified in proposal)	Receipt of proposal or contract/grant request	Deputy Chief of Party for Programs or designee
The implementing partner shall develop and implement a training program for water recipients on the operation and maintenance of roof-harvested rainwater systems, the potential for microbiological contamination, and proper treatment for safe drinking water.	Develop and implement a training program for water recipients on the operation and maintenance of roof-harvested rainwater systems, the potential for microbiological contamination, and proper treatment for safe drinking water	Attendance at a sample of training events	During training campaign	Community Advisor
The implementing partner shall conduct follow-up inspections to ensure that proper operation and maintenance and treatment of drinking water are being practice	The implementing partner shall conduct follow-up inspections to ensure that proper operation and maintenance and treatment of drinking water are being practice	Site inspection using the Monitoring Log for Roof-Harvested Rainwater Systems (Annex D of this EMMP)	Semi-Annually	Implementing Partner
	The implementing partner shall report on its inspections	Report to CCAP on results of monitoring	Quarterly	Implementing Partner

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
Prior to drinking water provision, the project will prepare and receive approval for a Water Quality Assurance Plan (WQAP). The IEE had several specific conditions regarding the content of the WQAP, which are listed in the text below this table.	The WQAP will be developed as per the specific conditions listed below this table. The specific monitoring and mitigation measures will be determined in the WQAP.	To be determined in the WQAP.	To be determined in the WQAP.	To be determined in the WQAP.

IEE Conditions for the content of the WQAP

- The WQAP will be prepared in consultation with the cognizant AOR/COR and/or Activity Manager. Its purpose is to ensure that all new and rehabilitated USAID-funded sources of drinking water provide water that is safe for human consumption. The completed WQAP must be approved by: the AOR/COR and/or Activity Manager; the MEO; and the REA.
- Once approved, the WQAP must be implemented in full, and for the duration of drinking water activities. Implementation must include testing of water prior to making the supply point available to beneficiaries.
- The WQAP constitutes a key element of the project's EMMP. As with all other elements of the EMMP, project budgets, workplans, and staffing plans must provide for its full implementation. The approved WQAP must include at minimum the following sections:
- Project information (name of project, name of IP, period of performance, contact information, name of COR/AOR)
- A description of the drinking water points to be subject to the WQAP (approximate numbers, water source(s), technology(ies), general geographic area and installation context).
- An inventory of applicable water quality standards, including those promulgated by USAID, as well as the cognizant host-country regulatory entity/entities. (The World Health Organization [WHO] *Guidelines for Drinking-water Quality* may be substituted for host-country standards that are not accessible, unclear or outdated.)
- The responsible parties/entities/institutions, under host country law or policy, for monitoring and managing water quality of the water points subject to this WQAP. If other than the IP, a summary assessment of their capacity and their involvement.
- A technical assessment of the equipment, resources and expertise that will be required to monitor and report on compliance with applicable water quality standards. This should include, for example, sampling materials, reagents, transportation, storage, laboratory facilities and capacity, communications, training or certification criteria, etc.
- Protocol for initial testing and ongoing monitoring of water quality, to include:
    - contaminants for which initial testing and ongoing monitoring will be conducted
    - water quality assessment methods, including test type and frequency
    - data management and reporting; the project must maintain a central registry of monitoring results by water point and date; GPS coordinates for water points are expected

    - designation of ‘responsible party’ for each aspect of protocol response procedures in the event water does not meet water quality standards
- Justification for NOT testing to any applicable standard
- Sustainability strategy to the extent that responsibility for longer-term water quality assurance will transition in part or whole to project partners or beneficiaries. A summary assessment of the capacity of these partners, and any capacity building to be undertaken
- The WQAP should follow any applicable USAID guidance, as well as local laws, regulations and policies.

Activity 8a: Provide support to local universities, students, and NGOs for implementation of green infrastructure climate adaptation measures – Activities Not Requiring an ERF

If the activity:

(a) disturbs an area less than 1/5 hectare AND
(b) has a total cost less than $200,000, AND
(c) will not involve resettlement, AND
(d) is not in or adjacent to an undisturbed local ecosystem

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
Only native species growing in the region shall be used for any planting activities	Only native species growing in the region shall be used for any planting activities	Review revegetation plan to ensure that native, regionally common species are proposed	Plan development and review	Technical Specialist
		Site inspections	During planting and after emergence	Municipal Advisor
The activity shall be designed and implemented using the principles and good practices provided in USAID AFR's guidelines for Community-Based Natural Resource Management.[12]	All activities shall apply USAID[8,13] and IUCN[14] best practices as follows: • Work with the community to select sites for rehabilitation. • Design and implement a public awareness strategy to inform the community about the value of the resource to be rehabilitated. • Design and implement a training program for the participants in the rehabilitation activity on the ecological and physical needs of the biological system that will be rehabilitated as well as the methodology for its rehabilitation. • Produce and follow a written implementation and management plan for the activity and the area to be managed. • Monitor post-implementation conditions in the area rehabilitated (survival rates, species composition, growth rates, etc.)	Review and approval of proposed green infrastructure project Attendance a sample of public awareness activities and training events Review of written implementation and management plan Review of monitoring plan Implement monitoring plan and report to CCAP	Receipt of proposal or contract/grant request During initial operational period End of planning phase End of rehabilitation phase Post rehabilitation as per monitoring plan	Deputy Chief of Party for Programs or designee Community Advisor Deputy Chief of Party for Programs or designee Deputy Chief of Party for Programs or designee Implementing Partner

[12] USAID. 2009. Chapter 2: Community-Based Natural Resource Management. in Environmental Guidelines for Small-Scale Activities in Africa. http://www.encapafrica.org/egssaa/cbnrm.pdf

[13] Watson, Andrew (ed.). 2000. Workshop on Principles and Approaches for CBNRM in Malawi, Document 10: Proceedings. Community Partnerships for Sustainable Resource Management (COMPASS), a USAID-funded project, Workshop held in November 17-19, 1999. http://pdf.usaid.gov/pdf_docs/Pnadb169.pdf

[14] Adapted from: Jagt, Corjan J. van der and Nico Rozemeijer. 2002. Practical Guide to Facilitating CBNRM in Botswana. Occasional Paper No. 8, IUCN/SNV CBNRM Support Programme. http://www.cbnrm.bw/publications/CBNRM%20Support%20Programme%20paper%208.pdf

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
	Green infrastructure activities that will create a natural resource that will eventually produce a marketable product and will require long-term management (e.g., mangrove reforestation) shall be implemented via community-based natural resource management (CBNRM) and abide by the following principles: • Communities shall take the lead role in identifying, planning and implementing CBNRM activities. • The natural resources being managed and resource boundaries shall be clearly defined. • To ensure sustainability, short and long-term benefits directly related to use of the resources should be tangible and obvious to the communities. • The CBNRM organization shall: o Possess legitimate authority to make decisions. o Be managed transparently and democratically, so that leaders can be held accountable. o Be the prime beneficiaries of resource management. o Promote equitable sharing of benefits and distribution of costs. o Secure tenure to the area being managed. o Be gender sensitive. o Be supportive of other community priorities and needs even if these differ from the service providers' mandate and agenda (i.e., be good community citizens). • The roles and responsibilities of other participating stakeholders should be clearly defined. • The CBNRM organization should form partnerships with national and/or regional NGOs and government authorities that can provide technical assistance and support. • A capacity needs assessment and long-term capacity-building plan should be prepared and implemented. • Planning and development must be coordinated with other institutions that have responsibility for or governance over the resources.	Review and approval of proposed green infrastructure project Proof of tenure Review of capacity needs assessment and long-term capacity-building plan	Receipt of proposal or contract/grant request Prior to grant reward End of planning phase	Deputy Chief of Party for Programs or designee Grants/Sub-contracts Manager Community Advisor

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The activity shall be designed and implemented using the principles and good practices provided in USAID's Sector Environmental Guidelines for Small-Scale Construction[15]	Same as for Small-Scale Construction for Activity 4, Climate Resilient House Construction	Same as for Small-Scale Construction for Activity 4	Same as for Small-Scale Construction for Activity 4	Same as for Small-Scale Construction for Activity 4

[15] USAID. 2014. Sector Environmental Guidelines: Small-Scale Construction. http://www.usaidgems.org/Sectors/construction.htm

Activity 8b: Provide support to local universities, students, and NGOs for implementation of green infrastructure climate adaptation measures – Activities Requiring an ERF

If the activity:

(a) disturbs an area greater than 1/5 hectares OR
(b) has a total cost greater than $200,000, OR
(c) involves resettlement, OR
(d) is in or adjacent to an undisturbed local ecosystem

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
Complete the Environmental Review Form (ERF) in Annex E and the accompanying Environmental Review Report (ERR), if required	To be determined in the ERF/ERR.	To be determined in the ERF/ERR.	To be determined in the ERF/ERR.	To be determined in the ERF/ERR.
The environmental mitigation and monitoring conditions established by the approved ERF/ERR must be generally consistent with applicable good-practice guidance in USAID's Sector Environmental Guidelines[16]	To be determined in the ERF/ERR.	Review and approval of the ERF/ERR.	Receipt of ER/ERR F	Deputy Chief of Party for Programs or designee
The implementing partner must assure implementation of any environmental mitigation and monitoring conditions specified by the approved ERF/ERR	To be determined in the ERF/ERR.	Put the language in the grant or contract	Grant or contract development	Grants/Sub-contracts Manager

[16] http://www.usaidgems.org/sectorGuidelines.htm

Activity 9a: Provide support to local universities, students, and NGOs for other small-scale, community-based adaptation measures, not including hard-engineered defenses or large-scale construction – Activities <u>Not Requiring</u> an ERF

If the scale of the construction associated with the activity:

(a) disturbs an area less than 1,000 m^2, AND
(b) has a total cost less than $200,000 , AND
(c) will not involve resettlement, AND
(d) is not in or adjacent to an undisturbed local ecosystem

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
The implementing partner shall secure the necessary permits from the municipal authorities prior to construction.	Post permit number on construction premises	Observation of permit number during site visits	Periodic site visits during construction	Municipal Advisor
The activity shall be designed and implemented using the principles and good construction practices provided in USAID's Sector Environmental Guidelines for Small-Scale Construction[17]	Same as for Small-Scale Construction for Activity 4, Climate Resilient House Construction	Same as for Small-Scale Construction for Activity 4	Same as for Small-Scale Construction for Activity 4	Same as for Small-Scale Construction for Activity 4

[17] USAID. 2014. Sector Environmental Guidelines: Small-Scale Construction. http://www.usaidgems.org/Sectors/construction.htm

Activity 9b: Provide support to local universities, students, and NGOs for other small-scale, community-based adaptation measures, not including hard-engineered defenses or large-scale construction – Activities Requiring an ERF

If the scale of the construction associated with the activity:

(a) disturbs an area greater than 1,000 m^2, OR
(b) has a total cost greater than $200,000, OR
(c) will involve resettlement, OR
(d) is in or adjacent to an undisturbed local ecosystem

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
Complete the Environmental Review Form (ERF) in Annex E and the accompanying Environmental Review Report (ERR), if required	To be determined in the ERF/ERR.	To be determined in the ERF/ERR.	To be determined in the ERF/ERR.	To be determined in the ERF/ERR.
The environmental mitigation and monitoring conditions established by the approved ERF/ERR must be generally consistent with applicable good-practice guidance in USAID's Sector Environmental Guidelines[18]	To be determined in the ERF/ERR.	Review and approval of the ERF/ERR.	Receipt of ER/ERR F	Deputy Chief of Party for Programs or designee
The implementing partner must assure implementation of any environmental mitigation and monitoring conditions specified by the approved ERF/ERR	To be determined in the ERF/ERR.	Put the language in the grant or contract	Grant or contract development	Grants/Sub-contracts Manager

[18] http://www.usaidgems.org/sectorGuidelines.htm

10. General Conditions

IEE Condition	Mitigation Measure	Monitoring	Timing	Responsible Party
Integration and implementation of EMMP into work plans, budgets and regular project performance reporting	Integrate EMMP requirements into annual work plans and budgets	Preparation of work plans	Annually	Chief of Party
	"Environmentalized" at least one core project performance indicator[19]	At least one core indicator	After approval of EMMP	Deputy Chief of Party for Programs or designee
	Report on EMMP monitoring activities and results in quarterly progress reports	Preparation of quarterly progress reports	Quarterly	M&E Specialist
The prime implementing partner shall assure that sub-contracts and sub-grant agreements reference and require compliance with relevant IEE conditions	Include the CCAP Environmental Compliance Language for Sub-Contracts and Grants (Annex F of this EMMP) in the sub-contract or grant agreement	Put the language in the sub-contract or grant agreement	Sub-contract or grant agreement development	Grant Specialist
Assurance of sub-grantee and sub-contractor capacity and compliance	Develop and implement an environmental compliance training program	Program developed Number of training sessions given	After approval of EMMP Annually	Deputy Chief of Party for Programs or designee M&E Specialist

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

ANNEX A: Monitoring Log for Construction Activities

Coastal City Adaptation Project
Monitoring Log for Construction Activities

Site Name:	
Implementing Partner:	
Contract Number:	
Type of Activity:	

Date	Name of Inspector

Mitigation Measure	Date	Yes	No	If No, Action Taken
Is the necessary permit number on posted construction premises				
Are construction site boundaries marked and access controlled?				
Have construction timetables that minimize disruption to the normal activities in the construction area and the surrounding community been established, announced to nearby residents, and adhered to?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Are the noisiest types of work concentrated into as short a period as possible and during least disruptive times of the day?				
Have measures been taken to keep dust to a minimum?				
Is water use and runoff managed at the construction site so that no on-site standing water persists more than 4 days?				
Are records available of regular self-inspection of site against occupational health and worker safety standards and tracking violations and accidents?				
Have all workers been provide with appropriate personal protective equipment as per the proposed sanitation, occupational health and worker safety measures?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Is smoking prohibited or restricted to designated smoking area well away from flammable materials?				
Is a first aid on-site, as well as someone familiar with its use and trained in basic first aid?				
Are workers provided with drinking water and sanitary facilities, including a hand-wash station?				
Do all workers have an up-to-date tetanus vaccination?				
Are spoils maintained at least 1 meter back from the edge of any excavation?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Are the walls of any excavation 1.75 meters or deeper shored up or sloped back and provided a means exit (ladder, stair, ramp) at least every 10 meters?				
Are materials for fill, well graded and placed to avoid pockets of segregated materials in fill, and compacted to recognized standards?				
If it is the rainy season, are temporary drainage, erosion control and sediment retention measures installed to avoid fouling or flooding public by-ways and adjacent properties or contaminating waterways?				
If it is the rainy season, are stockpiled construction materials covered?				
Are on-site containers for solid waste provided?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Is waste which can be salvaged, re-used or recycled segregated?				
Are waste materials being taken to an appropriate, designated local disposal area?				
Are they prohibiting burning of waste on-site?				
Are solvents, lubricants, oils, and other hazardous liquids placed over a lined area with appropriate secondary containment (e.g., bermed perimeter) to contain spillage?				
Are appropriate containment structures built around bulk storage tanks to prevent contamination of soil and water				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Are branded materials handled, stored, used and processed in accordance with manufacturer's instructions and recommendations				
Is the use of asbestos containing materials being prohibited?				
Are the paints, primers, varnishes, stains, sealants and glazing paints being used lead free and are water-based paints being used wherever practical?				

ANNEX B: Monitoring Log for Latrines

Coastal City Adaptation Project
Monitoring Log for Latrines

Site Name:	
Implementing Partner:	
Contract Number:	
Type of Activity:	

Date	Name of Inspector

Mitigation Measure	Date	Yes	No	If No, Action Taken
Do latrines appear to be in regular use?				
Are the latrines clean and the areas around them free of latrine wastes?				
Are the latrines free of significant unpleasant odors?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Do the latrines appear to be free of insects?				
Are hand washing stations with soap available?				
Are hole coverings in place?				
If the pit latrines have been recently emptied, was the material removed properly disposed of, as opposed to being used directly as soil amendments or other use that would contaminate the environment?				
If the pit latrines have been recently decommissioned, have the pits been filled in with rocks or soil?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
If s have recently been emptied, was the waste in the mature chamber allowed 12 months residence time before being removed?				
, are generous quantities of carboniferous material (dry leaves, straw, etc.) be added to the active chamber?				
If the latrine is a non-urine diverting composting toilet using movable-batch systems, do the containers appear to not be leaking?				
If the latrine is a urine diverting composting toilet, is alkaline material (ashes or lime) being added to increase pH?				

ANNEX C: Monitoring Log for Solid Waste Management

Coastal City Adaptation Project
Monitoring Log for Solid Waste Management

Site Name:	
Implementing Partner:	
Contract Number:	
Type of Activity:	

Date	Name of Inspector

Mitigation Measure	Date	Yes	No	If No, Action Taken
Are non-hazardous wastes and special or hazardous wastes managed separately? (Are they collected separately and disposed of separately?)				
If communal bins are used for collection, do they have lids to exclude animals, insects and rain?				
If communal bins are used for collection and they have lids, are the residents closing the lids after duping their solid waste into the containers?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Is the waste being collected and transported effectively and efficiently? (You should mark “No” if bins are generally over-flowing with solid waste or waste is piling up around the bins.)				
Is the collected waste being transported to and disposed of in a disposal site designated by the Municipality?				
Are the transfer points or recycling collection sites, if they exist, being managed so as not to cause a public nuisance for nearby residents (such as bad smells, attracting vermin, noise, etc.)?				

ANNEX D: Monitoring Log for Roof-Harvested Rainwater Systems

Coastal City Adaptation Project
Monitoring Log for Roof-Harvested Rainwater Systems

Site Name:	
Implementing Partner:	
Contract Number:	
Type of Activity:	

Date	Name of Inspector

Mitigation Measure	Date	Yes	No	If No, Action Taken
Can the owner of the system explain to you the procedure for diverting from the storage tank the "foul flush" (the water captured during the first 10 minutes of the first rainfall after a long dry spell)?				
If you are there shortly after the first rainfall after a long dry spell, does it appear from the condition of the water in the tank that they have used the procedure to divert "foul flush" from the tank?				
Can the owner of the system tell you the last time he/she inspected and/or cleaned the storage tank?				
If the owner says the tank was cleaned within the last month, does the inside of the tank appear to be clean?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Does the owner of the system have a schedule for inspecting or cleaning the tank?				
Have the owner describe to you how he/she cleans the tank. Does the description include: scrubbing of the inner walls and floors with a chlorine solution followed by thorough rinsing?				
Can the owner of the system tell you the last time he/she inspected and/or cleaned the gutters and downpipes?				
If the owner says the gutters and downpipes were cleaned within the last month, do they appear to be clean?				
Does the owner of the system have a schedule for inspecting or cleaning the gutters and downpipes?				

Mitigation Measure	Date	Yes	No	If No, Action Taken
Does the cover on the storage tank appear to be well-maintained and secure?				
Does the owner of the system treat the collected water before using it for drinking water?				
Can the owner of the system describe how he/she treats the water before using it as drinking water?				
If pumps used to lift water out of the storage tank, does the owner have a maintenance schedule for the pumps?				

ANNEX E:

Africa Bureau ENVIRONMENTAL REVIEW FORM & INSTRUCTIONS

Note to USAID Staff, Consultants & Partners Regarding the: Africa Bureau ENVIRONMENTAL REVIEW FORM & INSTRUCTIONS

Appropriate use

1. The Environmental Review Form (ERF) can only be used when and as specifically authorized by the IEE or EA governing the project or program in question. For IEEs, this authorization is made in the form of a negative determination with conditions. *Authorized use of the ERF is limited to the specific class of activities enumerated in the determination.*

2. The BEO will not clear an IEE or EA that authorizes use of the ERF unless ALL of the following are true:

   a. **the general nature or potential scope of the activities for which the ERF will be used are known** at the time the IEE is written (e.g. small infrastructure rehabilitation, training and outreach for a specified purpose, etc.).

   b. **these activities will be executed under a grant or subproject component of a parent project/program.** The ERF cannot be used in lieu of a request for categorical exclusion, IEE or IEE amendment when new activities/components are to be added to existing projects, programs or sector portfolios.

   c. of their general nature, **foreseeable adverse environmental impacts are small or easily controllable with BASIC MITIGATION TECHNIQUES that can BE SUCCESSFULLY IMPLEMEMENTED BY FIELD STAFF.**

   d. of their general nature, the **activities are NOT large-scale.**

   There is no formal AFR standard for "small-scale activities." Over time, AFR has developed some "rules of thumb" for activities that are BOTH small-scale AND pose very low risks of significant adverse impacts. These are used in the ERF itself: e.g. construction involving less than 10,000 sq ft total disturbed area and less than $200,000 total cost; road rehabilitation of less than 10km total length without change to alignment or right-of-way. Activities moderately larger than these "rules of thumb" are also small-scale, but are treated by the ERF as being of moderate/unknown risk, thus requiring an environmental review report.

   What does "moderately larger" mean? What about activities for which there is no "rule of thumb" built into the ERF? Absolute physical scale and funding level, physical scale relative to the surrounding built environment, population affected, and number of locations affected are among the factors relevant to determining whether a class of activities is "small scale." The IEE must provide enough information for the BEO to assess whether the activities proposed for subproject review will be indeed be small scale within their implementation context.

Adaptation of the form

1. Text in **UNDERLINE & BLUE HIGHLIGHT** **MUST** be customized to the particular project/mission.
2. Yellow highlighted text must be reviewed and then modified, deleted or retained, as appropriate.
3. Both the form AND instructions should be generally reviewed and modified to reflect the specific project/program and implementation context.
4. The adapted form and instructions must be appended to the Initial Environmental Examination for the overall project.
5. For NRM-oriented programs (especially those involving CBNRM, ecotourism, enterprises exploiting non-timber forest products, etc.) consider adaptation and use of the Supplemental Environmental Review Form for NRM sector activities.

Questions and Guidance

General guidance on subproject review is available on the MEO Resource Center at www.encapafrica.org/meoEntry.htm. For specific questions, contact the Mission Environmental Officer or Regional Environmental Advisor. Good-practice examples of completed forms, environmental review reports and environmental management plans are available from USAID/AFR's ENCAP project: encapinfo@cadmusgroup.com; www.encapafrica.org.

Revision history:

Major update on 24 June 2010 to clarify appropriate use, revise Env Review Report structure, and update clearance requirements. Formatting and presentation revised 17 Jan 2005. Revised April 13, 2004, to include biosafety considerations and better reflect the Supplemental Environmental Review Form for NRM sector activities.

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Instructions for environmental review of XXX Program Subprojects/Sub-grants

Note: *These instructions accompany the attached "Environmental Review Form for USAID/XXX Program/Project Activities" (ERF).* ***Follow, but DO NOT SUBMIT, these instructions.***

Who must submit the Environmental Review Form (ERF)?

ALL Implementing Partners seeking to implement [describe qualifying activities] under the XXX Program/Project must complete, sign and submit the ERF to [insert name & email of C/AOTR].
Authority: Use of the ERF for these activities is mandated by the governing Initial Environmental Examination (IEE) for the XXX Project/Program. The IEE can be downloaded at: *[insert URL].*

No implementation without an approved ERF

The proposed activities cannot be implemented and no "irreversible commitment of resources" for these activities can be made until the ERF (including Environmental Review Report, if required, see Step 4, below) is cleared by the C/AOTR, the Mission Environmental Officer (MEO) and the Regional Environmental Advisor (REA).
NOTE: USAID may deny clearance to the ERF, or may require modification and re-submission for clearance.

Environmental management requirements resulting from the ERF

If the ERF requires preparation of an Environmental Review Report (see Step 4, below), any environmental management measures specified in the approved Environmental Review Report MUST be implemented.

Situations in which additional environmental review is required.

If the ERF finds that one of more of the proposed activities has the potential to cause significant adverse environmental impacts, the activities must be redesigned or an IEE or full Environmental Assessment must be conducted and approved prior to implementation.
If USAID determines that the proposed activities are outside the scope of activities for which use of this form is authorized, the activities must be redesigned or an IEE or IEE Amendment will be required.
In either situation, USAID will confer with the partner to determine next steps. Note: If an IEE or EA is required, all environmental management measures specified in the IEE or EA must then be implemented.

Step 1. Provide requested "Applicant information" (Section A of the ERF)

Step 2. List all proposed activities

In Section B of the form, list all proposed activities.
Activities are a desired accomplishment or output: e.g. seedling production, road rehabilitation, school construction. Each activities has entailed *actions*—for example, road rehabilitation includes survey, grading, culvert construction, compaction, etc. *Be aware of these entailed actions, but do NOT list them.*
List activities DESCRIPTIVELY. For example, "training" is not a sufficient activity listing. The listing must specify WHO is being trained, and in WHAT.

Step 3a. Screening: Identify low-risk and high-risk activities

For *each* activity you have listed in Section B of the form, refer to the list below to determine whether it is a listed low-risk or high-risk activity.

If an activity is specifically identified as "very low risk" or "high risk" in the list below, indicate this in the "screening result" column in Section B of the form.

Very low-risk activities (Activities with low potential for adverse biophysical or health impacts; including §216.2(c)(2))	**High-risk activities** (Activities with high potential for adverse biophysical or health impacts; including §216.2(d)(1))
Provision of education, technical assistance, or training. (Note that activities directly affecting the environment. do not qualify.) **Community awareness** initiatives. **Controlled agricultural experimentation** exclusively for the purpose of research and field evaluation confined to small areas (normally under 4 ha./10 acres). This must be carefully monitored and no protected or other sensitive environmental areas may be affected). **Technical studies and analyses** and other information generation activities not involving intrusive sampling of endangered species or critical habitats. **Document or information transfers**. **Nutrition, health care or family planning**, EXCEPT when (a) some included activities could directly affect the environment (construction, water supply systems, etc.) or (b) biohazardous (esp. HIV/AIDS) waste is handled or blood is tested. **Small-scale construction.** Construction or repair of facilities if total surface area to be disturbed is under 10,000 sq. ft. (approx. 1,000 sq. m.) (and when no protected or other sensitive environmental areas could be affected). **Intermediate credit.** Support for intermediate credit arrangements (when no significant biophysical environmental impact can reasonably be expected). **Maternal and child feeding** conducted under Title II of Public Law 480. **Title II Activities.** Food for development programs under Title III of P.L. 480, when no on-the-ground biophysical interventions are likely. **Capacity for development.** Studies or programs intended to develop the capability of recipients to engage in development planning. (Does NOT include activities directly affecting the environment) **Small-scale Natural Resource Management activities** for which the answer to ALL SUPPLEMENTAL SCREENING QUESTIONS (see *Natural Resources supplement*) is "NO."	**River basin development** **New lands development** **Planned resettlement** of human populations. **Penetration road building, or rehabilitation** of roads (primary, secondary, some tertiary) over 10 km length, and any roads which may pass through or near relatively undegraded forest lands or other sensitive ecological areas **Substantial piped water supply and sewerage** construction. **Major bore hole or water point construction.** **Large-scale irrigation; Water management structures** such as dams and impoundments **Drainage of wetlands** or other permanently flooded areas. **Large-scale agricultural mechanization.** **Agricultural land leveling.** **Procurement or use of restricted use pesticides**, or wide-area application in non-emergency conditions under non-supervised conditions. (Consult MEO.) **Light industrial plant production or processing** (e.g., sawmill operation, agro-industrial processing of forestry products, tanneries, cloth-dying operations). **High-risk and typically not funded by USAID:** **Actions affecting protected areas and species.** Actions determined likely to significantly degrade protected areas, such as introduction of exotic plants or animals. Actions determined likely to jeopardize threatened & endangered species or adversely modify their habitat (esp. wetlands, tropical forests) **Activities in forests, including:** ▪ **Conversion of forest lands** to rearing of livestock ▪ **Planned colonization of forest** lands ▪ **Procurement or use of timber harvesting equipment** ▪ **Commercial extraction of timber** ▪ **Construction of dams** or other water control structures that flood relatively undegraded forest lands ▪ **Construction, upgrading or maintenance of roads** that pass through relatively non-degraded forest lands. (Includes temporary haul roads for logging or other extractive industries)

(This list of activities is taken from the text of 22 CFR 216 and other applicable laws, regulations and directives)

Step 3b: Identifying activities of unknown or moderate risk.

All activities NOT identified as "very low risk" or "very high risk" are considered to be of "unknown or moderate risk." Common examples of moderate-risk activities are given in the table below. Check "moderate or unknown risk" under screening results in Section B of the form for ALL such activities.

Common examples of moderate-risk activities

CAUTION:
If ANY of the activities listed in this table may adversely impact (1) protected areas, (2) other sensitive environmental areas, or (3) threatened and endangered species and their habitat, THEY ARE NOT MODERATE RISK. All such activities are HIGH RISK ACTIVITIES.

Small-scale agriculture, NRM, sanitation, etc. (You may wish to define what "small scale" means for each activity)

Agricultural experimentation. Controlled and carefully monitored agricultural experimentation exclusively for the purpose of research and field evaluation of MORE than 4 ha.

> **NOTE Biotechnology/GMOs:** No *biotechnology testing or release* of any kind are to take place within an assisted country until the host countries involved have drafted and *approved* a regulatory framework governing biotechnology and biosafety.
>
> All USAID-funded interventions which involve biotechnologies are to be informed by the ADS 211 series governing "Biosafety Procedures for Genetic Engineering Research". In particular this guidance details the required written approval procedures needed before transferring or releasing GE products to the field.

Medium-scale construction. Construction or rehabilitation of facilities or structures in which the surface area to be disturbed exceeds 10,000 sq. ft (1000 sq meters) but funding level is $200,000 or less. (E.g. small warehouses, farm packing sheds, agricultural trading posts, produce market centers, and community training centers.)

Rural roads. Construction or rehabilitation of rural roads meeting the following criteria:

- Length of road work is less than ~10 km
- No change in alignment or right of way
- Ecologically sensitive areas are at least 100 m away fr om the road and not affected by construction or changes in drainage.
- No protected areas or relatively undegraded forest are within 5 km of the road.

Title II & III Small-Scale Infrastructure. Food for Development programs under Title II or III, involving small-scale infrastructure with the known potential to cause environmental harm (e.g., roads, bore holes).

Quantity imports of commodities such as fertilizers

Sampling. Technical studies and analyses or similar activities that could involve intrusive sampling, of endangered species or critical habitats. (Includes aerial sampling.)

Water provision/storage. Construction or rehabilitation of small-scale water points or water storage devices for domestic or non-domestic use. Water points must be located where no protected or other sensitive environmental areas could be affected.

> **NOTE**: USAID guidance on water quality requires testing for arsenic, nitrates, nitrites and coliform bacteria.

Support for intermediate credit institutions when indirect environmental harm conceivably could result.

Institutional support grants to NGOs/PVOs when the activities of the organizations are known and may reasonably have adverse environmental impact.

Pesticides. . Small-scale use of USEPA-registered, least-toxic general-use pesticides. Use must be limited to NGO-supervised use by farmers, demonstration, training and education, or emergency assistance.

> **NOTE**: Environmental review (see step 5) must be carried out consistent with USAID Pesticide Procedures as required in Reg. 16 [22 CFR 216.3(b)(1)].

Nutrition, health care or family planning, if (a) some included activities could directly affect the environment (e.g., construction, supply systems, etc.) or (b) biohazardous healthcare waste (esp. HIV/AIDS) is produced, syringes are used, or blood is tested.

Step 4. Determine if you must write an Environmental Review Report

Examine the "screening results" as you have entered them in Table 1 of the form.

i. If ALL the activities are "very low risk," then no further review is necessary. In Section C of the form, check the box labeled "very low risk activities." Skip to Step 8 of these instructions.

ii. If ANY activities are "unknown or moderate risk," you MUST complete an ENVIRONMENTAL REVIEW REPORT addressing these activities. Proceed to Step 5.

iii. If ANY activities are "high risk," note that USAID's regulations usually require a full environmental assessment study (EA). Because these activities are assumed to have a high probability of causing significant, adverse environmental impacts, they are closely scrutinized. *Any* proposed high-risk activity should be discussed in advance with USAID. Activity re-design is often indicated.

In some cases, it is possible that reasonable, achievable mitigation and monitoring can reduce or eliminate likely impacts so that a full EA will not be required. If the applicant believes this to be the case, the Environmental Review Report must argue this case clearly and thoroughly. Proceed to Step 5.

Step 5. Write the Environmental Review Report, if required

The Environmental Review Report presents the environmental issues associated with the proposed activities. It also documents mitigation and monitoring commitments. Its purpose is to allow the applicant and USAID to evaluate the likely environmental impacts of the project.

For a single, moderate risk activity, the Environmental Review Report is typically a SHORT 4–5 page document. The Report will typically be longer for (1) multiple activities; (2) activities of high or unknown risk; and/or (3) when a number of impacts and mitigation measures are being identified and discussed. The Environmental Review Report follows the outline below. Alternate outlines are acceptable, so long as all required information is covered.

A. **Summary of Proposal.** Very briefly summarize background, rationale and outputs/results expected. (Reference proposal, if appropriate).

B. **Description of Activities.** For all moderate and high-risk activities listed in Section B of the ERF, succinctly describe location, siting, surroundings (include a map, even a sketch map). Provide both quantitative and qualitative information about actions needed during all project phases and who will undertake them. (All of this information can be provided in a table). If various alternatives have been considered and rejected because the proposed activity is considered more environmentally sound, explain these.

C. **Site-specific Environmental Situation & Host Country Requirements.** Describe the environmental characteristics of the site(s) where the proposed activities will take place. Focus on site characteristics of concern—e.g., water supplies, animal habitat, steep slopes, etc. With regard to these critical characteristics, is the environmental situation at the site degrading, improving, or stable?

Also note applicable host country environmental regulations and/or policies. (For example, does the project require host country environmental review or permitting? Building approval? Etc.)

NOTE: provide site-specific information in this section, NOT country-level information. General information about country level conditions should already be contained in the IEE governing the XXX project/program.

D. Environmental Issues, Mitigation Actions, and Findings. For ALL proposed activities

i. Briefly note the potential environmental impacts or concerns presented by the proposed activities (if any). *For guidance, refer to Africa Bureau's Environmental Guidelines for Small-Scale Activities; available at www.encapafrica.org/egssaa.htm.*

As per the *Small-Scale Guidelines*, consider direct, indirect and cumulative impacts across the activity lifecycle (i.e. impacts of site selection, construction, and operation, as well as any problems that might arise with abandoning, restoring or reusing the site at the end of the anticipated life of the facility or activity). Note that "environment" includes air, water, geology, soils, vegetation, wildlife, aquatic resources, historic, archaeological or other cultural resources, people and their communities, land use, traffic, waste disposal, water supply, energy, etc.)

ii. Assess the extent to which these *potential* impacts and concerns are significant in the context of the specific activity design and site.

iii. Set out the mitigation actions to be employed to address these issues.

Mitigation actions are means taken to avoid, reduce or compensate for impacts. Mitigation measures must be reasonable and implementable by field staff. They should be consistent with the good practice guidance provided in Africa Bureau's Environmental Guidelines for Small-Scale Activities; (www.encapafrica.org/egssaa.htm.) Cite this or other guidance used for mitigation design.

iv. Reach one of three findings regarding the potential impacts:

a. Significant adverse impacts are very unlikely. Of its nature, the activity in question is very unlikely to result in significant, adverse environmental impacts. Special mitigation or monitoring is not required.
Note: this conclusion is rarely appropriate for high-risk activities.

b. With implementation of the specified mitigation and monitoring, significant adverse impacts are very unlikely.

c. Significant adverse impacts are possible. That is, it is not possible to rule out significant adverse environmental impacts even given reasonable, attainable mitigation and monitoring.

In this case, USAID and the partner will consult regarding next steps. If the activity is to go forward in its current form, additional analysis in the form of an IEE or EA will be required.

Format and structure of this section. Choose a format and structure that presents the necessary information clearly and succinctly.
Table formats can be used. In the example below, the proposed activity was construction of an institutional facility on a 7500m3 plot bisected by a seasonal stream providing drainage to the local area. One potential impact of the activity was reduction of or alteration to the drainage eco-service provided by the seasonal stream.

Issue or cause for concern	Analysis	Finding and conditions/mitigation actions
The seasonal stream running through the plot drains an area of at least 2 km^2 to the WNW. Diminution or alteration to this drainage "service" could result in increased upstream pooling & flooding during the rainy season, with associated property damage and increased breeding habitat for disease vectors.	As indicated at left, this impact only arises if the drainage "service " provided by the seasonal stream is diminished or altered in some adverse manner. So long as compound design maintains the existing service level and construction is managed without disruption to stream flow, actual adverse impact will be negligible or zero.	Per analysis at left, this potential impact is not significant, so long as the following mitigations are implemented: 1. Total stream capacity cannot be diminished by the development of the compound. (Stream channel on average is 3m x 1m.) 2. The stream must remain substantially in the same channel and cannot, e.g., be re-routed around the property. 3. If construction will result in an interruption to stream flow, provision must be made to provide a temporary bypass. Temporary damming of stream flow is not permissible. 4. Post-construction, the stream bed within the property, including point-of-entry (e.g. via culvert under perimeter wall) must be maintained free of obstructions to flow.

E. Environmental Mitigation and Monitoring Plan (EMMP). Set out how compliance with mitigation actions will be monitored/verified. This includes specifying WHO will be responsible for the various mitigation actions, and HOW implementation of the mitigation actions will be tracked/verified.

Also specify how you will report to USAID on the implementation of mitigation actions. (You are REQUIRED to provide your C/AOTR with sufficient information on the status of mitigation implementation for USAID to effectively fulfill its oversight and performance monitoring role.)
Again, choose a format and structure that presents the necessary information clearly and succinctly. EMMPs are typically in table format, and often include a compliance log or "monitoring record" section that records implementation status of the various mitigation actions. The EMMP with current monitoring log can then simply be submitted to the C/AOTR with the quarterly or 6-month project report, satisfying the environmental compliance reporting requirement. .

The most basic EMMP format is

Mitigation action	Responsible Party	Monitoring/Verification Method	Monitoring Record (date, result, corrective actions taken, if any)

For additional EMMP formats and examples, see the ENCAP EMMP factsheet, available via www.encapafrica.org/meoEntry.htm

F. **Other Information**. Where possible and as appropriate, include photos of the site and surroundings; maps; and list the names of any reference materials or individuals consulted. (Pictures and maps of the site can substantially reduce the written description required in parts B & C)

Step 6. Transcribe findings from the Environmental Review Report to the ERF

For each high-risk or unknown/moderate-risk activity, transcribe your finding from the environmental review report to the last column of Section B of the ERF.

Step 7. Sign certifications (Section C of former.)

Step 8. Submit form to USAID C/AOTR. Be sure to attach the Environmental Review Report, if any.

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Environmental Review Form for XXX Program Subprojects/Subgrants

Follow, but do not submit, the attached instructions.

A. Applicant information

Organization	Parent grant or project
Individual contact and title	Address, phone & email (if available)
Proposed subproject /subgrant (brief description)	Amount of funding requested
	Period of performance
	Location(s) of proposed activities

B. Activities, screening results, and findings

Proposed activities (Provide DESCRIPTIVE listing. Continue on additional page if necessary)	**Screening result** (Step 3 of instructions)			**Findings** (Step 6 of instructions. Complete for all moderate/unknown and high-risk activities ONLY)		
	Very Low Risk	High-Risk*	Moderate or unknown risk*	significant adverse impacts are very unlikely	With specified mitigation, significant adverse impacts are very ulikely	Significant Adverse impacts are possible
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

*These screening results require completion of an Environmental Review Report

C. Certification:

I, the undersigned, certify that:

1. The information on this form and accompanying environmental review report (if any) is correct and complete.
2. Implementation of these activities will not go forward until specific approval is received from the C/AOTR.
3. All mitigation and monitoring measures specified in the Environmental Review Report will be implemented in their entirety, and that staff charged with this implementation will have the authority, capacity and knowledge for successful implementation.

(Signature) _____ (Date) _____

(Print name) _____ (Title) _____

Note: if screening results for *any activity* are "high risk" or "moderate or unknown risk," this form is not complete unless accompanied by an environmental review report.

BELOW THIS LINE FOR USAID USE ONLY

Notes:

1. For clearance to be granted, the activity MUST be within the scope of the activities for which use of the ERF is authorized in the governing IEE. **Review IEE before signature.** If activities are outside this scope, deny clearance and provide explanation in comments section. The Partner, C/AOTR, MEO and REA must then confer regarding next steps: activity re-design, an IEE or EA.
2. Clearing an ERF containing one or more findings that **significant adverse impacts are possible** indicates agreement with the analysis and findings. It does NOT authorize activities for which "significant adverse impacts are possible" to go forward. It DOES authorize other activities to go forward. The Partner, C/AOTR, MEO and REA must then confer regarding next steps: activity re-design, an IEE or EA.

Clearance record

C/AOTR ☐ Clearance given ☐ Clearance denied	(print name)	(signature)	(date)
USAID/XXXX MEO ☐ Clearance given ☐ Clearance denied	(print name)	(signature)	(date)
Regional Env. Advisor (REA) ☐ Clearance given ☐ Clearance denied	(print name)	(signature)	(date)
Bureau Env. Officer (BEO)* ☐ Clearance given ☐ Clearance denied	(print name)	(signature)	(date)

C/AOTR, MEO and REA clearance is required. BEO clearance is required for all "high risk" screening results and for findings of "significant adverse impacts possible. The BEO may review "

Note: if clearance is denied, comments must be provided to applicant (use space below & attach sheets if necessary)

Note to individuals adapting the:
* Supplemental Environmental Review Form for NRM Activities
for use on a particular program/activity:

- This supplement is oriented around major resource/issue clusters and asks "leading questions" about the actual potential for unintended harmful impacts, especially of CBNRM/ ecotourism activities.
- **Underlined & blue** highlighted text MUST be modified to reflect project and mission name
- Questions should be modified to respond to the needs of individual projects. This is intended to be a "living" document subject to adaptation.

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17 Jan 2005

Supplement to the Environmental Review Form for Natural Resources Activities

Additional Screening Criteria for Natural Resource Activities under XXX Program

Purpose

This is a supplement to the "Instructions for environmental review of XXX Program/Project activities." It is to be used for natural *resources-based activities*, including:

- Community-Based Natural Resource Management (CBNRM)
- Ecotourism
- Natural resources-based enterprise development with micro- and small enterprises

This supplement provides additional questions to ascertain whether these proposed activities should be categorized as "very low risk:"

- If the answers to ALL the questions that follow are "NO," then the proposed natural resource-based activity is considered "very low risk."
- If the answer to ANY question is "YES," the activity CANNOT be considered "very low risk."

Screening criteria

Will the activities…	YES	NO
Natural Resources		
Accelerate erosion by water or wind?		
Reduce soil fertility and/or permeability?		
Alter existing stream flow, reduce seasonal availability of water resources?		
Potentially contaminate surface water and groundwater supplies?		
Involve the extraction of renewable natural resources?		
Lead to unsustainable use of renewable natural resources such as forest products?		
Involve the extraction of non-renewable natural resources?		
Restrict customary access to natural resources?		
Reduce local air quality through generating dust, burning of wastes or using fossil fuels and other materials in improperly ventilated areas?		
Affect dry-season grazing areas and/or lead to restricted access to a common resource?		
Lead to unsustainable or unnecessarily high water extraction and/or wasteful use?		
Ecosystems and Biodiversity		
Drain wetlands, or be sited on floodplains?		
Harvest wetland plant materials or utilize sediments of bodies of water?		
Lead to the clearing of forestlands for agriculture, the over-harvesting of valuable forest species?		
Promote in-forest bee keeping?		
Lead to increased hunting, or the collection of animals or plant materials?		
Increase the risks to endangered or threatened species?		
Introduce new exotic species of plants or animals to the area?		

Will the activities…	**YES**	**NO**
Lead to road construction or rehabilitation, or otherwise facilitate access to fragile areas (natural woodlands, wetlands, erosion-prone areas)?		
Cause disruption of wildlife migratory routes?		
Agricultural and Forestry Production		
Have an impact on existing or traditional agricultural production systems by reducing seed availability or reallocating land for other purposes?		
Lead to forest plantation harvesting without replanting, the burning of pastureland, or a reduction in fallow periods?		
Affect existing food storage capacities by reducing food inventories or encouraging the incidence of pests?		
Affect domestic livestock by reducing grazing areas, or creating conditions where livestock disease problems could be exacerbated?		
Involve the use of insecticides, herbicides and/or other pesticides?		
Community and Social Issues		
Have a negative impact on potable water supplies?		
Encourage domestic animal migration through natural areas?		
Change the existing land tenure system?		
Have a negative impact on culturally important sites in the community?		
Increase in-migration to the area?		
Create conditions that lead to a reduction in community health standards?		
Lead to the generation of non-biodegradable waste?		
Involve the relocation of the local community?		
Potentially cause or aggravate land-use conflicts?		

ANNEX F
Coastal City Adaptation Project
Environmental Compliance Language for Sub-Contracts and Grants

Instructions: Replace the wording in blue highlighting with appropriate wording for the particular sub-contract/grant agreement.

1a) The Foreign Assistance Act of 1961, as amended, Section 117 requires that the impact of USAID's activities on the environment be considered and that USAID include environmental sustainability as a central consideration in designing and carrying out its development programs. This mandate is codified in Federal Regulations (22 CFR 216) and in USAID's Automated Directives System (ADS) Parts 201.5.10g and 204, which, in part, require that the potential environmental impacts of USAID-financed activities are identified prior to a final decision to proceed and that appropriate environmental safeguards are adopted for all activities. The sub-contractor's/grant recipient's environmental compliance obligations under these regulations and procedures are specified in the following paragraphs of this sub-contract/grant agreement.

1b) In addition, the sub-contractor/grant recipient must comply with host country environmental regulations unless otherwise directed in writing by USAID . In case of conflict between host country and USAID regulations, the latter shall govern.

1c) No activity funded under this sub-contract/grant agreement will be implemented unless an environmental threshold determination, as defined by 22 CFR 216, has been reached for that activity, as documented in a Request for Categorical Exclusion (RCE), Initial Environmental Examination (IEE), or Environmental Assessment (EA) duly signed by the Bureau Environmental Officer (BEO). (Hereinafter, such documents are described as "approved Regulation 216 environmental documentation.")

2a) An IEE (insert IEE # and download reference here, if available) has been approved for CCAP, which is funding this sub-contract/grant agreement. The IEE covers activities expected to be implemented under this contract/grant agreement. USAID has determined that a **Negative Determination with conditions** applies to one or more of the proposed activities. This indicates that if these activities are implemented subject to the specified conditions, they are expected to have no significant adverse effect on the environment. The sub-contractor/grant recipient shall be responsible for implementing all IEE conditions pertaining to activities to be funded under this sub-contract/grant agreement. These conditions are specified in paragraphs 2b through 2x of this sub-contract/grant agreement.

2b) Condition

2c) Condition

2d) etc.

3a) An Environmental Mitigation and Monitoring Plan (EMMP) has been approved for CCAP, which is funding this sub-contract/grant agreement. The IEE covers activities expected to be implemented under this contract/grant agreement. The sub-contractor/grant recipient shall be responsible for implementing specific EMMP requirements pertaining to activities to be funded under this sub-contract/grant agreement. These requirements are specified in paragraphs 3b through 3x of this sub-contract/grant agreement.

3b) Requirement from EMMP with "implementing partner" as responsible party

3c) Requirement from EMMP with “implementing partner” as responsible party
3d) etc.
4) The sub-contractor/grant recipient will be responsible for reporting to CCAP on implementation of the conditions specified in paragraphs 2b through 2x of this sub-contract/grant agreement and the EMMP requirements specified in paragraphs 3b through 3x of this sub-contract/grant agreement via its regular performance reporting as required in paragraph paragraph number of reporting requirements.