

COVER SHEET: INITIAL ENVIRONMENTAL EXAMINATION

PROGRAM/ACTIVITY DATA:

Program/Activity Number: Participating Agency Program Agreement (PAPA): AEG-T-00-07-00003-00

Country/Region: West Africa

Program/Activity Title: Sustainable and Thriving Environments for West Africa Regional Development, Phase III (STEWARD III)

Funding Begin: September 2011 **Funding End:** September 2015 **LOP Amount:** \$ 18,000,000

Sub-Activity Amount: \$ n/a

IEE Prepared By: Patrick Hall & Mark Stoughton, **Current Date:** 9 June 2012
The Cadmus Group, Inc. (patrick.hall@cadmusgroup.com;
mark.stoughton@cadmusgroup.com); Robert Buzzard, USAID/W-Afr REA

Expiration Date: June 30, 2017

Submitted By (Project Point-of-Contact): Stephanie Otis, USFS (srotis@fs.fed.us)

IEE Amendment (Y/N): N If "yes", Filename & date of original IEE _____ ; _____

However, this IEE is prepared pursuant to requirements of the 2007 IEE for the Participating Agency Program Agreement (PAPA) under which STEWARD III is implemented.

ENVIRONMENTAL ACTION RECOMMENDED: (Place X where applicable)

Categorical Exclusion: X Negative Determination: X
Positive Determination: _____ Deferral: X

ADDITIONAL ELEMENTS: (Place X where applicable)

CONDITIONS X PVO/NGO: X

SUMMARY OF FINDINGS:

Purpose. STEWARD III is executed by the US Forest Service (USFS) under a Participating Agency Program Agreement (PAPA). The IEE for the PAPA requires that *at minimum* a project-specific IEE be developed for STEWARD III, and submitted to the cognizant bureau (AFR).

Program Description. STEWARD III will build on the two previous project phases, continuing USG commitment to promoting biodiversity conservation and addressing the adverse effects of global climate change in West Africa. Specifically, the goals of STEWARD III are to:

1. Conserve biodiversity and improve rural livelihoods in critical trans-boundary landscapes in the Upper Guinean Forest ecosystem;
2. Produce harmonized policies and legal frameworks for NRM in a regional context; and
3. Contribute to national strategic plans on climate change in the Mano River Union states and promote resiliency in the face of climate change.

It is anticipated that the proposed project activities will be implemented at varying scales by multiple partners across the three STEWARD III geographic Priority Zones:

- Outamba-Kilimi National Park (Sierra Leone) and Madina Oula/Soya/Oure Kaba subprefectures (Guinea)
- Nimba (Guinea/ Côte d'Ivoire) and East Nimba Nature Reserve (Liberia)
- Tai National Park (Côte d'Ivoire) and Grebo National Forest (Liberia)

STEWARD III project activities will be implemented via a combination of ST/TA led by the USFS and cooperative agreements and contracts with partner organizations. Specific activities are grouped according to the following eight Activity Areas:

1. Advance USAID Regional and bilateral strategies in environment, climate change, food security, and water, sanitation & hygiene (WASH).
2. Conserve biodiversity in trans-boundary Priority Zones
3. Support and improve forest-based sustainable livelihoods, food security and market linkages
4. Improve national and regional frameworks for Reduced Emission from Deforestation and Forest Degradation (REDD+)
5. Improve resiliency of local communities in adapting to climate change
6. Increase sustainable access to safe water and sanitation and improve hygiene
7. Support policy reform for trans-boundary conservation and climate change
8. Support knowledge management and promotion and sharing of better management practices in NRM, climate change and WASH

Recommended Determinations are found in Section 3 of this IEE. That section is organized according to the presentation of proposed activities and expected results in the STEWARD III Program Description of April 3, 2011. Please note that:

- Categorical exclusion are recommended pursuant to 22CFR 216.2(c)(2)(i), (iii) and (v); and
- Negative determinations, and negative determinations with conditions are recommended pursuant to 22 CFR 216.3(a)(2)(iii).

In addition to the specific conditions enumerated in Section 3, the negative determinations recommended in this IEE are contingent on full implementation of the following general monitoring and implementation requirements:

1. **Inclusion of Regulation 216 language.** Program Managers and Contracting and Agreement Officers Representatives (CORs/AORs) will ensure that the environmental compliance Regulation 216 language is included in all solicitations and awards. By explicitly enumerating the environmental compliance responsibilities of project implementers, use of this recommended language can help ensure that environmental compliance requirements stemming from the Regulation 216 process are fully integrated into project designs, work plans, and implementation of activities.
2. **IP Briefings on Environmental Compliance Responsibilities.** The AOR shall provide the IP with a copy of this IEE and brief the IP on their environmental compliance responsibilities.

3. Development of EMMP. The IP shall develop and provide for AOR review and approval an Environmental Mitigation and Monitoring Plan (EMMP) documenting how the project will implement and verify all IEE conditions.

The EMMP shall identify how the IP shall assure that IEE conditions that apply to activities supported under subcontracts and sub-grants will be implemented. (In the case of large sub-grants or subcontracts, the IP may elect to require the sub-grantee/subcontractor to develop their own EMMP.)

(Note: sample EMMP formats are available at www.encapafrika.org/meoEntry.htm.)

4. Integration and implementation of EMMP. The IP shall integrate the EMMP into its project work plan and budgets, implement the EMMP and report on its implementation as an element of regular project performance reporting.

The IP shall assure that sub-contractors and sub-grantees integrate implementation of IEE conditions, where applicable, into their own project work plans and budgets and report on their implementation as an element of sub-contract or grant performance reporting.

5. Integration of compliance responsibilities in sub-contracts and grant agreements. The IP shall assure that future sub-contracts and sub-grant agreements and/or significant modifications to existing agreements, reference and require compliance with relevant elements of these conditions.

6. Assurance of sub-grantee and sub-contractor capacity and compliance. The IP shall assure that sub-grantees and subcontractors have the capability to implement the relevant requirements of this IEE. The IP shall, as and if appropriate, provide training to sub-grantees and subcontractors in their environmental compliance responsibilities and in environmentally sound design and management (ESDM) of their activities.

7. USAID monitoring responsibility. As required by ADS 204.5.4, the AOR will actively monitor and evaluate whether the conditions of this IEE are being implemented effectively and whether there are new or unforeseen consequences arising during implementation that were not identified and reviewed in this IEE. If new or unforeseen consequences arise during implementation, the AOR will suspend the activity and initiate appropriate, further review in accordance with 22 CFR 216. USAID Monitoring shall include regular site visits.

8. New or modified activities. As part of its Work Plan, and all Annual Work Plans thereafter, IPs, in collaboration with the AOR, shall review all on-going and planned activities to determine if they are within the scope of this IEE.

- If any IP adds new activities or makes substantial modifications to existing activities, an amendment to this IEE addressing these activities shall be prepared for USAID review and approval. No such new activities shall be undertaken prior to formal approval of this amendment.
- Any ongoing activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be halted until an amendment to the documentation is submitted and written approval is received from USAID.

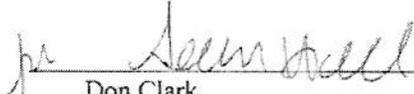
9. Compliance with Host Country Requirements. Nothing in this IEE substitutes for or supersedes IP, sub grantee and subcontractor responsibility for compliance with all applicable host country laws and regulations. The IP, sub grantees and subcontractor must comply with host country environmental regulations unless otherwise directed in writing by USAID. However, in case of conflict between host country and USAID regulations, the latter shall govern.

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

CLEARANCE:

ROECCR Director 
Anne Dix

Date: 6/11/12

Acting Mission Director: 
Don Clark

Date: 6/11/12

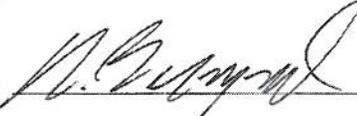
CONCURRENCE:

AFR Bureau Environmental Officer: 
Brian Hirsch

Date: 07/06/12

Filename: _____

ADDITIONAL CLEARANCES:

Regional Environmental Advisor 
Robert Buzzard

Date: 11 June 12

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

CLEARANCE:

ROECCR Director _____ Date: _____
Anne Dix

Acting Mission Director: _____ Date: _____
Don Clark

CONCURRENCE:

AFR Bureau Environmental Officer: _____ Date: _____
Brian Hirsch

Filename: _____

ADDITIONAL CLEARANCES:

Regional Environmental Advisor _____ Date: _____
Robert Buzzard

INITIAL ENVIRONMENTAL EXAMINATION

Program/Activity Number: Sustainable and Thriving Environments for West Africa Regional Development, Phase III (**STEWARD III**)

Country/Region: USAID/West Africa

1. Background and Activity Description

1.1 Purpose and scope of IEE

The *Sustainable and Thriving Environments for West Africa Regional Development* (STEWARD) project is a forest conservation and sustainable livelihoods program that was conceived as USAID's regional effort at biodiversity conservation in trans-boundary areas of West Africa's Upper Guinean Forest. The STEWARD project is implemented under a Participating Agency Program Agreement (PAPA) between USAID and the U.S. Forest Service (USFS) International Programs. Following successful implementation of Phases I and II, USAID and USFS will continue STEWARD into Phase III, a four-year project, through September 2015.

STEWARD III will be implemented by a USFS-led long-term project team—in a capacity analogous to that of a prime contractor—in conjunction with cooperative agreements, fixed-price contracts, and short-term technical consultants. STEWARD III will continue the commitment of USFS and USAID to promoting US foreign assistance goals of biodiversity conservation and addressing the adverse effects of global climate change. The goal of STEWARD III is to promote regional strategies for and promising approaches to biodiversity conservation, improved livelihoods and sustainable natural resource management (NRM) in the Upper Guinean Forest ecosystem of Guinea, Sierra Leone, Liberia, Cote d'Ivoire and Ghana. A regional or 'transboundary' approach to achieving this goal is appropriate because: i) threats to biodiversity operate with little concern for national borders; ii) NRM policies, regulations and conservation activities of the forest-states are not complementary and in some cases impede effective conservation at landscape scale; and iii) working only within the national boundaries of the forest states limits effective, rapid extension and scaling up of promising approaches to conservation, livelihood improvement and climate change mitigation emerging from STEWARD pilot sites.

The PAPA between USAID and USFS continues to enable inter-agency collaboration on STEWARD. In addition to allowing incremental bilateral buy-ins to the STEWARD project, the PAPA IEE prescribes a course of action for ensuring that the potential negative environmental impacts of proposed project activities are adequately addressed. The governing PAPA IEE¹ states in its Summary of Findings:

The defined tasks to be implemented under this PAPA include training, capacity building, technical assistance and institutional strengthening in forestry-related topics. These tasks do not include actual on-the-ground forestry activities such as tree planting, harvesting, road building, etc. However, these activities would be expected to inform and stimulate changes in how forest activities are conducted in partner countries.

¹ PAPA with the USDA Forest Service: Management for conservation and sustainable use of natural resources -- principally agricultural. 28 February 2007. Approval: Joyce Jatko, EGAT Bureau Environmental Officer.

For these reasons, the PAPA IEE requires that *at a minimum* a project-specific IEE will be developed for STEWARD III, and submitted to the cognizant bureau (AFR) for approval. Therefore, this IEE for the STEWARD III project is submitted in accordance with the conditions specified in the governing PAPA IEE. This STEWARD III IEE reviews the reasonably foreseeable effects of the project's activities on the environment. For activities that could result in some environmental impact (eg., providing TA on land-use strategies, forest management practices, silviculture recommendations, natural resource management options), recommendations and activities undertaken by USFS personnel and STEWARD III implementing partners (IPs) will be in conformance with the environmental determinations and Threshold Decisions presented in Section 3 of this IEE. The IEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation. The USFS and STEWARD III IPs are responsible for the implementation of the mitigation and monitoring measures stipulated in this IEE, with the USFS having ultimate responsibility.

1.2 Project Background and Overview of Activities

Note: this section provides an overview of STEWARD III activities. Activities are described in more detail in Section 3.

Phase I of the STEWARD project (October 2007 – June 2009) focused on promoting a regional approach to biodiversity conservation in West Africa through collaboration with leading local and international environmental organizations, governments, regional working groups, and local communities. Phase II of the STEWARD project (July 2009 – February 2011) expanded upon Phase I activities with the objective of strengthening trans-boundary NRM in West Africa to support peace building, biodiversity conservation, knowledge sharing, and policy harmonization.

STEWARD III continues the commitment of the USG to promote biodiversity conservation and to address the adverse effects of global climate change. Specifically, the goals of STEWARD III are to:

1. Conserve biodiversity and improve rural livelihoods in critical trans-boundary landscapes in the Upper Guinean Forest ecosystem;
2. Produce harmonized policies and legal frameworks for NRM in a regional context; and
3. Contribute to national strategic plans on climate change in the Mano River Union states and promote resiliency in the face of climate change.

At this stage in project planning and development, it is anticipated that the following proposed activities—grouped by “Activity Area”—will be implemented at varying scales by multiple partners across the three STEWARD III geographic Priority Zones:

- Outamba-Kilimi National Park (Sierra Leone) and Madina Oula/Soya/Oure Kaba subprefectures (Guinea)
- Nimba (Guinea/ Côte d'Ivoire) and East Nimba Nature Reserve (Liberia)
- Tai National Park (Côte d'Ivoire) and Grebo National Forest (Liberia)

STEWARD III Project Activity Areas:

1. Advance USAID Regional and bilateral strategies in environment, climate change, food security, and water, sanitation & hygiene (WASH).
2. Conserve biodiversity in trans-boundary Priority Zones
3. Support and improve forest-based sustainable livelihoods, food security and market linkages
4. Improve national and regional frameworks for Reduced Emission from Deforestation and Forest Degradation (REDD+)
5. Improve resiliency of local communities in adapting to climate change
6. Increase sustainable access to safe water and sanitation and improve hygiene (WASH)
7. Support policy reform for trans-boundary conservation and climate change
8. Support knowledge management and promotion and sharing of better management practices in NRM, climate change and WASH

The particular program of work (however preliminary) used to prepare this IEE is subject to modification by mutual agreement between USAID/West Africa and USFS International Programs as needed to accommodate changing circumstances.

STEWARD III activities will be implemented via a combination of ST/TA led by the USFS and cooperative agreements or contracts to partner organizations. Partner organizations will be identified and funded through a project-specific funding facility, the STEWARD Strategic Activities Fund (SAF). The SAF will be processed through the USFS Grants and Agreement Office and USFS Department of Acquisitions Management Office by the STEWARD III Program Manager. The SAF will serve as a leveraging tool, maximizing resources available to West African partners, by providing funds for direct interventions. It is envisioned that the SAF will support cooperative agreements, contracts, cost-sharing agreements, and purchase orders to public sector institutions, local associations, community-based organizations, businesses, local and international NGOs, and individuals whose proposed activities will contribute to project results and meet STEWARD' s eligibility and evaluation criteria. Additional information on the SAF is available online at:

https://www.fbo.gov/index?s=opportunity&mode=form&id=8a7e02e34ab7dc663ab5359c2f207323&tab=core&_cvview=1

2. Country and Environmental Information (Baseline Information)

2.1 Locations Affected: Biodiversity and Trans-Boundary NRM in the Upper Guinean Forest Ecosystem

This summary of bio-diversity and natural resource management in the Upper Guinean Forest Ecosystem is based primarily on existing material from the USFS, Conservation International, and the Critical Ecosystem Partnership Fund (CEPF), which has provided more than \$6M in grants and funding for regional bio-diversity conservation in the region since 2000.

Overview.

The Upper Guinean Tropical Forest is one of West Africa's eight major biomes², and originally it covered an estimated 1,265,000km² across six West African states – Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Ghana and Togo (see boxed area of Map 1). The forest is considered a global priority for biodiversity conservation. However, this forest is highly degraded, and it has been dramatically encroached and fragmented. Its biodiversity is severely threatened by an array of land use pressures and unsustainable land use practices; eg., illegal logging, slash and burn agriculture, conversion of natural forest to rubber, cocoa and oil palm plantations, wildlife poaching to supply bush meat markets and unregulated mineral exploitation. Moreover, given the recent history of conflict in several of these countries, the region has critical peace-building needs, with important NRM dimensions.³

USAID and USFS began regional conservation activities under STEWARD Phase I in late 2007 and expanded efforts under STEWARD Phase II beginning in mid-2009. These activities sought to address threats to biodiversity across the Upper Guinean Forest Ecosystem and to capitalize on opportunities to support peace building, conservation, knowledge dissemination and policy harmonization.

² Biomes – the world's major biotic communities, classified according to the predominant vegetation and characterized by adaptations of organisms to that particular environment.

³ US Forest Service International Programs Website: <http://www.fs.fed.us/global/globe/africa/steward.htm>

Map 1: Geographic Coverage of the Upper Guinean Forest Ecosystem (Boxed Area)



Source: Conservation International; available online at:
http://www.biodiversityhotspots.org/xp/Hotspots/west_africa/Pages/default.aspx.

Level and significance of biodiversity. Conservation International has designated the Guinean Forests of West Africa (inclusive of the Upper and Lower Guinean Forest Ecosystems) as a biodiversity hotspot: one of 34 regions worldwide that “hold especially high numbers of endemic species,” but faces “extreme threats and has already lost at least 70 percent of its original natural vegetation.”⁴ The Upper Guinean Forest ecosystem has an estimated 9,000 species of vascular plants. Of these, 2,250 (25%) are believed to be endemic⁵. These figures ‘rank’ the ecosystem eighth and 15th in the world for plant species diversity and endemism, respectively.

Another global analysis conducted on centers of plant diversity identified nine centers of plant endemism within the Upper Guinean Forest Ecosystem. Two of these ‘centers’ are designated priority zones (PZs) in the STEWARD III project:

1. Taï National Park, Côte d'Ivoire (STEWARD priority zone)
2. Southeast Forest Remnants, Côte d'Ivoire
3. Southeast Ghana
4. Mount Nimba on the Liberia-Guinea-Côte d'Ivoire border (STEWARD priority zone)
5. The Cestos-Senkwen River Area, Liberia
6. Lofa-Mano, Liberia
7. Sapo National Park, Liberia
8. The Gola Forests, Sierra Leone; and
9. Loma, Sierra Leone

There are a number of economically important tree species in this hotspot. The oil palm (*Elaeis guineensis*), widely planted throughout the tropics for oil production, is native to the hotspot, while

⁴ Conservation International. Biodiversity Hotspots Web site. Available online at:
<http://www.biodiversityhotspots.org/xp/Hotspots/hotspotsScience/Pages/default.aspx>

⁵ Endemic - Prevalent in or unique to a particular locality or region.

valuable timber species include the African ebony (*Diospyros gracilis*), two genera of African mahogany (*Entandophragma* and *Khaya*), and iroko (*Milicia excelsa*), which is widely exploited.

Levels of fauna diversity and endemism in the Guinean Forests are also impressive.

- *Mammals.* Mammalian diversity, with 320 species, represents more than a quarter of the roughly 1,100 mammal species found on the African continent. Almost 70 of the forests' 320 mammal species (more than 20 percent) are endemic to the region, including 18 species of primate.

Officially, about 17 percent of the remaining closed forest across the hotspot is technically under some form of protection. However, Conservation International has determined that only three percent of the area is under a level of protection appropriate for biodiversity conservation purposes. Mammal conservation in this region is therefore critically linked to an increase in the size and number of protected areas. The forest elephant (*Loxodonta africana cyclotis*) and bongo (*Boocerus euryceros*) have emerged as important flagship species for conservation in the Guinean region and beyond, as have Guinean endemics such as the pygmy hippopotamus (*Hexaprotodon liberiensis*), several species of forest duikers (*Cephalophus jentinki*, *C. maxwelli*, *C. niger*, *C. zebra*), and a host of highly endangered primate species and subspecies. The most important areas of primate diversity, endemism and threat in the Upper Guinean Forest Ecosystem are found in the forests of southwestern Ghana-southeastern Côte d'Ivoire.

- *Birds* also exhibit significant levels of diversity and endemism in the Guinean Forest Hotspot, with 785 species and 75 endemics (approx. 10 percent). BirdLife International has recognized the Upper Guinean Forests as an Endemic Bird Area with 15 restricted-range and 11 threatened species. Important flagship bird species for tropical forest conservation in the Upper Guinean Forests include the white-breasted guinea fowl (*Agelastes meleagrides*), white-necked rockfowl (*Picathartes gymnocephalus*), rufous fishing owl (*Scotopelia ussheri*), Liberian greenbul (*Phyllastrephus leucolepis*), Nimba flycatcher (*Malaenornis annamarulae*), and the Gola malimbe (*Malimbus ballmanni*).
- *Reptiles and amphibians.* Relatively less is known about the region's reptile and amphibian diversity. Minimum species estimates for each class are 210 and 221, respectively. Levels of endemism within the known herpetological faunas are relatively high, however, with 52 species of reptile (25 percent) and 85 species of amphibian (almost 40 percent) found only with the Guinean Forest Hotspot.

Threats to biodiversity. Key threats to the region's bio-diversity include civil conflict and poverty, commercial logging and ensuing agricultural conversion, and bush meat harvesting:

- *Civil conflict*—from tension to open warfare—and its post-conflict legacy have proven perhaps the most persistent and difficult to overcome. Liberia and Sierra Leone are slowly recovering and rebuilding from prolonged periods of civil strife. Recent unrest in Guinea highlights the region's violent past and the fragile peace that, for the most part, has taken hold.

In the context of such political upheaval, the flow of refugees from one country to the next becomes a constant problem, as people arrive without resources and require at the very least food, shelter and fuel. The firewood demands of large refugee camps often deforest the surrounding area and consume all wildlife; returning refugees present a similar challenge. With regards to longer-term capacity building, civil unrest has been one of the most important factors affecting the ability of stakeholders to achieve success in the conservation arena.

- *Poverty.* Following closely behind conflict is poverty, with many of the region's people being closely dependent on the natural resource base offered by the Upper Guinean Forest Ecosystem. Poverty and unemployment exacerbates social unrest and stimulates human migration, ethnic tension, and conflicts regarding land tenure.

- *Logging and agricultural conversion.* In terms of overall economic activity, deforestation due to commercial logging—and the slash-and-burn agriculture that often follows timber extraction—also threaten wildlife populations. Small-scale and industrial mining also pose considerable threats to the region’s remaining tropical forests, as most of these are located on substrates rich in iron ore, diamonds, gold, rutile (TiO₂), and bauxite. The effects of mining vary; large-scale mining (a major concern in areas such as Mt. Nimba) can affect the health of freshwater systems and regional watersheds. Small-scale mining leading to forest clearance and increased levels of hunting for bush meat.
- *Bush meat harvesting.* The harvest of bush meat and underlying forest clearance in particular pose a direct threat to biodiversity in the region. Bush meat harvests have increased dramatically in recent years, largely due to new (primarily logging) roads that open up access to formerly remote areas, the increasingly commercial nature of the bush meat trade, as well as the depletion of marine fish resources. The hunting tradition is very strong in the Guinean forest countries, and bush meat consumption has historically represented a significant source of protein for the rural population. The most commonly hunted game species are the larger birds and medium-sized mammals such as forest antelopes (duikers) and diurnal monkeys.

Bush meat hunting, like slash-and-burn agriculture, will not necessarily cause significant negative ecological impacts when practiced at subsistence levels in areas of low human population density. However, levels of bush meat hunting have soared in recent years, especially as a function of new logging roads that provide easier access to formerly remote areas and allow hunters to move deeper into the forests. In addition to animals killed to meet subsistence needs, hunters are now being paid to shoot significantly more game to feed the growing number of logging crews. They are also not discouraged from shooting additional animals for sale in city markets; the logging companies that subsidize hunting to provide meat for logging crews also transport large quantities of bush meat to major population centers. Bush meat hunting has consequently reached epidemic levels in the Guinean Forest region and is rightly blamed for the “empty forest syndrome” (the absence of wild animals in otherwise intact forest). It is also largely responsible for driving several West African primate species to the brink of extinction, as suggested by reports that no evidence of Miss Waldron’s red colobus can be found in its former range in Ghana and Côte d’Ivoire despite several intensive surveys over the last few years.

2.2 National Environmental Policies and Procedures in West Africa

The countries in which STEWARD III project activities will be implemented are highly diverse in their environmental protection and NRM policies, procedures and capacities: from relatively well developed and robust standards of environmental management and conservation in Ghana, to ambitious yet tentative post-war systems in Liberia and Sierra Leone. Political turmoil and outright conflict in Guinea and Côte d’Ivoire raise serious questions regarding the practical application of those countries’ environmental laws and regulations.

This regional diversity motivates and necessitates STEWARD’s trans-boundary framework wherein the development and application of best management practices in biodiversity conservation and climate change mitigation can “raise the bar” across participating countries. The geographic scope of the proposed activities precludes a thorough assessment and/or qualification of the discrete policies and procedures framing project implementation. Additionally, through Activity Area 7 (Support policy reform for trans-boundary conservation and climate change) STEWARD III itself seeks standard improvements to environmental regulation and the establishment of an enabling political culture across the project zone.

For illustrative purposes, individual national environmental protection policies and procedures can be viewed and compared by visiting the following English-language Web sites:

- Ghana Environmental Protection Agency (EPA): <http://www.epa.gov.gh/>
The EPA's Environmental Impact Assessment (EIA) requirements are summarized in a PDF document available at: <http://epa.gov.gh/ghanalex/report/eia.pdf>;
A complete compilation of Ghana's Environmental Assessment regulations (as promulgated in 1999) is found at:
<http://www.epa.gov.gh/ghanalex/acts/Acts/ENVIRONMENTAL%20ASSESSMENT%20REGULATION,1999.pdf>
- The Sierra Leone Environmental Protection Agency (SLEPA) was created in 2008 as part of the Ministry of Lands, Country Planning and the Environment through an Act of Parliament and signed by the President. A 15-member Board for SLEPA has been appointed by the President and all members have been approved by Parliament. The full text of the Environmental Protection Agency Act of 2008 is found at: <http://www.sierra-leone.org/Laws/2008-11.pdf>. Section IV of the Act deals specifically with environmental impact assessments.
- The Environmental Protection Agency of Liberia was established in 2003 through the EPA Act (available at: http://www.moa.gov.lr/doc/epa_act.pdf) and is modeled after the U.S. EPA. This was preceded by adoption of the Environment Protection and Management Law in late 2002 which "mandates a comprehensive set of laws and legal framework to protect the environment through sustainable development and management." Part III of the NEP Act deals specifically with environmental impact assessment, audit and monitoring.

3. Potential Environmental Impacts and Recommended Determinations, Including Conditions

Note: This section is organized according to the presentation of proposed activities and expected results in the STEWARD III Program Description of April 3, 2011.

At this stage in project planning and development, it is anticipated that the following proposed activities—grouped by “Activity Area”—will be implemented at varying scales by multiple partners across the three STEWARD III geographic Priority Zones:

- Outamba-Kilimi National Park (Sierra Leone) and Madina Oula/Soya/Oure Kaba subprefectures (Guinea)
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Activity Area 1: Advance USAID Regional and bilateral strategies in environment, climate change, food security, and water, sanitation & hygiene (WASH).

These sectoral strategies will be advanced through the promotion of linkages among program partners in each of these technical areas, by coordination of related initiatives and by strengthening of private sector alliances.

The coordination and strengthening will occur through the implementation of activities in Activity Areas 2 – 8, detailed below. **Thus, there are no activities specific to this objective and no separate recommended determination is required.**

Activity Area 2: Conserve biodiversity in trans-boundary Priority Zones

Community-driven biodiversity conservation activities in trans-boundary STEWARD III Priority Zones will be scaled-up and strengthened. These proposed activities will be undertaken in partnership with local and national governments:

- 2.A Forest co-management
- 2.B Cartography
- 2.C Fire Management
- 2.D Soil and Water Conservation
- 2.E Beekeeping
- 2.F Silviculture

Entailed Activities	Potential Adverse Environ. Impacts
<p>2.A Forest co-- management—workshops are organized to improve collaboration among communities and government forest managers; workshops encourage management of indigenous forest (e.g., protection of sacred forests) and NRM techniques for water sources, sustainable forest management plans, traditional sources of fruit, medicine and other non-timber forest products</p>	<p>Although designed to improve collaboration among stakeholders, the proposed workshops will promote specific biodiversity-related NRM practices and therefore do not qualify for a categorical exclusion. Effectively implemented, the enhanced techniques will be environmentally beneficial. However, their use in and near protected or otherwise sensitive areas warrants</p>

(NTFPs).	careful review of the workshop curricula and delivery.
2.B Cartography —GPS and GIS technologies are used to map and spatially define program interventions, including agroforestry and community forests sites.	None - proposed cartographic activities entail no biophysical interventions and their implementation has neither direct adverse environmental impacts, nor are indirect adverse impacts foreseeable.
2.C Fire management —communities are trained on the environmental consequences of slash and burn agriculture, other forms of burning, wildfires as a result of honey hunting. and the benefits of forest protection; training promotes alternative approaches to increasing soil fertility, including use of controlled burns to decrease fuel loads and support soil biota.	While activities 2.C – 2.D are limited to training and capacity development, the objective is to change management and use of the natural environment in and near protected areas. While the change sought is environmentally beneficial (strengthened biodiversity conservation and NRM), possible “failure modes” exist which could result in adverse environmental impacts. These are:
2.D Soil and water conservation —communities are trained in essential conservation techniques and demonstration sites established to illustrate alternatives to traditional slash and burn cultivation that help protect soil and water resources. (Some non-native plant species may be used as tools to fix nitrogen, provide vegetative matter, and decrease erosion. However, these species currently exist in the region.)	<ul style="list-style-type: none"> ▪ Controlled burns, when poorly planned and conducted, can become uncontrolled, causing unintended harm to environmental resources and to human life and property. ▪ Inappropriate choice of species and techniques, including water and soil management and conservation techniques. Many best practices are highly context specific; what is environmentally beneficial in one area may be adverse in another. (e.g. crop and agroforestry species choices.)
2.E Beekeeping —communities are trained in sustainable beekeeping techniques, such as the Kenyan Top Bar Hive, which reduce threats caused by traditional beekeeping (i.e., use of open fire and the felling of trees to harvest honey).	Training in <i>sustainable</i> beekeeping techniques has no foreseeable significant adverse impact, even when undertaken in or near protected areas.
2.F Silviculture —communities are trained in the fundamentals of silviculture (including economic aspects) and new sites are established within the Priority Zones. Existing plantations are rehabilitated for improved management. Training and capacity building will promote silviculture on degraded sites, not intact native forest.	Training and capacity building in silviculture and the establishment/rehabilitation of plantations may inadvertently lead to clearance of natural forest for tree lots or fruit tree plantations; poorly controlled use of pesticides on fruit crops or in nurseries, with potential consequent adverse impacts on water quality, aquatic organisms and human health.

Considerations regarding a recommended determination. With the exception of Activity 2.B (Cartography), the training and capacity building and technical assistance activities proposed in Activity Area 2 seek to change natural resource management and improve practices in and around sensitive or degraded ecosystems. Therefore, these activities do not qualify for a categorical exclusion under 216.2(c)(2)(i).

However, the intended effects of the training and associated technical assistance are environmentally beneficial, and seek to improve a currently deteriorating/threatened baseline situation in these sensitive environments. This argues against a positive determination, if adequate safeguards exist against the “failure modes” discussed above.

Recommended Determinations:

- **Activity 2.B (Cartography)** conforms to a class of activities eligible for categorical exclusion under 22 CFR 216.2(c)(2)(iii) - analysis, studies, academic or research workshops and meetings - and no contraindication to categorical exclusion exists. Accordingly, a **categorical exclusion** is recommended.
- **Activity 2.E. (Training in Sustainable Beekeeping)** conforms to a class of activities eligible for categorical exclusion under 22 CFR 216.2(c)(2)(i) - training and technical assistance - and no contraindication to categorical exclusion exists. Accordingly, a **categorical exclusion** is recommended.

For all other activities in this area, a **negative determination** is recommended, subject to the following **conditions**:

- Prior to any training activities: USFS must complete an expert review of the training content, drawing on expertise from within USFS, other members of the STEWARD team, or 3rd party experts/consultants. This review must assess the potential for the “failure modes” discussed above and must suggest remedies. The review, including names, titles and qualifications of the expert(s) contributing, and a record of actions taken in response to the expert review must be provided to the COTR, the REA and the BEO, and the COTR and REA must approve the review and record of actions taken prior to the trainings.
- Training in controlled burns cannot be limited to classroom theory, but must include closely supervised field practice and follow-up monitoring.
- Per FAA 118, training in soil and water conservation techniques and silviculture may not promote the introduction of exotic plant species not already cultivated in the area, where there is any reasonable chance that this may facilitate their introduction or spread within a protected area. The training review (above) must specifically consider this issue and the soundness of species choices generally.
- In the event that small-scale demonstration plots or facilities (eg., woodlots, tree nurseries) for demonstration purposes, siting and management guidelines for these facilities will be described as part of the training content submitted for review, and STEWARD shall assure that these guidelines are implemented.
- No procurement or use of pesticides, even to support training demonstration facilities, is authorized.

Activity Area 3: Support and improve forest-based sustainable livelihoods, food security and market linkages

These activities will support demand-driven, forest-based livelihoods activities. Specific activities include:

- 3.A Analysis of and strengthening of select value chains
- 3.B Soil and water conservation efforts
- 3.C Sustainable agriculture
- 3.D Aquaculture
- 3.E Agroforestry
- 3.F High-value fruit trees
- 3.G Tree nurseries and woodlots
- 3.H Improved banana propagation
- 3.I Non-timber forest products (NTFPs)
- 3.J Leveraging bi-lateral USAID Feed the Future programs

Entailed Activities	Potential Adverse Environ. Impacts
<p>3.A-1 Analysis of select value chains</p> <p>3.A-2 Strengthening of select value changes</p>	<p>Value chain analysis and strengthening represents the successful integration of broader STEWARD bio-diversity conservation and sustainable livelihood activities. Treated separately, the <u>analysis</u> portion of this activity (3.A-1) qualifies for a categorical exclusion.</p> <p>The <u>strengthening</u> of value chains (3.A-2) implies an increase in net value of various products and services, which carries distinct social and environmental implications.</p> <p>Many elements of value-chain strengthening are captured under 3.B-3.H, below. Other potential elements, such as market development, construction of processing facilities, etc. are not yet defined and cannot be assessed.</p>
<p>3.B Soil and water conservation—communities are trained in essential soil and water conservation techniques to protect forest-based livelihoods</p>	<p>While activities 3.B – 3.H are limited primarily to training and capacity development, the objective is to change management and use of the natural environment in and near protected areas. While the change sought is environmentally beneficial (biodiversity conservation and NRM), possible “failure modes” exist which could result in adverse environmental impacts. These are:</p> <ul style="list-style-type: none"> ▪ Inappropriate choice of species and techniques, including water and soil management and conservation techniques. Many best practices are highly context specific; what is environmentally beneficial in one area may be adverse in another. (e.g. crop and agroforestry species choices.) ▪ Training may facilitate destructive or unsustainable
<p>3.C Sustainable agriculture—communities are trained in appropriate NRM and cultivation techniques.</p>	
<p>3.D Aquaculture—communities are trained in the maintenance and harvesting of small-scale, semi-intensive integrated aquaculture for the production of rice and fish to increase local food security.</p>	
<p>3.E Agroforestry—communities are trained in landscape management techniques that ‘reduce pressure’ on natural ecosystems (community forest areas, state forest and national parks), including tree planting techniques</p>	

<p>such as live fences, wood lots with fast-growing local and exotic trees such as <i>Acacia mangium</i> and <i>Gmelina arborea</i>, boundary plantings to demarcate fields and protected areas, and bands of trees (riparian buffers) to protect streams and rivers.</p>	
<p>3.F High-value fruit trees—communities are trained in conservation of agricultural lands through high-value fruit tree plantations with <i>Anacardium occidentale</i> (cashew), <i>Cola nitida</i>, citrus, mango, coconut and banana.</p>	
<p>3.G Tree nurseries and woodlots—local residents are trained in nursery management (exotic and indigenous trees) and the out planting of tree seedlings to promote biodiversity conservation (enrichment of natural forest) and revenue generation.</p>	
<p>2.H Improved banana propagation—improved varieties are introduced with year-round production techniques to help farmers diversify revenue options, increase production and improve profits.</p>	<p>exploitative practices such as clearing of natural forest for tree lots or fruit tree plantations or selective or incomplete adoption of best practices; eg., poorly controlled use of pesticides and fertilizers with potential consequent adverse impacts on water quality, aquatic organisms, and human health.</p> <ul style="list-style-type: none"> ▪ The introduction and training in the cultivation of improved banana varieties may inadvertently facilitate or incentivize clearance of natural forest or other protected lands for banana tree lots. Propagation might also lead to poorly controlled use of pesticides and fertilizers with potential adverse impacts on water quality, aquatic organisms and human health.
<p>3.I NTFPs—promote trans-boundary sustainable harvesting, production, implementation of semi-intensive production techniques (i.e. plantations), market research techniques, connections with governments and private sector for marketing of NTFPs</p>	<p>These activities are intended to facilitate and promote adoption of more environmentally benign livelihood alternatives than logging or land clearance for agriculture. The aim is to incentivize biodiversity conservation and strengthen NRM in sensitive, at-risk environments.</p> <p>However, market development can trigger non-sustainable as well as sustainable harvesting levels. Semi-intensive production techniques can become intensive for NTFPs amenable to plantation cultivation, with attendant land clearing, pesticide use, etc. In this case, their biodiversity impacts can become negative rather than beneficial, and other adverse impacts (e.g., related to inappropriate pesticide use) are possible.</p>
<p>3.J Leveraging USAID “Feed the Future” programs</p>	<p>The programmatic integration of any Feed the Future-originated activities implemented in conjunction with STEWARD must comply with the determinations and conditions (specified in 3B – 3H below), and in specific FtF environmental compliance documentation.</p>

Considerations regarding a recommended determination. With the exception of Activities 3.A, the training and capacity building and technical assistance activities proposed in Activity Area 3 seek to change NRM practices and resource exploitation in and around sensitive or degraded ecosystems. Therefore, these activities do not qualify for a categorical exclusion under 216.2(c)(2)(i).

However, the intended effects of the training and associated technical assistance are environmentally beneficial, and seek to improve a currently deteriorating/threatened baseline

situation in these sensitive environments. This argues against a positive determination, if adequate safeguards exist against the “failure modes” discussed above.

Recommended Determination. Activity 3.A (Value Chain Analysis) conforms to a class of activities eligible for categorical exclusion under 22 CFR 216.2(c)(2)(iii) - analysis, studies, academic or research workshops and meetings. Accordingly, a **categorical exclusion** is recommended.

For **Activities 3.B through 3.H** a **negative determination** is recommended, subject to the following **Conditions**:

- Prior to any training activities, USFS must complete an expert review of the training content, drawing on expertise from within USFS, other members of the STEWARD team, or 3rd party experts/consultants. This review must assess the potential for the “failure modes” discussed above and suggest indicated remedies. The review, including names, titles and qualifications of the expert(s) contributing, and a record of actions taken in response to the expert review must be provided to the COTR, the REA and the BEO, and the COTR and REA must approve the review and record of actions taken prior to the trainings.
- Per FAA 118, training in soil and water conservation techniques, sustainable agriculture, agroforestry, and tree nurseries and woodlots may not promote the introduction of exotic plant species not already cultivated in the area, where there is any reasonable chance that this may facilitate their introduction or spread within a protected area. The training review (above) must specifically consider this issue, and the soundness of species choices generally.
- In the event that small-scale demonstration plots or facilities (e.g. woodlots, orchards, market gardens, seed multiplication facilities, etc.) will be established for training/demonstration purposes, siting and management guidelines for these facilities will be described as part of the training content submitted for review, and STEWARD shall assure that these guidelines are implemented.
- No procurement or use of pesticides, even to support training demonstration facilities, is authorized.

For **Activity 3.I (Non-timber forest products (NTFPs))**, the primary concern is assuring that adequate consideration has been given and measures taken to limit the possibility of non-sustainable NTFP harvesting /exploitation techniques driving the activity. Accordingly, a **negative determination** is recommended subject to the following **conditions**:

- Prior to the activity, USFS must submit a statement to the COTR, REA and BEO specifically addressing how the risks of benefits accruing to non-sustainable NTFP harvesting/exploitation techniques will be controlled and limited.
- The measures specified in the statement must be implemented, and the statement will include reporting/verification measures regarding implementation of these risk control measures.
- The statement must be cleared by the COTR and REA prior to implementation of the activity.

For **Activity 3.J (Leveraging USAID Feed the Future programs)** implementation would be in the context of activities 3B, C, F, G and possibly H, above. The recommended determinations for them apply.

Activity Area 4: Improve national and regional frameworks for Reduced Emission from Deforestation and Forest Degradation (REDD+)

Improvements in the structure of REDD+ at the national and regional levels will be coupled with capacity building activities, including local-level efforts to increase community engagement in REDD+ incentive programs. Local participation in REDD+ will be enhanced through the introduction of social and environmental safeguards that are aligned with the ‘core values’ of social impact assessment (SIA)⁶ and that are informed by decisions and practices of the on-going (2012) “Learning Initiative on Social Assessment of REDD+” (LISA-REDD+)⁷. One of the primary objectives of LISA-REDD+ is to promote and support the development of principles, conditions and practices of REDD+ interventions so that people or the environment are not harmed by, but actually benefit from, REDD+ activities (Cancun).

Considerations regarding a recommended determination. With the exception of the introduction of social and environmental safeguards, REDD+ mechanisms focus on implementation of particular NRM practices and the establishment of environmental management priorities in general. Given the potential failure modes associated with these types of interventions, REDD+ activities do not qualify for a categorical exclusion under 216.2(c)(2)(i).

Specific failure modes associated with REDD+ initiatives include: an uneven distribution of benefits wherein more powerful political and economic interests exploit the process at the expense of local populations (ie., “process capture”); a devaluing of the spiritual or cultural importance that indigenous communities attach to forests; failure to leverage REDD+ interventions as a means of strengthening biodiversity conservation, climate change mitigation, and ecosystem services; and the exclusion of local communities from NRM decision-making and its impact on sustainable livelihoods.

Recommended Determination. Activities related solely to the introduction and assessment of social and environmental safeguards conform to a class of activities eligible for categorical exclusion under 22 CFR 216.2(c)(2)(i) and (iii) (Education, technical assistance and training, analysis, studies, academic or research workshops and meetings). As noted above, no contraindication to this categorical exclusion exists. Accordingly, a **categorical exclusion** is recommended.

⁶ ‘Core values’ of the SIA community of practice: i) There are fundamental human rights that are shared equally across cultures, and by males and females alike; ii) There is a right to have those fundamental human rights protected by the rule of law, with justice applied equally and fairly to all, and available to all; iii) People have a right to live and work in an environment that is conducive to good health and to a good quality of life and that enables the development of human and social potential; iv) Social dimensions of the environment – specifically but not exclusively peace, the quality of social relationships, freedom from fear, and belongingness – are important aspects of peoples’ health and quality of life; v) People have a right to be involved in decision-making about the planned interventions that will affect their lives; vi) Local knowledge and experience are valuable and can be used to enhance planned interventions (Source: Vanclay (2003) *Social Impact Assessment: International principles*. Special Publication Series No2, May. Intl Assn for Impact Assessment, Fargo, ND).

⁷ The aim of LISA-REDD+ is to provide methods, tools and guidance for assessing social impacts of REDD+ programs to help governments and civil society design, implement and build support for effective and equitable REDD+ that delivers on sustainable development, human rights and good governance objectives. Core partners include: CARE International; Climate, Community and Biodiversity Alliance; Forest Trends; Centre for International Forestry Research; International Institute for Environment and Development; the Overseas Development Institute and USAID/Forest Carbon, Markets and Communities (FCMC) program.

The threshold determinations for **all other REDD+ -related activities** implemented under STEWARD III such as determining and ascribing ownership of resources set aside for carbon sequestration, carbon accounting and monitoring, the calculation and allocation of benefits from ecosystem services (eg, sequestered carbon) are **subject to a deferral**. This deferral will be resolved at such time that a complete and adequately detailed work plan is available and approved by the USFS and USAID.

Activity Area 5: Improve resiliency of local communities in adapting to climate change

Activities in this area will seek to mitigate the adverse effects of climate change in key landscapes. Specific efforts include:

- 5.A Regional and site-specific climate vulnerability analyses
- 5.B Capacity building for estimation, reporting and monitoring of greenhouse gases (GhG)
- 5.C Leverage/support Low Emissions Development Strategies (“LEDS”)

Entailed Activities	Potential Adverse Environ. Impacts
<p>5.A Climate change analysis—determine vulnerability to climate change-related impacts at regional and site levels.</p>	<p>N/A—proposed vulnerability analysis entails no biophysical interventions and implementation of this activity has no adverse environmental impacts.</p>
<p>5.B GhG capacity building—development of a regional methodology for community-based carbon measurement will build capacity in estimating, reporting and monitoring greenhouse gases.</p>	<p>N/A—proposed formulation of methodology for increasing community GhG analysis entails no biophysical interventions. Implementation of this activity has no direct adverse environmental impacts. Similarly, no indirect adverse impacts are foreseeable.</p>
<p>5.C LEDS—low emissions development initiatives such as the forest carbon inventory and mapping activity in Ghana will be implemented region-wide.</p>	<p>LEDS activities are by nature designed to limit carbon emissions and thus produce a key environmental benefit. Typically, reducing carbon emissions benefits other aspects of the environment. However, adverse environmental and social impacts are possible. For example, development of even small-scale hydropower resources can adversely affect ecosystems and increase local incidence of malaria and schistosomiasis</p> <p>For STEWARD, the type of carbon inventory and mapping activity undertaken in Ghana entails no biophysical interventions and thus its implementation has no direct adverse environmental impacts.</p> <p>Additional LEDS initiatives remain undefined and will require environmental review at such time that a complete and adequately detailed work plan is available.</p>

Considerations regarding a recommended determination. Activities 5.A and 5.B conform, respectively, to classes of activities eligible for categorical exclusion under 22 CFR 216.2(c)(2)(iii) (Analyses, studies, academic or research workshops and meetings), and

216.2(c)(2)(i) (Education, technical assistance and training). As noted above, no contraindication to this categorical exclusion exists. Accordingly, a **categorical exclusion** is recommended.

For **Activity 5.C, the forest carbon inventory and mapping intervention** conforms to a class of activities eligible for categorical exclusion under 22 CFR 216.2(c)(2)(iii) (Analyses, studies, academic or research workshops and meetings). Accordingly, a **categorical exclusion** is recommended.

For any other proposed LEDS interventions, it is recommended that a threshold determination be **deferred** until such time that a complete and adequately detailed work plan is available.

Activity Area 6: Increase sustainable access to safe water, sanitation and improve hygiene (WASH)

Activities in this area will seek to improve access to WASH for domestic and productive uses. WASH-related activities will also incorporate a climate change resiliency and food security strategies. Climate change adaptation in WASH is particularly important and will be directed toward increased capacity in the planning, delivery and maintenance of climate-resilient WASH services, including those related to food production among rural populations, within local governments and among policy makers.

WASH-related activities are anticipated to represent a significant portion of the STEWARD Phase III project budget (in excess of 25 percent), and specific interventions are envisioned. Given the prospective scale of this Activity Area, threshold determinations for all WASH-related activities implemented under this project are indicated below.

STEWARD III's WASH-related intervention categories are shown below:

- A. Support to WASH MSMEs.** Business Development Services, training/TA and financial assistance for medium, small and micro-enterprises (MSMEs) that are engaged in construction/production of small-scale water supply & sanitation technologies, products, components and infrastructure (drilling low-cost boreholes, appropriate manual drilling technologies and pumps, rain water harvesting systems, latrine slabs, point of use (POU) water treatment products (e.g. aquatab, etc.)
- B. Other activities to increase market supply/availability** of small-scale water supply and sanitation technologies, products, components & infrastructure. May include small-scale construction to establish latrine slab production centers/sanitation “markets.”
- C. Supporting credit for household self-supply activities** generally provided by WASH MSMEs (see range of technical approaches under “Support to WASH MSMEs”, above.)
- D. Social education and baseline sanitation support:**
 - 1. Promotion/education of point-of-use water treatment & safe storage
 - 2. Promotion of/public education on hygiene/hand-washing/no open defecation and community-managed sanitation
 - 3. Financial assistance to extremely impoverished families to purchase basic sanitation goods and services
- E. Strengthening the WASH enabling policy environment**
- F. Institutional capacity-building** at sub-regional, national and local governmental levels and civil society

G. Community capacity-building for WASH

H. Strengthening WASH-related academic degree programs and research agenda

I. Awareness-raising, motivational and capacity-building workshops, conferences and events

J. Dissemination of studies, lessons learned, best practices and technology options resulting from and/or related to WASH on-the-ground activities.

K. Provision of climate adaptive, resilient small-scale water and sanitation infrastructure

- i) Water supply and access to water for domestic and productive activities; eg., direct construction, provision, rehabilitation and/or expansion of low-cost boreholes, shallow wells with various pump options, rainwater harvesting systems, small pipe-borne (reticulated) water systems, wastewater re-use and groundwater Recharge, Retention and Re-use (3R).
- ii) Small-scale sanitation - direct construction and rehabilitation of hand washing stations and latrines in schools and households.

Potential Adverse Impacts and Considerations Regarding Recommended Determinations

ACTIVITY TYPE	POTENTIAL ADVERSE IMPACTS
<p>6A. Support to WASH MSMEs</p>	<p>Direct small-scale construction other than water supply and sanitation infrastructure. As part of these activity types, STEWARD partners may directly undertake small-scale construction; eg., slab production facilities or sanitation markets.</p> <p>In the absence of complicating factors, USAID AFR Bureau has concluded that very small-scale general construction involving a total “disturbed area” of less than 1000m² is of its nature very unlikely to create significant adverse impacts.</p> <p>Construction at larger scales (or very small-scale construction in the presence of complicating factors) presents the risk that impacts typical of construction activities could be significant. These impacts include disturbance to existing landscape/habitat, sedimentation/fouling of surface waters, creation of standing water and adverse impacts of materials sourcing such as uncontrolled streambed mining or local deforestation.</p>
<p>6B. Other activities to increase market supply/availability of small-scale water supply and sanitation technologies, products, components & infrastructure</p>	<p>Potential adverse environmental impacts of WASH MSMEs and general efforts to build WASH services and markets on the supply side fall into 3 categories:</p> <ul style="list-style-type: none"> • Adverse impacts of their manufacturing, construction or installation activities. For example, a beneficiary enterprise could mine sand and gravel from a streambed, fouling the water with potential adverse effects on downstream users and aquatic life. • The risks attendant to poor design or siting choices or inferior quality of work/product. For example, a WASH enterprise might provide latrines with unlined pits in an area with a shallow water table. Or low-cost boreholes might be provided in an area in which groundwater has hazardous arsenic content. Or counterfeit or substandard POU treatment tabs could be marketed. • Overdraw/depletion of local water resources resulting from increased numbers of boreholes, wells, catchments, stream diversions, etc. <p>These impacts and risks can be controlled to non-significant levels with appropriate quality</p>

	<p>control, water quantity management and environmentally sound design and construction/production practices.</p> <p>However, STEWARD’s ability to assure that WASH MSMEs implement these practices is limited as STEWARD will not have complete operational control over these enterprises during project implementation, and no control at all once the project ends. This diminishes—<u>but does not fully eliminate</u>—STEWARD’s responsibility for potential adverse impacts.</p> <p>STEWARD’s primary influence over the on-the-ground activities of these enterprises is via the content of and conditionality attached to various forms of assistance. STEWARD can and should assure that capacity-building and technical assistance and other MSME support fully integrate good practice, and to the extent practicable, are provided contingent on implementation of these practices.</p> <p>In addition, technical guidance for WASH activities should recognize that the governmental and institutional <u>customers</u> for the WASH services provided by these enterprises should be important drivers of quality and good environmental practice.</p> <p>Overall management of water resources—including prevention of overexploitation—is of necessity a governance issue from the West African to community level, and not a function that individual enterprises can generally undertake or be held accountable for. This indicates strongly that STEWARD’s planned capacity-building for water resources management and governance at various levels is a significant cross-cutting issue in this project.</p>
<p>6C. Financial and technical support to household self-supply</p>	<p>These activities seek to improve household access to water by supporting and increasing household investment in household-level water supply offerings by WASH MSMEs (above). As such, this activity type is a demand-side complement to those that build the market supply side of WASH. The potential adverse impacts are thus identical to those discussed under activities 6A and B, immediately above, and this makes integrating environmental good practice in WASH MSME capacity-building/support all the more important.</p> <p>As discussed above, institutional customers should be important drivers of the quality of WASH services and good environmental practice in their market segment. Educated and demanding individual consumers can and should serve as a similar driver in household self-supply. This requires that demand-side capacity-building and outreach for household self-supply include consumer education regarding the difference between safe, high-quality products and services and sub-standard ones.</p>
<p>6D1. Promotion/education of point-of-use water treatment & safe storage</p>	<p>This activity has no foreseeable adverse impacts on the natural environment. However, chemical and other POU water treatment technologies can present risks to human health and usually require regulatory approval for this reason.</p>
<p>6D2. Promotion of/public education on hygiene/Hand-washing/No open defecation and community-managed sanitation</p>	<p>This activity has no foreseeable adverse impacts on the natural environment and conforms to a class of intervention normally eligible for categorical exclusion.</p>
<p>6D3. Financial assistance to extremely impoverished</p>	<p>This activity seeks to improve access to basic sanitation goods and services by extremely impoverished families, which may be offered by WASH MSMEs (above). As such, this activity is also a demand-side complement to activity types 6A and B (above), which build the market supply side of WASH. The potential adverse impacts are thus identical to those</p>

<p>families to purchase basic sanitation goods and services</p>	<p>discussed under activity 6A and B above, making integrating environmental good practice in WASH MSME capacity-building/support all the more important.</p> <p>As discussed above, institutional customers should be important drivers of the quality of WASH goods and services and good environmental practice in their market segment. Educated and demanding individual consumers can and should serve as a similar driver when purchasing basic sanitation goods and services. This requires that financial assistance to extremely impoverished families include consumer education regarding the difference between safe, high-quality products and services and sub-standard ones.</p>
<p>Activities 6E-J</p>	<p>These activities are intended to build institutional capacities at various levels for WASH planning and management. The activities conform to classes of interventions that can be eligible for Categorical Exclusion.</p> <p>However, as articulated in this IEE, WASH activities do have potential adverse impacts on critical environmental resources and human health. Failure to adequately address these risks and to apply the practices necessary to mitigate them in WASH policy development, capacity-building, training, awareness-raising, formal education and research is likely to result in environmental issues being given inadequate attention in future WASH implementation.</p>
<p>ACTIVITY TYPE</p>	<p>POTENTIAL ADVERSE IMPACTS</p>
<p>6K. Provision of climate adaptive, resilient small-scale water and sanitation infrastructure</p> <p>i) Direct provision of small-scale water supply, including wastewater re-use</p>	<p>During construction:</p> <ul style="list-style-type: none"> • Improper siting of facilities (eg., within wetlands, protected areas, or other sensitive habitats, etc.) may damages or destroy natural ecosystems. • Construction may cause minor disruption of the land around the supply system. • Safety issues during construction may be a problem (i.e., collapse of wells in too sandy soil horizons, accumulation of methane gas causing Firedamp explosion) <p>During operation/use:</p> <ul style="list-style-type: none"> • Water resource depletion arising from the operation of increased number of facilities (wells, boreholes, RWH technologies) may contribute to the depletion of water resources (surface and groundwater), if the demand for water and the extraction exceed sustainable yields. <p>Water resource depletion can in turn lead to degradation of terrestrial and aquatic ecosystem structures & functions and loss of biodiversity; loss of livelihoods/economic productivity, and adverse impacts on human health. These impacts may occur in the future or in down-gradient locations. Land subsidence may result from overdraw of shallow groundwater.</p> <p>Saline intrusion. In coastal areas, wells or boreholes located too close to the ocean or which tap shallow ground water lying on top of salty groundwater may lead to salt water intrusion.</p> <p>Supply of contaminated water. If poorly sited or poorly designed/protected, water supply systems can provide biologically or chemically contaminated water with consequent adverse effects on the health of beneficiaries and livestock.</p> <p>Siting problems can arise from drawing ground or surface water too close to sources of pollution such as latrines, pesticide stores, cemeteries, irrigated fields, etc.</p> <p>Groundwater may have hazardous concentrations of arsenic, iron, fluorine, etc. This can only be verified by pre-testing the water source.</p> <p>Flooding can contaminate water points, as can the failure to exclude livestock from water points intended for human use. Open hand-dug wells can become contaminated by the use</p>

	<p>of contaminated containers to draw water.</p> <p>Water can also become contaminated during transport from the water point to home, or during home storage.</p> <p>Wastewater re-use (e.g. re-use of domestic water for irrigation) presents particular hazards of biological contamination. For example, vegetables grown with contaminated water can present significant health risks, effectively serving as a transmitter for oral-fecal route diseases.</p> <p>Creation of standing water. Lack of appropriate drainage systems may cause the creation of stagnant (standing) water near water points that could create breeding opportunities for mosquitoes and other disease vectors.</p> <p>Loss of water supply due to climate change. Failure to design and/or locate systems in consideration of expected climatic change may result in loss of water supply to target beneficiaries. This can occur, for example, if (i) wells are tapping shallow groundwater that is fluctuating severely or dropping; or (ii) boreholes tap dropping water tables; or (iii) if surface waters dry up or drop below the levels of intakes.</p>
<p>6K. Provision of climate adaptive, resilient small-scale water and sanitation infrastructure</p> <p>ii) Direct Provision of Small-Scale Sanitation Infrastructure in schools and households; eg., (latrines; hand-washing stations)</p>	<p>Minor disruption of surrounding terrestrial areas during the construction process at individual sites.</p> <p>Water resources contamination. Poor design and siting, overflow and other accidents can lead to contamination of groundwater and surface waters with pathogens, especially with the multiplication of latrines. (Poor siting choices include: failure to site appropriately with respect to water table, slope, location near residences or surface water bodies. Poor design choices include unlined pit latrines in areas with shallow water tables).</p> <p>Increases in insect-borne diseases. Poorly designed and maintained sanitation facilities can lead to increases in insect-borne diseases. There are two groups to consider. First, culex mosquitoes, which do not transmit malaria but can transmit filariasis, breed extensively in septic tanks and flooded latrines.</p> <p>Second, flies and cockroaches often thrive on excreta and have been implicated in some transmission of fecal-oral disease.</p> <p>Mosquitoes, flies and cockroaches all constitute a great nuisance, and poor urban households have consistently been shown to spend substantial amounts of their scanty household income on control coils and nets.</p> <p>Poorly constructed latrines are prone to collapse and may increase the transmission of vector-borne diseases if not well constructed and maintained.</p> <p>Bad odors in areas very close to latrines</p>

Recommended Determinations

Pursuant to the above analyses, the following threshold determinations, and conditions if applicable, are recommended for the activities in this intervention category:

ACTIVITY TYPE	RECOMMENDED DETERMINATION AND CONDITIONS
6A. Support to WASH MSMEs	Direct construction involving a total disturbed area of less than 1000m2 <u>other than water and sanitation infrastructure.</u>

<p>6B. Other activities to increase market supply/availability of small-scale water supply & sanitation technologies, products, components & infrastructure</p>	<p>Negative Determination subject to the following Conditions:</p> <p>1. No complicating factors - ie., 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 or in an otherwise undisturbed local ecosystem. Sites violating one or more of these criteria are subject to the determinations and conditions for “construction other than very small-scale” (immediately below).</p> <p><u>Construction management</u>: Construction will be undertaken in a manner generally consistent with the guidance for environmentally sound construction, provided in the Small Scale Construction chapter of the USAID Environmental Guidelines for Small-scale Activities in Africa (www.encapafrika.org/egssaa.htm)</p> <p><u>At minimum</u>: (1) During construction, 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) IPs must require their general contractor to certify that it is not extracting fill, sand or gravel from waterways or ecologically sensitive areas, nor is it knowingly purchasing these materials 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.</p> <p><u>Paint</u>: No lead-based paint shall be used, when lead-free paint is used, it will be stored properly so as to avoid accidental spills or consumption by children; empty cans will be disposed of in a environmentally safe manner away from areas where contamination of water sources might occur; and the empty cans will be broken or punctured so that they cannot be reused as drinking or food containers</p>
	<p><i>Direct construction involving a total disturbed area of more than 1000m2 other than water and sanitation infrastructure</i></p> <p>Negative Determination subject to the following Conditions:</p> <p>1. The formal AFR subproject/sub-grant review process, as set out by the AFR Environmental Review Form (available at www.encapafrika.org/compliance.htm) must be completed and approved prior to construction of any individual facility.</p> <p>2. This review process must require the construction management and lead paint conditions specified above.</p>
	<p><i>Capacity building and initiating Business Development Services</i></p> <p>Negative Determination, subject to the Conditions that:</p> <ol style="list-style-type: none"> 1. Training and capacity-building incorporate modules that promote awareness of potential adverse impacts of WASH enterprises as related to: <ul style="list-style-type: none"> • manufacturing, construction or installation of structures; and • risks attendant to poor design, improper choices of siting or inferior quality or materials/workmanship. <p>For example, an inadequately trained WASH entrepreneur might provide: i) latrines with unlined pits in an area with a shallow water tables, or ii) low-cost boreholes in area in which groundwater has hazardous arsenic content. Therefore:</p>

	<ul style="list-style-type: none"> the quality of construction materials and latrine design will be ensured, and local laborers will be trained on the necessary aspects of quality construction and the potential pitfalls of poor latrine design and construction; Public sector capacity-building efforts must not simply create an enabling environment for WASH services, but also build capacity to help assure that private providers are held to high technical standards; and Capacity-building among IPs for effective contracting/oversight of WASH services is non-separable and must be conducted in parallel with these activities.
6C. Financial and technical support to household self-supply	<p>Negative Determination, subject to the Condition:</p> <p>The Conditions that apply to activities 6A and B, above, are pertinent here.</p>
6D1. Promotion/ education of point-of-use water treatment and safe storage	<p>Negative Determination, subject to the Condition that POU technologies receive all necessary regulatory approvals in the countries in which they are deployed, and that STEWARD undertakes feasible measures to ensure the quality of POU treatment products and equipment provided/supported.</p> <p>USAID GH Bureau concurrence will be required for the scale-up of decentralized production of chlorine solution via electrolysis for POU treatment.</p> <p><i>STEWARD is strongly encouraged to include child-safety messages in safe-storage education because there are numerous incidents of unattended small children drowning in household storage barrels/containers.</i></p>
6D2. Promotion of/public education on hygiene/Hand-washing/No open defecation and community-managed sanitation	<p>Categorical Exclusion per 22 CFR 216 (c)(2)(i) -- education, technical assistance or training programs</p>
6D3. Financial assistance to extremely impoverished families to purchase basic sanitation goods and services	<p>Negative Determination, subject to the Condition:</p> <p>The Conditions that apply to activities 6A and 6B above, are pertinent here.</p>
Activities E-J	<p>Negative Determination, subject to the Condition that these activities integrate, wherever appropriate, environmental soundness and good practice in WASH activities, consistent with the discussion, analysis and conditions in this IEE.</p>
6K Provision of climate adaptive, resilient small-scale water and sanitation infrastructure	<p>Negative Determination, subject to the Conditions:</p> <p>1. Good-practice design and operation standards must be implemented for new construction and rehabilitation works, generally consistent with USAID’s Environmental Guidelines for Small-Scale Activities in Africa (Water Supply & Sanitation and Small-Scale Construction chapters); www.encapafrika.org/egssaa.htm. These standards must be specified in the EMMP (see Section 4 of this IEE). They must include: (a) siting of new wells well away from groundwater contamination sources (e.g. latrines, cesspits, dumps, pesticide stores), (b) exclusion of livestock from water points; surrounding boreholes and wells with well-drained concrete pads & in general prevention of standing water at supply points; (c)</p>
i) Direct provision of	

<p>small-scale water supply, including wastewater re-use</p>	<p>location of livestock watering points at least 10m and down-grade from supply points for household/potable water; (d) assuring quality of construction materials and design; and (e) community engagement/training in source water protection, system maintenance, and in preventing contamination during transport from point of use & during household storage.</p> <p>STEWARD is strongly encouraged to include child-safety messages in safe-storage education; there are numerous incidents of small children drowning unattended in household storage barrels/containers.</p> <p>2. Waste water re-use is NOT authorized unless and until STEWARD submits and the REA reviews and approves a technical proposal, including siting, design and operating plan, for the proposed system. Upon review of the technical proposal, the REA may determine that more detailed environmental review is indicated and require completion of the AFR Subproject Review Form (ERF) and Process, or an amendment to this IEE. A separate technical proposal must be submitted for each substantially different wastewater reuse activity. The technical proposal must specifically address how the risks of disease transmission associated with wastewater re-use will be adequately controlled.</p> <p>3. Water quality assurance plan. For water supply activities, Implementing Partners (IPs) will develop and implement a Water Quality Assurance Plan that will ensure that all new and rehabilitated USAID-funded water supplies provide safe drinking water, defined as meeting local and WHO water quality standards. This Plan must be approved by the REA prior to initiation of these activities. The plan must include and assign responsibility to the IP for initial water quality testing. When feasible, the program must also set in place capacities and responsibilities to provide reasonable assurance that ongoing water quality monitoring occurs.</p> <p>The standards for initial and ongoing testing— including types of contaminants for which testing should be conducted, testing methods, testing frequency, and issues such as public access to results— should follow any applicable USAID guidance, as well as local laws, regulations and policies.</p> <p>The plan must include a response protocol in the event that the water does not meet water quality standards.</p> <p>The plan must include testing for Arsenic per Guidance Cable State 98 108651. Specifically, the USAID managing team must assure that the standards and testing procedures described in “Guidelines for Determining the Arsenic Content of Ground Water in USAID-Sponsored Well Programs in Sub-Saharan Africa” (www.encapafrika.org/docs.htm#specificwater). Note that this guidance requires initial testing, and quarterly testing for four quarters. If the program terminates in less than four quarters, remaining testing is the responsibility of the mission. Water violating the 10ppb Arsenic standard may not be supplied for public consumption.</p> <p>4. Water quantity assurance and management. Facilities will be carefully sited to maximize sustainable yields and will be tested to ensure that these yields are not exceeded. Appropriate design consideration will be given to changes in future availability resulting from climate change. (E.g. projected drops in water tables might suggest sinking wells or boreholes deeper, a constructing a surface water intake within a sandy riverbed/streambed.</p>
<p>6K. Provision of climate adaptive, resilient small-scale water and sanitation infrastructure</p>	<p>Negative Determination, subject to the Conditions:</p> <p>1. Good-practice design and operation standards must be implemented for new construction and rehabilitation works, generally consistent with USAID’s Environmental Guidelines for Small-Scale Activities in Africa (Water Supply & Sanitation and Small-Scale Construction chapters); www.encapafrika.org/egssaa.htm.</p> <p>These standards must be specified in the EMMP (see Section 4 of this IEE). They must include: (a) provisions to prevent contamination of water supplies, including maintaining</p>

<p>ii) Direct Provision of Small-Scale Sanitation Infrastructure in schools and households (latrines; hand-washing stations)</p>	<p>appropriate separation between water sources/supply points and latrines; (b) appropriate choice of latrine type and design for local environmental conditions, particularly to prevent overflow and contamination of the water table (e.g. pit latrines are rarely suitable in locations where the water table is high); (c) design to prevent “in-and-out access” to latrine pits by insect vectors and to minimize odors; (d) provision of hand wash stations and provision for rectal/buttocks –washing where appropriate, (e) development and implementation of a system for ongoing latrine cleaning and maintenance, including problem identification (i.e. construction faults, abnormal proliferation of flies, cockroaches and mosquitoes in the latrine area, risk in collapse of the tank or slab, etc.); and (f) construction quality control.</p> <p>2. Small-scale sanitation technologies that recycle human waste into compost or fuel (e.g. ecosan latrines) will be promoted as appropriate. However, such recycling is NOT authorized unless and until STEWARD submits and the REA reviews and approves a technical proposal, including siting, design and operating plan, for the proposed system. Upon review of the technical proposal, the REA may determine that more detailed environmental review is indicated and require completion of the AFR Subproject Review Form (ERF) and Process, or an amendment to this IEE. A separate technical proposal must be submitted for each substantially different human waste recycling activity. The technical proposal must specifically address how the risks of disease transmission associated with wastewater reuse will be adequately controlled.</p>
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* e.g. water seals, VIP latrine designs. .

Activity Area 7: Support policy reform for trans-boundary conservation and climate change

Policy reform activities will seek to create an enabling political and legal environment for biodiversity conservation, NRM and climate change response in STEWARD III countries.

Specific policy reform initiatives include:

- 7.A Development and adoption of targeted policies, regulations and guidelines
- 7.B Creation of trans-boundary ‘peace parks’
- 7.C Enhanced management of protected areas
- 7.D Improved rural livelihoods

Entailed Activities	Potential Adverse Environ. Impacts
<p>7.A Policy development—promote the development and adoption of particular biodiversity and climate change policies, regulations and guidelines at the regional, national and local levels.</p>	<p>This initiative is intended to foster the inception and promulgation of the policies and regulations needed to permit effective trans-boundary biodiversity conservation and natural resource management.</p> <p>The primary environmental risk in such endeavors is “process capture” by extraction-oriented governmental or private-sector stakeholders that drives policy development to the lowest common denominator. With deep social and technical expertise across the project zone, STEWARD staff and partners, in conjunction with USFS International Programs and USAID, are well</p>

	equipped to prevent such an outcome as policies and regulations are developed and implemented.
7.B Peace Park creation—establish trans-boundary peace parks.	<p>The establishment of trans-boundary Peace Parks and accompanying development of cross-border protected area management processes should be environmentally beneficial.</p> <p>However, establishment of protected areas does typically entail restrictions on existing use of land and natural resources. These restrictions are imposed to preserve biodiversity and ecosystem services, and to deliver other environmental benefits. Nevertheless, these restrictions, once implemented, can have the effect of depriving communities of livelihoods and subsistence resources (e.g. bushmeat, firewood, etc.). These adverse social impacts can be significant—just as the long-term impacts of continued unsustainable use of these resources can also be significant and adverse.</p> <p>Thus, additional information on specific interventions will be required prior to recommending a threshold determination for these activities.</p>
7.C Protected area management—improve policy frameworks and legal authority for the utilization and management of protected areas.	Similar to Activity 7.A, the evolution and strengthening of policy frameworks for protected area management runs the risk of process capture. However, the combined resources and expertise of the STEWARD team and partners effectively safeguards against such outcomes.
7.D Improved rural livelihoods—identify and promote specific policies and advance the underlying political environment in support of sustainable rural livelihoods.	The creation of an enabling policy environment in support of sustainable rural livelihoods will deal specifically with the principles of NRM and biodiversity conservation. Particular policies should be carefully evaluated from a perspective of environmental sustainability prior to promoting a rural livelihoods agenda through political advocacy. The STEWARD team possesses the technical expertise to perform such a review prior to commencing any interventions.

Considerations regarding a recommended determination. Activities 7.A, 7.C and 7.D seek to drive change in NRM laws and policies that directly or indirectly alter the management and use of sensitive natural environments. While the changes sought are beneficial, the potential negative outcomes that can result from policy change processes in general disqualify the activity from a Categorical Exclusion under 216.2(c)(2)(i) and (iii) - Education, technical assistance and training and analyses, studies, academic or research workshops and meetings. However, as noted in these specific cases, such adverse outcomes are highly unlikely.

Recommended Determination. Accordingly, a **negative determination** is recommended for these activities.

Activity 7.B also seeks to change NRM practices in sensitive environments through the establishment of protected areas. However, as specific initiatives remain undefined, it is recommended that a threshold

determination regarding the creation of trans-boundary Peace Parks **be deferred** until such time that a complete and adequately detailed workplan is available.

Activity Area 8: Support knowledge management and promotion and sharing of better management practices in NRM, climate change and WASH

This activity area will enhance learning networks through information technology and media. Contributions to regional knowledge management will be made through the documentation, dissemination, and advocacy of best management practices in NRM, climate change adaptation and WASH. No potential adverse impacts are foreseeable.

Recommended Determination. All interventions under Proposed Activity Area 8 conform to a class of activities eligible for categorical exclusion under 22 CFR 216.2(c)(2)(iii) (Analysis, studies, academic or research workshops and meetings), and 216.2(c)(2)(v) (Document and information transfers). As noted above, no contraindication to this categorical exclusion exists. Accordingly, a **Categorical Exclusion** is recommended.

4. Implementation and Monitoring

In addition to the specific conditions enumerated in Section 3, the negative determinations recommended in this IEE are contingent on full implementation of the following general monitoring and implementation requirements:

1. **Inclusion of Regulation 216 language.** Program Managers and Contracting and Agreement Officers Representatives (CORs/AORs) will ensure that the environmental compliance Regulation 216 language is included in all solicitations and awards. By explicitly enumerating the environmental compliance responsibilities of project implementers, use of this recommended language can help ensure that environmental compliance requirements stemming from the Regulation 216 process are fully integrated into project designs, work plans, and implementation of activities.
2. **IP Briefings on Environmental Compliance Responsibilities.** The AOR shall provide the IP with a copy of this IEE and brief the IP on their environmental compliance responsibilities.
3. **Development of EMMP.** The IP shall develop and provide for AOR review and approval an Environmental Mitigation and Monitoring Plan (EMMP) documenting how the project will implement and verify all IEE conditions.

The EMMP shall identify how the IP shall assure that IEE conditions that apply to activities supported under subcontracts and sub-grants will be implemented. (In the case of large sub-grants or subcontracts, the IP may elect to require the sub-grantee/subcontractor to develop their own EMMP.)

(Note: sample EMMP formats are available at www.encapafrika.org/meoEntry.htm.)

4. **Integration and implementation of EMMP.** The IP shall integrate the EMMP into its project work plan and budgets, implement the EMMP and report on its implementation as an element of regular project performance reporting.

The IP shall assure that sub-contractors and sub-grantees integrate implementation of IEE conditions, where applicable, into their own project work plans and budgets and report on their implementation as an element of sub-contract or grant performance reporting.

5. **Integration of compliance responsibilities in sub-contracts and grant agreements.** The IP shall assure that future sub-contracts and sub-grant agreements and/or significant modifications to existing agreements, reference and require compliance with relevant elements of these conditions.
6. **Assurance of sub-grantee and sub-contractor capacity and compliance.** The IP shall assure that sub-grantees and subcontractors have the capability to implement the relevant requirements of this IEE. The IP shall, as and if appropriate, provide training to sub-grantees and subcontractors in their environmental compliance responsibilities and in environmentally sound design and management (ESDM) of their activities.
7. **USAID monitoring responsibility.** As required by ADS 204.5.4, the AOR will actively monitor and evaluate whether the conditions of this IEE are being implemented effectively and whether there are new or unforeseen consequences arising during implementation that were not identified and reviewed in this IEE. If new or unforeseen consequences arise during implementation, the AOR will suspend the activity and initiate appropriate, further review in accordance with 22 CFR 216. USAID Monitoring shall include regular site visits.
8. **New or modified activities.** As part of its Work Plan, and all Annual Work Plans thereafter, IPs, in collaboration with the AOR, shall review all on-going and planned activities to determine if they are within the scope of this IEE.
 - If any IP adds new activities or makes substantial modifications to existing activities, an amendment to this IEE addressing these activities shall be prepared for USAID review and approval. No such new activities shall be undertaken prior to formal approval of this amendment.
 - Any on-going activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be halted until an amendment to the documentation is submitted and written approval is received from USAID.
9. **Compliance with Host Country Requirements.** Nothing in this IEE substitutes for or supersedes IP, sub grantee and subcontractor responsibility for compliance with all applicable host country laws and regulations. The IP, sub grantees and subcontractor must comply with host country environmental regulations unless otherwise directed in writing by USAID. However, in case of conflict between host country and USAID regulations, the latter shall govern.