

INITIAL ENVIRONMENTAL EXAMINATION - AMENDMENT #I

FACESHEET

Activity/Project Title: USAID/Mozambique Integrated Health Office Portfolio Increased Coverage of High Impact Health and Nutrition Services (Health Service Delivery): Extension & Amendment #1		Solicitation #: <i>[As assigned by contracting office]</i>	
Contract/Award Number (if known): TBD			
Geographic Location: Mozambique			
Originating Bureau: Africa Bureau			
Supplemental IEE: ☐ Yes ☒ No Amendment: ☒ Yes ☐ No Programmatic IEE: ☐ Yes ☒ No		DCN and date of Original document: DCN and ECD link(s) of Amendment(s): Mozambique_Health_Services Delivery IEE (SD, IR 4.1) http://gemini.info.usaid.gov/repository/doc/42481.docx (PDF), ETD Signature Date 2015-01-12. Amendment No.: 1	
Funding Amount: ceiling increase by \$400 M		Life of Project Amount: \$878,750,000	
Implementation Start/End: 2014–2023			
Prepared By: Josh Habib & Kathleen Hurley, GEMS/The Cadmus Group, Inc. Josh.Habib@cadmusgroup.com IEE Submitted by: Peter Cloutier – Division Chief, Integrated Health Office		Date Submitted: 6/2/2017	
Expiration Date: August 2023		Reporting due dates (if any):	
Environmental Media and/or Human Health Potentially Impacted (check all that apply): None ☐ Air ☐ Water ☐ Land ☐ Biodiversity ☐ Human Health ☐ Other ☐			
Recommended Threshold Determination <i>(check all that apply):</i> ☒ Negative Determination ☒ with conditions ☒ Categorical Exclusion		☐ Positive Determination ☒ Deferral ☐ Exemption ☐ USG Domestic NEPA action	

Additional Elements

☒ Conditions ☒ EMMP ☐ WQAP ☐ Pesticides ☐ Deferred ☐ Other: ESF/ERR
☐ DCA

Climate Change:

☐ GCC/Adaptation ☐ GCC/Mitigation ☐ Climate Change Vulnerability Analysis (included)

Adaptation/Mitigation Measures: No Climate Risk Management Screening was performed for the Health Service Delivery IR 4.1 IEE, but the entire Integrated Health Portfolio IEE will have a CRM analysis done and the potential management actions pertinent to IR 4.1 will be retroactively applied. The IHP CRM analysis Annex Table will be summarized at the end of Section 3, and in the Facesheet Summary.

Other Relevant Environmental Compliance Documentation:

USAID/Mozambique Integrated Health Office Portfolio IEEs for 2014-2019:

Strengthened Systems to Deliver Health, Nutrition, and Social Services (HSS, IR 4.3) ([DOCX](#)) ([PDF](#)); Approved 12/16/2014, and

Communication for Improved Health Outcomes (CIHO, IR 4.2) ([DOCX](#)) ([PDF](#)); Approved 12/21/2014.

BACKGROUND

On January 12, 2015 the Bureau Environment Officer approved the Initial Environmental Examination (IEE) for the USAID/Mozambique's Service Delivery Project Appraisal Document (PAD), one of the activities managed at the Integrated Health Office (IHO). The SD PAD was initially approved on November 28, 2014 for a period of performance through November 30, 2019 with a total life of project funding of \$478,750,000.

This project will implement evidence-based interventions to increase early initiation of ART, provide high quality services, ensure robust retention strategies and achieve epidemic control. Interventions include technical assistance, training, mentoring, and supportive supervision together with key system investments such as human resources, and laboratory and strategic information support.

The activities will be implemented through a five-year contract, with two (2) two-year options. At the end of the life of the project, the following will have been achieved:

- Increased utilization of quality facility-level services
- Increased utilization of quality community health services
- Improved active and completed referrals between community and clinical services

The activities supported will contribute to the current Service Delivery PAD results framework 4.1: Increased coverage of high impact health and nutrition services. Illustrative activities are listed in the current PAD.

This amendment request is to ensure that the IEE expiration date and LOP are aligned to the Service Delivery Project Appraisal Document (PAD). In February 2017, the Service Delivery PAD was extended to August 30, 2023 and the ceiling was increased by \$400,000,000 to \$878,750,000 through Amendment 1 to the PAD in February 2017.

SUMMARY OF FINDINGS:

Scope. This IEE addresses the entire portfolio of activities anticipated under **IR 4.1: Increased Coverage of High Impact Health and Nutrition Services** of the USAID/Mozambique **Health Status of Targeted Population Groups Improved (D04)** portfolio. It applies to all health Service Delivery activities implemented under Mozambique's 2014–2018 CDCS and Project Appraisal Document (PAD). It replaces and supersedes the Mission's previous IEEs; except that ongoing activities operating an approved environmental mitigation and monitoring plan (EMMP) may continue operating under that EMMP.

Note that there are activities discussed in the Service Delivery PAD that are not covered in this IEE because they are more appropriately covered in one of the other two health sector IEEs. For instance, social and behavior change communication (SBCC) activities are addressed in the IEE on Communication Improves Health Outcomes (IR 4.2) and procurement and supply chain strengthening activities (e.g., supply chain management to increase availability of drugs to prevent malaria) are covered in the Health Systems Strengthening (IR 4.3) IEE.

Recommended Determinations. The following table summarizes the recommended determinations for the health portfolio, per the intervention categories established by this IEE for purposes of environmental review. For each, a link is provided to the entailed activity descriptions, analysis of potential environmental impacts, and activity-by-activity determinations and conditions within section 3 of the IEE.

Intervention Category	Categorical Exclusion(s)	Negative Determination(s)	Positive Determination(s)	Deferral of Threshold Decision	Link to full analysis
Healthcare Worker/Delivery Agent Training; Healthcare Workforce Strengthening & Development		X			Click here
Direct & Capacity-Building Support for Delivery & Equitable Access to Health Services; Technical Assistance To Improve Prevention Efforts	X	X			Click here
Water and Sanitation for Health (WASH)	X	X		X	Click here

Construction other than Water/Sanitation Infrastructure		X		X	Click here
Studies, Surveys/Public Health Surveillance & other Data-Gathering Assessments & Models	X	X			Click here

General Implementation & Monitoring Conditions. In addition to the specific conditions enumerated in Section 3, the negative determinations recommended in this IEE are contingent on full implementation of a set of general monitoring and implementation requirements specified in Section 4 of the IEE.

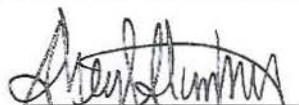
These require, in summary: (1) IP Briefings on Environmental Compliance Responsibilities; (2) Development of environmental mitigation and monitoring plans (EMMPs); (3) Integration and implementation of EMMPs in workplans and budgets; (4) Integration of compliance responsibilities in prime and sub-contracts and grant agreements; (5) Assurance of sub-grantee and sub-contractor capacity and compliance; (6) Health Team environmental compliance monitoring; (7) 22 CFR 216 documentation coverage for new or modified activities; and (8) compliance with host country requirements.

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

USAID/Mozambique Integrated Health Office Portfolio: Health Service Delivery

CLEARANCE:

Mission Director:


Sheryl Stumbras

Date: 5/15/2017

CONCURRENCE:

AFR Bureau Environmental Officer:


Brian Hirsch

Date: 6/13/2017

Approved: ☒
Disapproved: ☐

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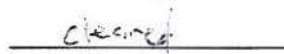
ADDITIONAL CLEARANCES:

Mission Environmental Officer:


Eduardo Langa

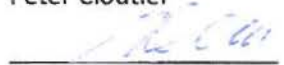
Date: 4/7/2017

Integrated Health Office Chief:


Peter Cloutier

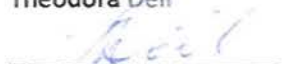
Date: 4/24/2017

Supervisory Program Officer:


Theodora Dell

Date: 5/15/17

Acting Deputy Mission Director:


Theodora Dell

Date: 5/15/17

Resident Legal Officer:


Stephen Valdes-Robles

Date: 5/2/2017

Regional Environmental Officer:
USAID/Southern Africa

Cleared by Email _____
Kerry Reeves

Date: April, 7, 2017

Distribution List:

USAID/Mozambique Health Team A/CORs and Activity Managers

USAID/ Mozambique Contracts Office

USAID/ Mozambique Program Development and Analysis Office

INITIAL ENVIRONMENTAL EXAMINATION

PROGRAM/ACTIVITY DATA:

Program/Activity Number:	Health Service Delivery (Activity Number not applicable at this level)
Program Activity Title:	USAID/Mozambique Integrated Health Office Portfolio Increased Coverage of High Impact Health and Nutrition Services
Country/Region:	Mozambique/ Africa
Functional Objective:	Investing in People
Program Area:	3.1 Health
Program Elements:	3.1.1, 3.1.7, 3.1.6, 3.1.3, 3.1.9, 3.1.2, 3.1.8 (PEPFAR, FP, MCH, PMI, NUTRITION, TUBERCULOSIS, WASH)

1.0 BACKGROUND AND PROGRAM DESCRIPTION

1.1 PURPOSE AND SCOPE OF IEE

This IEE addresses the portfolio of activities anticipated under the USAID/Mozambique Health Service Delivery portfolio. The service delivery portfolio is defined by Intermediate Result (IR) 4.1 in support of the mission's Development Objective 4 (D04), "Health status of targeted population groups improved" and includes all activities implemented under the "USAID/Mozambique 2014-2019 Health Services Delivery Project Appraisal Document: Increased Coverage of High Impact Health and Nutrition Services" (PAD).

The Service Delivery portfolio of activities will operate in parallel with IR 4.2: Increased Adoption of Positive Health and Nutrition Behaviors and IR 4.3: Strengthened Systems to Deliver Health, Nutrition, and Social Services.

Note that there are activities discussed in the Service Delivery PAD that are not covered in this IEE because they are more appropriately covered in one of the other two health sector IEEs. For instance, social and behavior change communication (SBCC) activities are addressed in the IEE on Communication Improves Health Outcomes (IR 4.2) and procurement and supply chain strengthening activities (e.g., supply chain management to increase availability of drugs to prevent malaria) are covered in the Health Systems Strengthening (IR 4.3) IEE.

This IEE, *together with IEEs developed for IR 4.2 and IR 4.3*, replaces and supersedes the Mission's

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“Improving the Health of Mozambicans” Health Sector IEE (FY 2009-2014); except that ongoing activities operating an approved environmental mitigation and monitoring plan (EMMP) may continue operating under that EMMP.

As with all IEEs, and in accordance with 22 CFR 216, this IEE reviews the reasonably foreseeable effects of subject activities on the environment. On this basis, this IEE recommends Categorical Exclusions or Threshold Decisions for these activities. Upon approval of this IEE, these recommendations become affirmed Categorical Exclusions and Threshold Decisions, and implementation of recommended conditions becomes mandatory.

In addition, this IEE sets out project¹-level implementation procedures intended to assure that conditions in this IEE are translated into activity-specific mitigation measures, and to assure systematic compliance with this IEE during project and program implementation. These procedures are themselves a general condition of approval for the IEE, and their implementation is therefore mandatory.

This IEE is a critical element of a mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation.

1.2 PROGRAM BACKGROUND: CONTEXT & JUSTIFICATION

The main public health system challenges in Mozambique include inadequate infrastructure and funding for health facilities and supplies, a shortage of health workers, an overreliance on donors for health financing, deficient information systems, and a weak civil society that does not hold the Government of the Republic of Mozambique (GRM) accountable for health service provision. E.g.:

- Per 100,000 people there are only 6.5 doctors, 28 nurses, and a total of 66 health care workers, a proportion that is among the lowest in the world.
- Multi-drug resistant tuberculosis rate and national HIV prevalence rates are both very high, at 3.5% and 11.5%, respectively.
- High child and maternal mortality rate reflect the difficulty women and children have in accessing essential health services (e.g., fewer than half of households have access to a health center less than 45 minutes away).²

Mozambique is one of the countries selected as a Global Health Initiative (GHI) country under President Obama’s six-year, US\$63 billion health initiative. Under GHI, the U.S. and Mozambique will work to reduce maternal, newborn, and child mortality in rural populations by: strengthening governance in the health sector; improving retention and management of the health workforce; and expanding access and uptake of quality maternal, newborn, and child health services.

In conjunction with health system strengthening and nutrition and health behavioral activities,

¹ The terms “activity” and “project” are used throughout this IEE per their standard meaning in environmental impact assessment, and NOT as per USAID’s new programming framework. As such, a project is a cluster of activities executed under a single, thematically focused prime contract or award. By contrast, in USAID’s new programming framework, “project” describes a sector- or sub-sector portfolio, covering multiple contracts or awards, and “activity” denotes a single such contract or award (“implementation vehicle.”)

² USAID/Mozambique Health Service Delivery PAD, 17 October 2014.

USAID/Mozambique Service Delivery activities aim to respond to these human and development health needs. The service delivery portfolio includes goals of increasing utilization of quality community-level and facility-level services, and improving active and completed referrals between community and facility services. In particular, USAID/Mozambique proposes activities to scale-up the delivery of evidence-based, high impact interventions to address the key causes of mortality and morbidity in target populations.

1.3 SUMMARY OF ACTIVITIES

The program areas supported by service delivery are malaria; maternal, newborn, and child health (MNCH); family planning; nutrition; HIV/AIDS; tuberculosis (TB); and water, sanitation, and hygiene (WASH). The populations targeted include: most-at-risk children under five, pregnant and lactating women, those infected with or affected by HIV/AIDS, and other at-risk groups (including youth, truck drivers, sex workers and orphans and vulnerable children [OVC]).

According to the USAID/Mozambique Health Service Delivery PAD (17 October 2014), the prospect of improved health services delivery in Mozambique is based on the proposed approach that coverage of health and nutrition services will increase if access to facility-level and community health services expands, and if referrals between community and facility services are improved. To supplement the primary IR 4.1—increased coverage of high impact health and nutrition services—the PAD identified three sub-IRs:

4.1.1 Increased utilization of quality facility-level services

4.1.2 Increased utilization of quality community-level services

4.1.3 Improved active and completed referrals between community and facility services.

The PAD also notes that, within the three sub-IRs, problems of *access and equity of health services*, *quality and efficiency of health programs and services*, and the *availability of qualified personnel*, can inhibit progress towards delivering critical health services to the population.

1.4 INTERVENTION CATEGORIES FOR PURPOSES OF ENVIRONMENTAL REVIEW

Neither the sub-IRs listed nor the intervention program areas (malaria, MNCH, etc.) listed immediately above constitute conducive activity categories for environmental review. Organizing environmental analysis either by sub-IRs or program areas would entail significant repetition of analysis for similar activities in different categories, and thus a long and unwieldy document.

Accordingly, for purposes of environmental review and compliance, this IEE organizes interventions in the USAID/Mozambique Health Service Delivery portfolio into five intervention categories. Each has activities from one or more IRs:

1. Healthcare Worker/Delivery Agent Training; Healthcare Workforce Strengthening & Development
2. Direct & Capacity-Building Support for Delivery & Equitable Access to Health Services; Technical Assistance To Improve Prevention Efforts
3. Water and Sanitation for Health (WASH)
4. Construction other than Water/Sanitation Infrastructure

5. Studies, Surveys/Public Health Surveillance & other Data-Gathering Assessments, Models, & Capacity-Building.

Each intervention category has a number of entailed activities; these are set out, and, where not self-explanatory, annotated in Section 3 of this IEE.

Note: there are activities discussed in the PAD that are not directly addressed in this IEE because they are more appropriately covered in one of the other two health sector IEEs. For instance, social and behavior change communication (SBCC) activities are addressed in the IEE on Communication Improves Health Outcomes (IR 4.2) and procurement and supply chain strengthening activities (e.g., supply chain management to increase availability of drugs to prevent malaria) are covered in the Health Systems Strengthening (IR 4.3) IEE.

2.0 COUNTRY AND ENVIRONMENTAL BASELINE INFORMATION

2.1 MOZAMBIQUE ENVIRONMENTAL PROFILE

Geography. Mozambique is located in Southeastern Africa along the Indian Ocean. It is separated from Madagascar by the Mozambique Channel and is bordered to the north by Tanzania, to the west by Zambia, Malawi, and Zimbabwe, and to the South by Swaziland and South Africa. Total land area is almost 800,000 km², with 2,470 km of coastline.³ Generally, the country is low lying, with coastal plains covering about 42% of land, mainly in the south and along the coast. Twenty-nine percent of the country is covered with plateaus, while 25% is highlands ranging from 500 to 1000 meters in the north and west. Around 25 rivers flow through Mozambique, exiting in the Indian Ocean. The Zambezi River is the largest, and cuts across central Mozambique.⁴

Climate. Mozambique's climate is semi-arid and subtropical in the south and tropical in the north. There is a warm, wet season from November to March and a dry, cooler season from April to October. Climate is influenced by altitude, latitude, and proximity to the sea. Mozambique receives from about 300 to 2,000 millimeters of rain per year, depending on location. The lowlands in the southern interior typically receive less rain than the Zambezi Delta and the Mountainous areas in the north and west. Droughts and

³ CIA World Factbook, Mozambique

⁴ Mozambique Environmental Threats and Opportunities Assessment, January 2013, accessed via the internet on September 18 at: http://pdf.usaid.gov/pdf_docs/PNAEA332.pdf



Source: CIA World Factbook



floods are common as precipitation varies significantly from year to year.

Ecosystems. The main terrestrial ecosystem in Mozambique is the Miombo woodlands, dry tropical woodlands consisting of broad-leaved trees. Mozambique also has 13,400 km² of coastal forest located from the northern border to the Zambezi river. The Mopane woodlands, dominated by the Mopane tree, are located in Western Mozambique in the Zambezi Valley and in the southwestern Gaza Province. In the dry southern areas of Mozambique where tree canopy cover is less than 20%, ecosystems consist of savanna grassland and thorn scrub vegetation. In western Mozambique and the northern Tete Province, the montane ecosystems include evergreen forests and afroalpine grasslands, shrublands and moorlands at the highest elevations.

The main freshwater and wetland ecosystems in Mozambique are rivers and their riparian zones, deltas, natural lakes and artificial lakes created by dams. Lake Niassa and the Zambezi Delta are important examples. Lake Niassa

is the southernmost Rift Valley Lake and is famous for its endemism, mainly the cichlid fish. The Zambezi delta was nominated as a Ramsar site, and supports a large population of aquatic birds, heron and ducks. It is also an important breeding ground for the wattled crane, and a temporary home to thousands of migratory species that depend on the habitat. Certain species in the delta habitats are also endangered, threatened, or of important commercial value.

Some of the largest and most important lakes for biodiversity, fisheries and tourism include Lake Bilene, Nhambavale, Quissico, Inharrime, and Piti. These lakes are important feeding and breeding grounds, but are threatened by unregulated development, pollution and tourism.

Coastal and marine ecosystems occupy 572,000 km² of Mozambique's total area and consist of dunes, beaches, seagrass beds, coral reefs, and mangroves. The dunes between Bazaruto Island and Ponta do Ouro are considered the tallest vegetated dunes in the world; the flora is diverse and the area contains many medicinal plants for local communities. Sandy beaches are home to five species of endangered marine turtles, as well as ghost crabs and coastal birds. These ecosystems are also under stress from unregulated development, tourism, and deforestation. Thirteen species of seagrass beds have been identified, and are important as a nursery and feeding area for sea turtles, dugongs, and other commercially valuable species. Coral reefs are located along the northern coast, mainly fringing reefs with hard corals and rich biodiversity. About 300 species of hard corals and 50 species of soft corals have

been identified. Small-scale fisheries depend on these reefs and associated ecosystems, as well as a growing tourism industry in the south, where Scuba diving is popular. Nine different species of mangrove trees have been identified in Mozambique. Mangrove forests are located on sheltered areas of the coast, mainly the estuaries and deltas of the Zambezi, Púnguè, and Save Rivers, and are important for local community use and ecosystem services, such as coastal protection.⁵

Soils. Granite rock underlies most of northern and west-central Mozambique, while the soils of southern and east-central Mozambique are sedimentary. The northern and central regions have more fertile, water-retentive soils with a higher content of red clay. In the south, soils are mostly sandy and infertile; fertile soils are limited to alluvials in the valleys of the Save, Limpopo, Incomáti, Umbelúzi, and Maputo rivers.⁶

Water Resources. Mozambique has abundant water resources due to its major river systems which also offer hydroelectric and irrigation potential. The Rovuma River lines Mozambique's northern border with Tanzania while the Zambezi River and its tributaries are found in the central region. The Zambezi has 819 km in Mozambique and drains more than 225,000 km² of the central region. The southern border with Swaziland and South Africa is formed partly by the Maputo River. Other drainage areas include the Messalo, Púnguè, Revuè, Buzi and Limpopo rivers. Mozambique shares several lake borders with Malawi (Nyasa, Chiuta and Chilwa) but has no other important lakes besides those created by the hydroelectric dam network.⁷

Mozambique has considerable groundwater potential with well yields in the Zambezi and Incomati basins at 70,000 m³ per day. Seventeen km³ of groundwater is produced annually and 97.3 km³ of surface water. Including some overlap between ground and surface water, total renewable water sources equal around 100.3 km³ per year. The Cahora Bassa dam on the Zambezi River is the largest hydroelectric plant in southern Africa with an installed capacity of 2,060 MW. Surface water is the main water source in Mozambique, although groundwater is used for drinking water supply in certain urban areas. In rural areas, shallow wells and handpump-mounted boreholes are the main source of drinking water.

The greatest source of water withdrawal is agriculture, where irrigation withdrew 86.6% in 2000, mainly from surface water, the main source of water in Mozambique. In 2003, 1,181 km² was irrigated. Total irrigation potential is around 3,300,000 ha, where the main areas suitable for irrigation are the center and the north of the country. The Zambezia province is home to 60% of the irrigation potential. Most irrigated lands are occupied by smallholder farmers and agricultural enterprises. Small-scale irrigation schemes exist all over the country, but are mostly abandoned or in bad condition due to the civil war,

⁵ Mozambique Environmental Threats and Opportunities Assessment, January 2013, accessed via the internet on September 18 at: http://pdf.usaid.gov/pdf_docs/PNAEA332.pdf

⁶ Mozambique, Accessed via the internet on 19 September at:
<http://www.britannica.com/EBchecked/topic/395363/Mozambique#toc43964>

⁷ Mozambique, Accessed via the internet on 19 September at:
<http://www.britannica.com/EBchecked/topic/395363/Mozambique#toc43964>

lack of inputs and technical assistance, and floods in 2000 and 2001.⁸

Biodiversity & Protected Areas. Mozambique is home to 5,500 plants, 581 birds, and 205 mammals. About 250 of these species are endemic to Mozambique. Five species of sea turtles occur along the coast, and eighteen other species of marine animals including dolphins, whales, seals, and dugong. Around 300 species of plants are on the “Red List” of threatened and endangered species, 55 of which are endemic to Mozambique. In addition, 105 mammal species are of conservation concern. The white rhinoceros, tsesebe, sitatunga, black rhinoceros, giraffe, roan antelope, mountain reedbuck, and cheetah are the most threatened large mammal species. The Gorongosa Mountains, Great Inselberg Archipelago of Quirimbas and the Chimanimani Mountains are all sites of high importance for biodiversity.^{9,10}

Mozambique has extended its protected areas from 11% to 25% of its national area, and has added new conservation areas as well, such as Quirimbas National Park for marine and coastal ecosystems and Limpopo Transfrontier National Park. Several areas are also under special protection, including Marromeu Complex, Maputoland Centre of Endemism, and the Chimanimani and Namuli Mountains.¹¹ Overall, protected areas include six national parks, eight national reserves, 13 forest reserves, two integral reserves, and 14 hunting concession designated for sport hunting and protecting species. In addition, the Marromeu Natural Reserve and Lake Niassa Partial Reserve are Ramsar sites due to the extensive biodiversity of their wetlands.¹² Mozambique has one UNESCO Cultural World Heritage Site, the Island of Mozambique.¹³

2.2 HEALTH AND HEALTH SECTOR PROFILE

Mozambique has made advances towards reaching its health-related Millennium Development Goals, but access to basic services remains low. Neonatal mortality decreased to 30 deaths/1000 and under-five mortality to 90 deaths/1000. However, in other areas health outcomes are still substandard. Malaria causes 26% of hospital deaths, HIV prevalence is still high, the national TB response is complicated by multi drug TB resistance (Mozambique is among the 22 high-burden TB countries), and women and children have inadequate access to health services. In addition, recurrent natural disasters and epidemics exacerbate health system issues and require stronger surveillance systems and accordance

⁸ Mozambique, accessed via the internet on 19 September at:

http://www.fao.org/nr/water/aquastat/countries_regions/moz/index.stm

⁹ Mozambique-Country Profile, accessed via the internet on 18 September at:

<http://www.cbd.int/countries/profile/default.shtml?country=mz#status>

¹⁰ Mozambique Environmental Threats and Opportunities Assessment, January 2013, accessed via the internet on September 18 at: http://pdf.usaid.gov/pdf_docs/PNAEA332.pdf

¹¹ Mozambique-Country Profile, accessed via the internet on 18 September at:

<http://www.cbd.int/countries/profile/default.shtml?country=mz#status>

¹² Mozambique Environmental Threats and Opportunities Assessment, January 2013, accessed via the internet on September 18 at: http://pdf.usaid.gov/pdf_docs/PNAEA332.pdf

¹³ Mozambique- Properties inscribed on the World Heritage List, accessed via the internet on September 18 at:

<http://whc.unesco.org/en/statesparties/MZ/>

with international health regulations.¹⁴

In 2013, the number of people living with HIV in Mozambique was 1.6 million. Adults have a 10.8% prevalence rate, while 190,000 children aged 0 to 14 are living with HIV. In 2013, around 82,000 people died from AIDS.¹⁵ Only 40% of HIV+ pregnant women received Anti-Retroviral Therapy (ART) for their own health, while 86% received ART for Prevention of Mother-to-Child Transmission.¹⁶ From 2004 to 2009, the number of children receiving ART increased from 500 to 12,647, representing 27% of children eligible for and requiring treatment.¹⁷

The high child and maternal mortality rate is a reflection on the difficulty women and children have in accessing essential health services. The main causes of death for children under five are neonatal death (34%), Malaria (18%), “other” (16%), and Sepsis (Tetanus, Meningitis, Encephalitis- 7%). The main causes of maternal death are indirect (29%), hemorrhage (25%) and hypertension (16%). In 2011, only 54% of live births were attended by skilled health personnel. Disease prevention and treatment in children is another challenge. Around 56% of children under five with diarrhea received treatment in 2011, while less than 40% of children slept under insecticide-treated nets. Nutrition is also a major issue among children, as 43% have stunted growth, and 16% are moderately or severely underweight.¹⁸

National water supply coverage in Mozambique was 47% in 2008, 77% in urban areas and 29% in rural areas. Sanitation coverage was 17%, with major differences again among urban (38%) and rural (4%) areas. Urban water and sanitation infrastructure will face increasing challenges as urban population growth increases at a rate of 4% each year. Mozambique’s water vulnerability is represented by its reliance on upstream neighbors for 50% of surface water. Further, climate change has implications for both food and water security as analysis suggests that Mozambique will face warming in inland regions and sea level rise along the coast. The government recognizes the role water and sanitation plays in reducing poverty levels, and has addressed water, sanitation and hygiene issues in its Five Year Plan (2010-2015), Poverty Reduction Action Plan, and UN Development Assistance Framework.¹⁹

2.3 ENVIRONMENTAL INSTITUTIONS, POLICY AND REGULATION

Environmental regulations in Mozambique begin with the **Constitution of 2004**, which addresses the environment and quality of life, and states “the state and local authorities, in collaboration with out appropriate partners, to adopt policies for the protection of the environment and care for the rational

¹⁴ Mozambique Country Cooperation Strategy at a Glance, accessed via the internet on 22 September 2014 at: http://www.who.int/countryfocus/cooperation_strategy/ccsbrief_moz_en.pdf

¹⁵ Mozambique HIV and AIDS estimates (2013), accessed via the internet on 22 September 2014 at: <http://www.unaids.org/en/regionscountries/countries/mozambique/>

¹⁶ <http://www.unaids.org/en/regionscountries/countries/mozambique/>

¹⁷ Mozambique Maternal, Newborn & Child Survival, accessed via the internet on 22 September 2014 at: http://www.countdown2015mnch.org/documents/2014Report/Mozambique_Country_Profile_2014.pdf

¹⁸ Mozambique Maternal, Newborn & Child Survival, accessed via the internet on 22 September 2014 at: http://www.countdown2015mnch.org/documents/2014Report/Mozambique_Country_Profile_2014.pdf

¹⁹ Mozambique WASH Sector Brief, accessed via the internet on 22 September 2014 at: <http://www.ircwash.org/sites/default/files/ISF-2011-Mozambique.pdf>

utilization of all natural resources”. It also claims that the state shall adopt policies to prevent and control pollution and erosion, integrate environmental objectives into sector policies, promote the integration of environmental values in educational policies and programs, and ensure the rational and sustainable utilization of natural resources.

In Mozambique, the **Ministry of Land, Environment and Rural Development (MITADER) (former Ministry for Coordination of Environmental Action – MICOA)**_ is responsible for implementing the National Environmental Management Program (NEMP) and associated environmental legislation, and for coordinating with other ministries to integrate environmental aspects into their projects and policies. The NEMP was formulated by MITADER in 1996 and contained an Environmental Policy, a proposal for the Framework Environmental Act (passed in 1997) and an Environmental Strategy. MITADER has established regulations relating to environmental management including for industrial activities, mining, standards for environmental quality and effluent emissions, and environmental auditing. MITADER is also responsible for regulating Environmental Impact Assessments (EIAs) which involves approving the terms of reference, reviewing completed EIAs and implementing an audit process.

The **Environmental Law of 1997** is the basis of all legislation regarding preservation of the environment. The law’s objective is to define the legal basis for judicious utilization and management of the environment, aiming to achieve sustainable development in Mozambique. The law’s mandate includes public and private activities that have any risk of influencing the environment. The principles set out by this law are rational and sustainable management and use of the environment for the maintenance of biodiversity and ecosystems and improvement of quality of life for citizens; recognition of traditions and local knowledge which may contribute to the conservation and preservation of natural resources; precaution for activities that might harm the environment; an integrated, global vision of the environment; public participation; equitable access to natural resources by all; and commitment to minimizing trans-boundary impacts. Chapter four of this law, Prevention of Environmental Damage, requires licensing of activities likely to cause environmental impacts. Issuance of a license depends on an EIA being completed and accepted by MITADER.

Mozambique has several laws that provide the legal framework for ownership and management of environmental resources, such as forests, land, and water. Mozambique’s **Forestry and Wildlife Policy, Law, and Regulations** confirm the State’s mandate over natural forests and wildlife resources, calls for establishing protected areas to conserve biodiversity, and provides guidelines for the sustainable use of these resources. The Forestry and Wild Law regulations include licensing details and information about exploitation, game farms, and fines. The **Land Act** provides the legal framework for land and natural resource ownership in Mozambique. It establishes that surface and groundwater belong to the state and people of Mozambique, and requires a license for use of large quantities of water. It also recognizes the need to create protected areas for ecologically sensitive land and natural resources. The **Water Law** in Mozambique established the state’s ownership of inland surface and groundwater and requires a license for the use of large quantities of water for industry, irrigation or other purposes. Licenses are granted if the water use does not cause significant environmental damages. These laws acknowledge the rights of local communities over land and natural resources, and encourage their involvement in

management and conservation.^{20,21}

Mozambique is a member of the World Bank and IUCN, and therefore should follow these organization's guidelines related to biodiversity conservation. In addition, Mozambique is party to multiple international conventions and protocols to protect the environment, including the convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES), the Vienna and Montreal Conventions for protection of the Ozone, the Kyoto Protocol, the UN Convention on Biological Diversity, the Cartagena Protocol on Biosafety, the Convention on Persistent Organic Pollutants (POPs), the UN Framework Convention on Climate Change, and the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movements of Hazardous Wastes within Africa.²²

2.4 REGULATIONS RELEVANT TO THE HEALTHCARE SECTOR

Mozambique's **Regulation for the Prevention of Pollution and Marine and Coastal Environmental** establishes the legal basis for protection and conservation of seas, lakes, rivers, beaches and fragile ecosystems, and limits pollution resulting from discharge by ships, platforms, or land-based sources along the coast. It also prohibits the discharge of toxic or harmful wastewater or substances that may cause pollution.

In 2006 Mozambique passed the **Regulation on Waste Management** to encourage waste producers to minimize waste. It establishes rules related to production and discharge of toxic and polluting substances as well as activities that degrade the environment.

The **Regulation regarding Standards for Environmental Quality and the Discharge of Effluent** defines standards for environmental quality and effluent emission for receiving bodies of water, treatment technologies, systems and methods. It requires that liquid industrial effluent be discharged through an appropriate entity in accordance with emission and discharge standards, and that the point of discharge is determined during the environmental licensing process so the water quality of the receiving body will be unchanged.

The **Regulation regarding the Quality of Water for Human Consumption** establishes water quality parameters for human consumption, and procedures for controlling water quality to protect human health.²³

3.0 POTENTIAL ENVIRONMENTAL IMPACTS & RECOMMENDED DETERMINATIONS, INCLUDING CONDITIONS

As set out in section 1.4, for the purpose of environmental review, activities of the Service Delivery

²⁰ Mozambique Environmental Threats and Opportunities Assessment, January 2013, accessed via the internet on September 18 at: http://pdf.usaid.gov/pdf_docs/PNAEA332.pdf

²¹ Mozambique, accessed via the internet on 22 September at: <http://www.saiea.com/saiea-book/mozam1.pdf>

²² Mozambique Environmental Threats and Opportunities Assessment, January 2013, accessed via the internet on September 18 at: http://pdf.usaid.gov/pdf_docs/PNAEA332.pdf

²³ <http://www.erm.com/PageFiles/13352/Draft-EIA-Aug2013/Chapter-2-LNG.pdf>

program addressed by this IEE are grouped into the following intervention categories.

1. Healthcare Worker/Delivery Agent Training; Healthcare Workforce Strengthening & Development
2. Direct & Capacity-Building Support for Delivery & Equitable Access to Health Services; Technical Assistance To Improve Prevention Efforts
3. Water and Sanitation for Health (WASH)
4. Construction other than Water/Sanitation Infrastructure
5. Studies, Surveys/Public Health Surveillance & other Data-Gathering Assessments & Models.

Each category contains a number of entailed activities. In sections 3.2-3.6, the entailed activities are described and their potential impacts analyzed. On this basis, Recommended Determinations are made. In most cases, Negative Determinations entail conditions. Upon approval of this IEE, implementation of these conditions becomes mandatory.

3.1 ADVERSE IMPACTS OF HEALTH SERVICES DELIVERY DUE TO FAILURE TO PROPERLY MANAGE RESULTING WASTES

This section is a general discussion and analysis of waste-related impacts of health care service delivery. It is referenced at several points in the analyses of the specific intervention categories that follow in sections 3.2—3.6. It supports this subsequent analysis; no recommended determinations are attached specifically to this section.

Although healthcare activities provide many important benefits to communities, they can also unintentionally do harm via poor management of the wastes they generate. These wastes generally fall into three categories in terms of public health risk and recommended methods of disposal:

- **General** healthcare waste, similar or identical to domestic waste, including materials such as packaging or unwanted paper. This waste is generally harmless and needs no special handling; 75–90% of waste generated by healthcare facilities falls into this category, and it can be burned or taken to the landfill without any additional treatment.
- **Hazardous** healthcare wastes including infectious waste (except sharps and waste from patients with highly infectious diseases), small quantities of chemicals and pharmaceuticals, and non-recyclable pressurized containers. All blood and body fluids are potentially infectious.
- **Highly hazardous** healthcare wastes, which should be given special attention, includes sharps (especially hypodermic needles), highly infectious non-sharp waste such as laboratory supplies, highly infectious physiological fluids, pathological and anatomical waste, stools from cholera patients, and sputum and blood of patients with highly infectious diseases such as TB and HIV. They also include large quantities of expired or unwanted pharmaceuticals and hazardous chemicals, as well as all radioactive or genotoxic wastes.

Pharmaceutical Wastes and Medical Supplies, including condoms: Pharmaceutical drugs including vaccines have specific storage time and temperature requirements, and may expire or lose efficacy before they are used, particularly in remote areas where demand is low and/or infrequent.

Pharmaceutical waste may also accumulate due to inadequacies in stock management and distribution and/or lack of a routine system of disposal.

The effects of pharmaceutical waste in the environment are different from conventional pollutants. Drugs are designed to interact within the body at low concentrations to elicit specific biological effects in humans, and which may also cause biological responses in other organisms. There are many drug classes of concern, including antibiotics, antimicrobials, antidepressants, and estrogenic steroids. Their main pathway into the environment is through household use and excretion, and through the disposal of unused or expired pharmaceuticals.

Effects on aquatic life are a major concern in disposal of pharmaceuticals. A wide range of pharmaceuticals has been discovered in fresh and marine waters globally, and even in small quantities some of these compounds have the potential to cause harm to aquatic life.

Additional health risks related to disposal include burning pharmaceuticals and plastic medical supplies (including new or used condoms) at low temperatures or in open containers, which results in release of toxic pollutants into the air. Inefficient and insecure sorting and disposal may allow drugs beyond their expiry date to be diverted for resale to the general public.

Potentially infectious wastes: Improper training, handling, storage and disposal of the waste generated in health care facilities or activities can spread disease through several mechanisms. Transmission of disease through infectious waste is the greatest and most immediate threat from healthcare waste. If waste is not treated in a way that destroys the pathogenic organisms, dangerous quantities of microscopic disease-causing agents—viruses, bacteria, parasites or fungi—will be present in the waste. These agents can enter the body through punctures and other breaks in the skin, mucous membranes in the mouth, by being inhaled into the lungs, being swallowed, or being transmitted by a vector organism. Those who come in direct contact with the waste are at greatest risk. Examples include healthcare workers, cleaning staff, patients, visitors, waste collectors, disposal site staff, waste pickers, substance abusers and those who knowingly or unknowingly use “recycled” contaminated syringes and needles. Although sharps pose an inherent physical hazard of cuts and punctures, the much greater threat comes from sharps that are also infectious waste. Healthcare workers, waste handlers, waste-pickers, substance abusers and others who handle sharps have become infected with HIV and/or hepatitis B and C viruses through pricks or reuse of syringes/needles.

Contamination of water supply from untreated healthcare waste can also have devastating effects. If infectious stools or bodily fluids are not treated before being disposed of, they can create and extend epidemics. The absence of proper sterilization procedures is believed to have increased the severity and size of cholera epidemics in Africa during the last decade.

3.2: HEALTHCARE WORKER/DELIVERY AGENT TRAINING; HEALTHCARE WORKFORCE STRENGTHENING AND DEVELOPMENT

Constituent Activities. This intervention category consists of:

1. Training/supportive supervision activities focused on:

- a. HIV/AIDS Support, including counseling and rapid HIV/AIDS testing, prevention of mother-to-child transmission (PMTCT) and Voluntary Medical Male Circumcision (VMMC); screening, testing, and treatment;
- b. PEPFAR, Voluntary Counseling & treatment (VCT)
- c. TB and multi-drug resistant tuberculosis (MDRTB), including training, screening, testing, and treatment; sputum transfer programs; and technical assistance in provision of clinical care in TB service settings, including examinations, clinical monitoring, and related laboratory services
- d. Maternal and Child Health, including family planning, antenatal care (ANC), post-rape care; nutrition
- e. Malaria (PMI – Malaria Operations Plan)
- f. Additional support for Palliative care training (e.g., social and material support, such as counseling in nutrition, legal aid, and housing), STI screening, prevention, and treatment services; other immunization and vaccination services (e.g., for Human Papilloma Virus, Pentavalente, and Pneumococcal)
- g. Orphans and Vulnerable Children and Gender-Based Violence: activities include technical assistance, community mobilization, capacity strengthening of local nongovernmental organizations, and advocacy

Note re: Facility Rehabilitation & Equipment and Supplies Procurement Associated with Training:

Small-scale facility rehabilitation associated with training is covered under the construction section (Section 3.5) and subject to the relevant conditions described therein. Procurement of equipment associated with training is covered under the procurement section of the USAID/Mozambique Health Systems Strengthening IEE and subject to the relevant conditions described therein.

Potential Adverse Impacts & Considerations Regarding Recommended Determinations.

Training (including supportive supervision) is one of a class of activities under 22 CFR 216 eligible for categorical exclusion. However, training of health care providers is intended to improve and expand the delivery of and/or access to health care services. As described in section 3.1, the delivery of these services presents a set of potentially significant adverse environmental and health impacts, particularly waste-and bio-safety related.

Further, the purpose of the training activities and the development of training curricula are to influence the actions of healthcare providers/service delivery agents. Appropriate management of health care waste depends heavily on individual actions of these agents: e.g., is there consistent separation of sharps and “red bag” waste? Training therefore must, as appropriate, address proper handling, use and disposal of health care waste, including proper disposal of blood, sputum, and sharps.

Similarly, the district and regional health system managers who are the target of leadership development programs will likely influence the actions of healthcare providers and service delivery agents—as well as the physical condition and management of the health care facilities for which these

leaders are responsible.

While USAID does not have control over the actions of health care providers/service delivery agents/managers post-training, it can—and it is needful to—assure that the curricula, training (including supportive supervision) and leadership programs fully and appropriately integrate sound management of health care waste.

Recommended Determinations. Following from the analysis above, the following determination is recommended for activities in this category.

Activity	Recommended Determination
<p>1. Training/supportive supervision focused on:</p> <p>a. HIV/AIDS Support, including prevention of mother-to-child transmission (PMTCT) and Voluntary Medical Male Circumcision (VMMC); screening, testing, and treatment;</p> <p>b. PEPFAR, Voluntary Counseling & treatment (VCT)</p> <p>c. TB and MDRTB, including training, screening, testing, and treatment; sputum transfer programs</p> <p>d. Maternal and Child Health, including family planning, antenatal care (ANC), post-rape care; nutrition</p> <p>e. Malaria (PMI – Malaria Operations Plan),</p> <p>f. Palliative care support, STI screening, prevention, and treatment services; other immunization and vaccination services (e.g., for Human Papilloma Virus, Pentavalente, and</p>	<p>Negative determination with the following conditions:</p> <ul style="list-style-type: none"> <p>Training, supervision, curricula development and other health care worker/workforce capacity building must address appropriate management practices concerning the proper handling, use, and disposal of medical waste, including blood, sputum, and sharps, when techniques or care situations being addressed would generate and require disposal of hazardous or highly hazardous waste (e.g. sharps, afterbirth from delivery, waste from screening for HIV or STDs, sputum samples for diagnosis of TB). Where USAID-funded training activities directly generate HCW, USAID MUST assure appropriate management of this waste.</p> <p><u>Note that this condition applies to activities targeting home care AND community health workers, not just those in clinics and health facilities.</u> Wherever relevant, appropriate disposal mechanisms in home-based and community-based situations that are cost effective and safe must be identified and appropriately incorporated in training, protocols, and guidelines. This includes training home care and community health workers to deliver positive messages about personal and household hygiene, sanitation, and proper disposal of condoms and other potentially harmful materials.</p> <p>Additional conditions for tuberculosis activities. In addition to being subject to the conditions above:</p> <p><u>Training/curricula/supervision in the area of TB diagnosis and care</u> must address standards for diagnosis, including risk factors for TB, appropriate diagnostic testing for persons with symptoms, and appropriate clinical evaluation procedures.</p> <p><u>Where USAID directly supports diagnostic testing,</u> USAID must assure that the TB laboratories meet the reference standards established by WHO related to 1) codes of practice, 2) equipment, 3) laboratory design and facilities, 4) health surveillance, 5) training, and 6) waste handling. Depending on the specific tests conducted by a facility, additions and modifications to the WHO measures may be warranted for different levels of risk as described in WHO's</p>

Pneumococcal)
g. Orphans and Vulnerable
Children and Gender-Based
Violence

Tuberculosis Laboratory Biosafety Manual (2012 ed or later)
(http://apps.who.int/iris/bitstream/10665/77949/1/9789241504638_eng.pdf)

Mandatory references.

Training in TB diagnosis must conform to WHO guidance, specifically the Tuberculosis Laboratory Biosafety Manual (2012 ed or later). Available at: http://apps.who.int/iris/bitstream/10665/77949/1/9789241504638_eng.pdf

Training in TB care, including diagnosis, treatment, and public health, must conform to the international standards articulated in the World Health Organization's International Standards for Tuberculosis Care (http://www.who.int/tb/publications/ISTC_3rdEd.pdf?ua=1)

Conform to PMI Best Management Practices, available at:

<http://www.pmi.gov/resource-library/training-guidance>

For all activities in this category, the USAID Sector Environmental Guidelines for Healthcare Waste (<http://www.usaidgems.org/Sectors/healthcareWaste.htm>) contains guidance, which must inform compliance with these conditions, particularly in the section titled, "Minimum elements of a complete waste management program." See also WHO's "Safe Management of Wastes from Healthcare Activities."

3.3: DIRECT & CAPACITY-BUILDING SUPPORT FOR DELIVERY OF & EQUITABLE ACCESS TO HEALTH SERVICES; TECHNICAL ASSISTANCE TO IMPROVE PREVENTION EFFORTS

Constituent Activities. This intervention category consists of activities to:

1. Support strengthened referral systems: Training/supportive supervision to improve processes for identifying patients who should be referred to the next level of specialized care, beginning at the local health clinic level through more specialized health care provision capabilities.
2. Provide direct support for on-the-ground service delivery and care, and to management systems.
3. Improve quality and usage of community and facility level services.
4. Strengthen the patient cascade from testing to treatment to care, improving the patient's experience, and ensuring immediate and continued follow up.
5. Develop the capacity of Civil Society Organizations (CSOs) for service delivery.
6. Technical assistance to improve the systems and programs of Departments driving the prevention agenda, including prevention of gender-based violence (GBV) and HIV/AIDS. Prevention programs are largely implemented via behavior change communication (e.g. promotion of male and female condom use), but Mozambique's Gender-Based Violence Initiative also targets providing protection and appropriate services for GBV survivors.

Note: Except in the area of strengthened referral systems, training and supportive supervision of health care workers, is covered in section 3.2.

Potential Adverse Impacts & Considerations Regarding Recommended Determinations.

Support for strengthened referral systems is simply intended to improve the capacity of healthcare providers to identify and refer patients to the next level of specialized care. It does not address, have control over, or foreseeable effects on service delivery or infrastructure at referral facilities. As such, it does not have foreseeable adverse environmental impacts.

Activities in sub-categories 2-6 are intended to improve and expand the delivery of and/or access to health care services. As detailed in Section 3.1, the delivery of these services presents a set of potentially significant adverse environmental and health impacts, particularly related to medical waste. Expansion of these services while strengthening delivery and/or access to health care services may result in adverse environmental impacts. Therefore, these remaining activities DO present potential adverse environmental impacts. These impacts may be direct or indirect:

- **Where USAID support for service delivery is direct**, USAID bears full responsibility for adverse impacts when its support fails to address waste management or to consider the capacity of medical facilities to properly handle, label, treat, store, transport and properly dispose of medical waste.
- **Where USAID instead funds capacity building for the entities that manage delivery of care** (e.g. government ministries, NGOs), USAID generally has far less control over service delivery on the ground. Reduced control means that USAID's responsibility for adverse impacts is shared or attenuated—but not eliminated.

For example, proper waste management requires that the systems and structures governing health care delivery address and require appropriate management. Where USAID's support means that USAID has substantial influence over these systems and structures, USAID and IPs must work to best assure that these systems and structures support appropriate health care waste management.

With specific respect to **activities to develop capacity of CSOs for service delivery**. These activities are intended to heighten the involvement of CSOs in the Mozambican healthcare system. This may include capacity building, establishment of a CSO funding mechanisms, and partnership development.

Direct funding of CSOs for care delivery is possible. This entails all the generation of medical waste, and thus all the potential adverse impacts attendant to such waste; see section 3.1. USAID's responsibility for these impacts is no different in this case than when any other implementing partner is directly delivering care.

In the case of building CSO *capacity* to deliver and manage care, but not directly funding such care, USAID's control over the care CSOs deliver is highly limited or zero. However, the purpose of such capacity building is to substantially influence care delivery practices. As such, such capacity building must incorporate and address appropriate management of medical waste and end-of-life commodities.

Technical assistance to improve the systems and programs of Departments driving the prevention agenda. Generally, this TA will focus on strengthening programs and systems that implement the "behavior change communications" (BCC) dimensions of GBV and HIV/AIDS prevention. BCC has no

foreseeable adverse impacts and this TA is thus eligible for categorical exclusion. This is also true of support to strengthen prevention policy implementation generally, and for offering protection to GBV survivors.

However, it is possible that prevention-related testing/surveillance and/or GBV survivor services may involve the generation of HCW/handling of potentially infectious biological samples. These present the risks discussed in section 3.1. While USAID will not be directly funding testing or surveillance or survivor services, program and system strengthening efforts are generally intended to increase not just the quality, but the quantity and availability of these services—and thus will have the effect of increasing the volume of HCW/biological samples to be managed. Such TA must therefore anticipate and promote appropriate management of HCW, including biological samples. This is functionally equivalent to situations in which USAID funds systems capacity-building for care delivery; see “remaining activities in this intervention category,” below.

Recommended Determinations. Following from the analysis above, the following determination is recommended for activities in this category.

Activity	Recommended Determination
1. Support for strengthened referral systems	Categorical Exclusion per 22 CFR 216.2(c)(2)(i) Education, technical assistance, or training
2. Direct support for on-the-ground service delivery and care 3. Improve quality and usage of community and facility level services 4. Strengthen the patient cascade from testing to treatment to care, improving the patient’s experience, and ensuring immediate and continued follow up, where testing 5. Develop capacity of Civil Society Organizations (CSOs) for service delivery	<p><u>Negative Determination</u> subject to the <u>conditions</u> that:</p> <p>Direct provision of care, including direct funding of CSOs for care delivery. Where USAID directly provides healthcare services, the health team and IPs must ensure, that medical waste generated as a result of that care is properly managed. In particular, adequate procedures and capacities must be in place to properly handle, label, treat, store, transport and properly dispose of blood, sharps and other medical waste and that norms and training include environmental health considerations.</p> <p>Support to health delivery & management systems, including CSO systems must involve all feasible efforts to assure that these systems:</p> <ul style="list-style-type: none"> • address and support proper waste management (including handling, labeling, treatment, storage, transport and disposal of medical waste) • address and support the capacity of medical facilities for waste management; and, • prioritize environmental health considerations. <p>It is understood that USAID support to health delivery and management systems does not, in most cases, equate to direct USAID control over these systems. However, IPs must proactively advance these principles in their analysis and recommendations.</p>

	<p>Other support to health facilities and service delivery. The health team must ensure, to the greatest extent feasible, that the medical facilities and operations benefitting from USAID support have adequate procedures and capacities in place to properly handle, label, treat, store, transport and properly dispose of blood, sharps and other medical waste and that norms and training include environmental health considerations. The ability of IPs and the Health Team to assure such procedures and capacity is understood to be limited by its level of control over the management of the beneficiary facilities and operations.</p> <p>“Proper Management” of health care wastes is defined as being in substantial conformity with the USAID’s Sector Environmental Guidelines (SEG) “Health Care Waste” chapter (www.usaidgems.org/Sectors/healthcareWaste.htm), particularly the section titled, “Minimum elements of a complete waste management program.” Other important references to consult for sound waste management practices are “WHO’s Safe Management of Wastes from Healthcare Activities.”</p>
6. Technical assistance to improve the systems and programs of Departments driving the prevention agenda, including prevention of gender-based violence (GBV) and HIV/AIDS.	<p>For TA to strengthen (1) surveillance/testing involving biological samples or generation of HCW and/or (2) provision of GBV survivor or other services involving biological samples or generation of HCW:</p> <p>Negative Determination subject to the condition that TA involve all feasible efforts to assure that these systems:</p> <ul style="list-style-type: none"> • address and support proper waste management (including handling, labeling, treatment, storage, transport and disposal of medical waste) • address and support the capacity of facilities involved for waste management; and, • prioritize environmental health considerations. <p>It is understood that USAID support in this area will not, in most cases, equate to direct USAID control over these systems and programs. However, IPs must proactively advance these principles in the technical assistance provided.</p> <p>-----</p> <p>For all other activities in this category:</p> <p>Categorical Exclusion per 22 CFR 216.2(c)(2)(i) Education, technical assistance, or training</p>

3.4: WATER AND SANITATION FOR HEALTH (WASH)

Constituent Activities. This intervention category consists of activities to:

1. Small-scale watershed management, including vegetation and re-vegetation of streambanks and

hillsides.

2. Construction or rehabilitation of small-scale water infrastructure, such as boreholes, shallow wells, and spring capping, including associated infrastructure such as towers/tanks/standpipes and distribution systems.
3. Construction of small-scale sanitation infrastructure, to include latrines, showers, hand washing stations, flush toilets and KVIP toilets.
4. Capacity-building for equipment/system maintenance.
5. TA to community and District Assembly level management committees to support development of sustainable community based Water Boards to manage water systems.
6. TA in financial management for Water Boards to improve the ability to manage and maintain systems, meter use and collect fees. This support may include provision of water metering equipment.
7. Support access for financing for water and sanitation improvements at household and community levels).
8. Facilitate private sector participation in providing sanitation products and services through GDAs and other linking partnerships, including financial institutions.
9. Support WASH innovation technologies for latrines.
10. Water supply infrastructure activities equal to or greater than a total investment in a given community of \$250,000.

Potential Adverse Impacts & Considerations Regarding Recommended Determinations

In general, well-executed water and sanitation interventions bring substantial health and environmental benefits. However, active efforts are required to prevent unintended adverse impacts that can offset or negate these benefits.

Watershed management via plantings to reduce runoff and erosion will likely have a positive overall effect on the environment. However, poorly planned re-vegetation projects have an increased likelihood of failure due to improper selection of plant, shrub, and tree species, lack of community input and when capacity-building is absent. For example, the success of this activity will be seriously compromised if the community is not engaged on the importance of cattle exclusion from re-vegetated areas. Watershed management and revegetation are activities with high potential for long-term benefits, if planned and implemented properly.

Wells, boreholes, and water supply systems. In operation, wells and boreholes may

- Deplete groundwater when abstraction exceeds replenishment of groundwater resource.
- Create stagnant (standing) water in the vicinity of the water supply point and creation of diseases vectors breeding sites (mosquitoes, risks of contamination of fetched water, foot infection of water point users, seepage in and contamination of the wells, etc.)
- Create human health risks from provision of biologically or chemically contaminated water. Even if water is not contaminated initially, it can become so thru flooding, failure to exclude livestock from the water point, use of contaminated containers to draw water from hand-dug wells, and other factors.

- Lead to human health risks from contamination of water fetched from the water points to the end users (arising from contamination of containers, mishandling, etc.).

However, for small-scale interventions these impacts can be controlled below the level of significance by appropriate siting, design, and maintenance. With respect to the last, capacity-building in equipment/system maintenance is an essential corollary to construction/installation of small-scale sanitation systems and facilities.

Latrines, showers, hand washing stations, flush toilets and KVIP toilets: In operation, latrines can contaminate shallow groundwater and wells and, when not well maintained or of an open-pit design, can be the source of multiplication of flies, mosquitoes, spread of diseases, and foul odors. (Properly operated KVIP toilets, which are identified by as an intervention focus, address insect control and odor, though they may still contaminate groundwater.)

More specifically, poorly designed sanitation facilities can lead to insect-borne diseases: There are two groups to consider. Firstly, *Culex* mosquitoes, which do *not* transmit malaria but can transmit filariasis, breed extensively in septic tanks and flooded latrines. Secondly, flies and cockroaches often thrive on excreta and have been implicated in some transmission of fecal-oral disease. Mosquitoes, flies, and cockroaches all constitute a great nuisance, and poor urban households have consistently been shown to spend substantial amounts of their limited household income on using control coils and nets.

Construction of small-scale sanitation infrastructure may also lead to contamination and/or degradation of water sources. Sanitation projects may contaminate or degrade the quality of surface water, ground water, soil, and food, which may be caused by improper siting of sanitation facilities, improper disposal of excreta or wastewater, improper operation of sanitation facilities, among other causes.

However, for small-scale interventions, these impacts can be controlled below the level of significance by appropriate siting, water quality assurance protocols (including testing), design (including drainage and exclusion of livestock from water points) and maintenance. With respect to the last, capacity-building in equipment/system maintenance is an essential corollary to construction/installation of small-scale sanitation.

Social marketing/education/outreach/community mobilization on hygienic water handling/storage, hand-washing, use of sanitation facilities (CLTS---community-led total sanitation) and the importance of protecting water supplies is, like system and equipment maintenance, an essential corollary to construction and installation of small-scale water and sanitation infrastructure. Experience shows without behavior change, the physical infrastructure will not be used or maintained.

Support to access for financing for water and sanitation improvements at household and community levels presents risks if increased finance availability is not accompanied by complementary interventions that better assure that the small-scale/household installations conform to appropriate design and siting criteria, and are properly operated and maintained. Such complementary interventions include, e.g. training local contractors, working with community WASH committees to assure that credit is directed toward well-designed installations, etc.

Support WASH innovation technologies for latrines. Innovative latrine technologies may be promoted for their cost advantages, ease of construction, attractiveness to users, because they better address environmental contamination and disease vector problems, or for other reasons. As a class, however, they present the same potential risks as existing latrine technologies, and may or may not be an appropriate design choice in a specific context. Assessing and managing these risks for field testing or wider installation of innovative latrine technology requires a specific examination of the technology and its proposed use context.

Recommended Determinations. Following from the analysis above, the following determination is recommended for activities in this category.

Activity	Recommended Determination
1. Small-scale watershed management, including vegetation and re-vegetation of streambanks and hillsides	<p>Negative Determination with the following conditions: Plantings for erosion control must be conducted in conjunction with watershed management efforts. Project planners must evaluate what native species of trees, shrubs, and plants will work best to accomplish project goals while providing long-term benefits while engaging community members in planning and long-term management. Sources of native plant stocks – including the establishment of nurseries - must be assessed for environmental impacts. Plans should generally be consistent with USAID’s <i>Sector Environmental Guidelines: Forestry: Reforestation, Natural Forest Management, and Agroforestry</i></p>
2. Construction or rehabilitation of small-scale water infrastructure, such as boreholes, shallow wells, and spring capping, including associated infrastructure such as towers/tanks/standpipes and distribution systems	<p>Negative Determination with Conditions is recommended for small-scale water supply infrastructure activities (defined as total investment in a given community of less than \$250,000). The conditions are as follows: 1. Good-practice design standards must be implemented for new construction and rehabilitation works, generally consistent with USAID’s <i>Sector Environmental Guidelines: Water Supply & Sanitation</i>: http://www.usaidgems.org/Sectors/watsan.htm. These standards must be specified in the EMMP and must include siting of new wells well away from groundwater contamination sources (e.g. latrines, cesspits, dumps), exclusion of livestock from water points, and prevention of standing water at water supply points.</p> <ul style="list-style-type: none"> ● Water quality assurance plan. Prior to drinking water provision, the project will prepare and receive approval for a Water Quality Assurance Plan (WQAP). The WQAP will be prepared in consultation with the cognizant AOR/COR and/or Activity Manager. Its purpose is to ensure that all new and rehabilitated USAID-funded sources of drinking water provide water that is safe for human consumption. The completed WQAP must be approved by: the AOR/COR and/or Activity Manager; the MEO; and the REA. ● Once approved, the WQAP must be implemented in full, and for the duration of drinking water activities. Implementation must include

testing of water prior to making the supply point available to beneficiaries.

- The WQAP constitutes a key element of the project's EMMP. As with all other elements of the EMMP, project budgets, workplans, and staffing plans must provide for its full implementation. The approved WQAP must include at minimum the following sections:
 - Project information (name of project, name of IP, period of performance, contact information, name of COR/AOR)
 - A description of the drinking water points to be subject to the WQAP (approximate numbers, water source(s), technology(ies), general geographic area and installation context).
 - An inventory of applicable water quality standards, including those promulgated by USAID, as well as the cognizant host-country regulatory entity/entities. (The World Health Organization [WHO] *Guidelines for Drinking-water Quality* may be substituted for host-country standards that are not accessible, unclear or outdated.)
 - The responsible parties/entities/institutions, under host country law or policy, for monitoring and managing water quality of the water points subject to this WQAP. If other than the IP, a summary assessment of their capacity and their involvement.
 - A technical assessment of the equipment, resources and expertise that will be required to monitor and report on compliance with applicable water quality standards. This should include, for example, sampling materials, reagents, transportation, storage, laboratory facilities and capacity, communications, training or certification criteria, etc.
 - Protocol for initial testing and ongoing monitoring of water quality, to include:
 - contaminants for which initial testing and ongoing monitoring will be conducted
 - water quality assessment methods, including test type and frequency
 - data management and reporting; the project must maintain a central registry of monitoring results by water point and date; GPS coordinates for water points are expected
 - designation of 'responsible party' for each aspect of protocol
 - response procedures in the event water does not meet water quality standards
 - Justification for NOT testing to any applicable standard
 - Sustainability strategy to the extent that responsibility for longer-term water quality assurance will transition in part or whole to

	<p>project partners or beneficiaries. A summary assessment of the capacity of these partners, and any capacity building to be undertaken</p> <ul style="list-style-type: none"> • The WQAP should follow any applicable USAID guidance, as well as local laws, regulations and policies. <p>3. Capacity-building in equipment/system maintenance must be co-programmed with construction/installation of small-scale water supply infrastructure.</p>
3. Construction of small-scale sanitation infrastructure, to include latrines, showers, hand washing stations, flush toilets and KVIP toilets	<p>Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii), is recommended for small-scale sanitation infrastructure activities (defined as total investment in a given community of less than \$250,000). The conditions are as follows:</p> <p>1. Good-practice design standards must be implemented for new construction and rehabilitation works, generally consistent with USAID's <i>Sector Environmental Guidelines: Water Supply & Sanitation</i>: http://www.usaidgems.org/Sectors/watsan.htm. These standards must be specified in the EMMP and include provisions to prevent contamination of water supplies, appropriate choice of latrine type given local environmental conditions (e.g. improved pit latrines are rarely suitable in locations where the water table is high), provision of handwash stations, and development and implementation of a system for ongoing latrine cleaning and maintenance.</p> <p>2. Capacity-building in equipment/system maintenance must be co-programmed with construction/installation of small-scale sanitation infrastructure.</p>
<p>4. Capacity-building for equipment/system maintenance</p> <p>5. TA to community and District Assembly level management committees to support development of sustainable community based Water Boards to manage water systems</p> <p>6. TA in financial management for Water Boards to improve the ability to manage and maintain systems, meter use and collect fees. Support may include provision of water metering equipment.</p>	<p>Categorical Exclusion is recommended per 22 CFR 216.2(c)(2)(i) Education, technical assistance, or training programs</p>
7. Support access for financing for water and sanitation improvements at household	<p>Negative Determination subject to the following condition</p> <p>Complementary interventions must be undertaken that provide reasonable</p>

and community levels	assurance that the resulting water supply and sanitation installations substantially conform to the good-practice design standards enumerated above, and to build capacity and motivation for proper operation and maintenance.
8. Private sector participation in providing sanitation products and services through GDAs and other linking partnerships, including financial institutions	Negative Determination subject to the condition that sanitation products and services provided via such partnerships and linkages are subject to the same conditions enumerated herein for directly provided products and services.
9. Support to WASH innovation technologies for latrines	<p>Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii), The conditions are as follows:</p> <p>Prior to field testing or wider installation of any such innovative technology:</p> <ul style="list-style-type: none"> • The formal AFR subproject/subgrant review process, as set out by the AFR Environmental Review Form (available at http://www.usaidgems.org/Documents/ComplianceForms/AFR/AFR-EnvReviewForm-20Dec2010.doc) must be completed and approved by the COR/AOR, MEO and REA. • The IP must assure implementation of any mitigation and monitoring conditions specified by the approved ERF; and, <i>Note: In lieu of the Environmental Review Form, the Health Team or an IP may propose to the BEO an alternate review instrument/process developed specifically for the needs reviewing innovative latrine technologies.</i>
10. Water supply infrastructure activities equal to or greater than a total investment in a given community of \$250,000	Deferral

3.5: CONSTRUCTION OTHER THAN WATER/SANITATION INFRASTRUCTURE

Constituent Activities. This intervention category consists of

1. Technical and financial assistance for very **small-scale construction** or rehabilitation of health commodities warehouses and health facilities (less than 1000m² total disturbed area) with no complicating factors.
2. Technical and financial assistance for **small-scale construction** or rehabilitation of such facilities larger than 1000m² total disturbed area and/or with one or more complicating factors but in all cases less than 2000m².
3. Construction or rehabilitation of such facilities Larger Than 2000m².

Potential Adverse Impacts & Considerations Regarding Recommended Determinations. Construction itself has a well-known set of potential adverse impacts, including the following:

- *Disturbance to existing landscape/habitat.* Construction typically necessitates clearing, grading, trenching and other activities that can result in near-complete disturbance to the pre-existing landscape/habitat within the plot. If the plot contains or is adjacent to a permanent or seasonal stream/waterbody, grading and leveling can disrupt local drainage.
- *Sedimentation/fouling of surface waters.* Runoff from cleared ground or materials stockpiles during construction can result in sedimentation/fouling of surface waters, particularly if the site is located in close proximity to a stream or waterbody.
- *Standing water.* Construction may result in standing water on-site, which readily becomes breeding habitat for mosquitoes and other disease vectors.

Experience shows that these impacts are controllable below the level of significance with basic good construction management practices.

- *Adverse impacts of materials sourcing.* Construction requires a set of materials often procured locally: timber, fill, sand and gravel, bricks. Unmanaged extraction of these materials can have adverse effects on the environment. For example, streambed mining of sand or gravel can increase sedimentation and disturb sensitive ecosystems and purchase of timber from unmanaged or illegal concessions helps drive deforestation.

While IPs generally have direct control over their general contractors (GCs), construction materials are often procured by GCs from sub-vendors. In the case of timber, the sub-vendors are often at the end of a long and untraceable supply chain.

This separation from source both limits the actions that IPs can take to assure environmentally responsible sourcing of these materials and reduces IP responsibility for these impacts. (It should also be noted that for the relatively small construction projects anticipated under the HSD portfolio, adverse impacts related to materials sourcing should be quite limited.)

However, IPs can and should undertake reasonable due diligence to assure that they do not bear direct responsibility for adverse impacts, and to reduce indirect impacts so far as feasible.

In the absence of complicating factors,²⁴ 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. Construction at larger scales (or very small-scale construction in the presence of complicating factors) does present the risks that the impacts described above could be significant.

Impacts of facilities in operation: In operation, general/institutional facilities & compounds generate a set of waste streams (e.g. gray water, latrine discharge, solid waste). In general, if improperly managed, such wastes can contaminate ground and surface water, create breeding habitat for disease vectors, etc.

For example, failure to design or maintain appropriate drainage structures can result in standing water within the compound or on adjacent land. Local erosion, including damage to adjacent fields, and sedimentation of nearby surface waters can also result.

If latrine design or a maintenance failure permits insects or other disease vectors free in-and-out access to the pit/tank, pathogens in human waste can be spread within the compound and to the nearby community. Similarly, spilling latrine waste during pump-out releases contained pathogens into the environment. Storing solid waste (usually a mixture of food scraps, packaging, and paper) in open containers creates breeding habit for and attracts disease vectors such as rodents.

For *health care facilities*, the above risks are heightened due to (1) the higher likelihood that infectious diseases that may be present in human excreta, (2) the vulnerability of patient populations to poor environmental health conditions, and (3) the particular hazards of health care waste, as described in Section 3.1. Failure to provide infrastructure for appropriate management of health care waste in facility construction/rehabilitation and failure to observe appropriate design standards for sanitation provision can have significant adverse consequences.

In general, the potential impacts of facilities construction and operation somewhat larger than 1000m² and/or which serve as health delivery, training, or diagnostic facilities or have other complicating factors, are controllable with basic good design and operating practices. However, the precise nature of the potential impacts, and the appropriate design and operating practices to mitigate them, are highly dependent both on location and the specific characteristics of the infrastructure. Not enough information is known regarding potential construction in the USAID/Mozambique HSS portfolio at this scale to assess these impacts in this IEE; however, a site- and design-specific subsidiary environmental review process provides a mechanism to consider and address such impacts.

In the health sector, a subsidiary environmental review process is not appropriate, however, for construction activities that are significantly larger than 1000m² (e.g., 2000m² and above); health sector

²⁴ Complicating factors include, e.g. siting within 30m of a permanent or seasonal stream or water body, or displacement of existing settlement/inhabitants, or building on an average slope in excess of 5%, or building on a site that is heavily forested or in an otherwise undisturbed local ecosystem. If the facility involved delivers health care services, serves as diagnostic laboratories, or provide practical or lab-based health training, this is also complicating factors.

construction at these scales has a higher probability of requiring more complex environment, health and safety mitigations.

Recommended Determinations. Following from the analysis above, the following determination is recommended for activities in this category.

Activity/Class of activities	22 CFR 216 Reference or Condition
<p>1. Technical and financial assistance for very small-scale construction (less than 1000m² total disturbed area) with no complicating factors.</p> <p>NOTE: does NOT apply to facilities delivering health care services, serving as diagnostic laboratories, or providing practical or lab-based health training</p>	<p>Negative Determination with Conditions</p> <p>The following would be anticipated conditions for this class of activities:</p> <ol style="list-style-type: none"> 1. No complicating factors. The site/facility 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. The facility does NOT deliver health care services, serves as a diagnostic laboratory, or provide practical or lab-based health training. Sites/Facilities violating one or more of these criteria are subject to the determinations and conditions for "small-scale construction" (immediately below). 2. <i>Construction</i> 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 Sector Environmental Guidelines. (http://www.usaidgems.org/sectorGuidelines.htm). At minimum during construction, (a) 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; (b) Construction must be managed so that no standing water on the site persists more than 4 days; (c) 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; (d) IPs must identify and implement any feasible measures to increase the probability that timber is procured from legal, well-managed sources. 3. <i>Asbestos</i>. If the presence of Asbestos is suspected in a facility to be renovated, the facility must be tested for asbestos before rehabilitation works begin. Should asbestos be present, then the work must be carried out in conformity with host country requirements, (if any) and in conformity with guidance to be provided by the health team, in consultation with the MEO and REA. All results of the testing for asbestos shall be communicated to the C/AOR. 4. <i>Paint</i>. 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 an 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>5. Waste handling equipment and infrastructure. USAID intervention must result in the facilities' possessing adequate infrastructure and equipment to appropriately handle the wastes they may generate.</p>
<p>2. Technical and financial assistance for small-scale construction larger than 1000m² total disturbed area and/or with one or more complicating factors but in all cases less than 2000m².</p> <p>This INCLUDES small-scale renovation/refurbishment and expansion of facilities delivering health care services, serving as diagnostic laboratories, or providing practical or lab-based health training</p>	<p>The following would be anticipated conditions for this class of activities:</p> <ol style="list-style-type: none"> 1. The formal AFR subproject/subgrant review process, as set out by the AFR Environmental Review Form (ERF; available at http://www.usaidgems.org/Documents/ComplianceForms/AFR/AFR-EnvReviewForm-20Dec2010.doc) must be completed and approved by the COR/AOR, MEO and REA prior to construction.* 2. The IP must assure implementation of any mitigation and monitoring conditions specified by the approved ERF; and, 3. The environmental management conditions established by the ERF process must be consistent with the conditions for "very small scale construction" enumerated immediately above and, at minimum, consistent with achieving a "no issues" result under application of the ENCAP Visual Field Guide for Small-Scale Construction. (http://www.usaidgems.org/Documents/VisualFieldGuides/ENCAP_VslFldGuide--Construction_22Dec2011.pdf) <p>4. Water supplies. Where water supplies for drinking or washing patients or laundry are upgraded or provided, measures will be taken to ensure that drainage from laundry and bathing facilities does not affect the water supply nor pose threats for transmittal of infectious diseases. The conditions applying to water supplies will also be observed.</p> <p>5. Waste handling equipment and infrastructure. An end result of USAID intervention must be that facilities will possess adequate infrastructure and equipment to appropriately handle the health care, human and general wastes they may generate. The conditions applying to sanitation infrastructure apply to sanitation interventions undertaken with such construction;</p> <p><i>*Note: in lieu of the ERF, the Health Team or an IP may propose to the BEO an alternate review instrument/process developed specifically for the needs of the health portfolio.</i></p> <p><i>Note that equipment and supplies procurement associated with rehabilitation/refurbishment is addressed in and subject to the requirements of the USAID/Mozambique IEE "Strengthened Systems to Deliver Health, Nutrition, and Social Services."</i></p>
3. Construction Larger Than 2000m ²	Deferral

3.6: STUDIES, SURVEYS/PUBLIC HEALTH SURVEILLANCE & OTHER DATA-GATHERING ASSESSMENTS & MODELS

Constituent Activities. This intervention category consists of the following activities:

1. Studies, surveys/public health surveillance and other data-gathering assessments and models in support of health programs and activities.
2. Develop strategic activities to:
 - a. Strengthen HIV/AIDS surveillance
 - b. Monitor and evaluate health outcomes
 - c. Improve health management information systems
 - d. Increase transparency and accountability
3. Dissemination of information/lessons learned/best practices

Note that:

- *Strategic activities to improve financial management systems at health facilities are covered under the Health Systems Strengthening (HSS) IEE.*
- *Based on information in the PAD, this IEE does not anticipate and thus does not cover human subject research.*

Potential Adverse Impacts & Considerations Regarding Recommended Determinations.

Studies, surveys/public health surveillance and other data-gathering assessments are eligible for categorical exclusion, except where they involve the collection and/or analysis of blood or body fluid samples or other activities that may generate medical waste. This includes, e.g. tuberculosis surveillance, which may involve collection and transportation of sputum samples. Such activities present the risks associated with these wastes/infectious materials; see section 3.1.

Strategic activities in this intervention category (2a-2d). HIV/AIDS surveillance and monitoring and evaluating health outcomes involve the handling of potentially infectious biological samples and the generation of HCW. Such activities present the risks associated with these wastes/infectious materials; see section 3.1. Strategic activities to strengthen and expand such surveillance and monitoring will, if successful, increase the volume of samples and HCW to be managed. As such, these strategic activities must anticipate any generation of healthcare waste, and advance and promote provision for appropriate management/handling of this waste.

The remaining strategic activities—improving health management information systems and increasing transparency and accountability—are unlikely to have any adverse environmental impacts and the categorical exclusion for technical assistance activities can therefore apply.

Dissemination of information/lessons learned/best practices. Dissemination of healthcare information and lessons learned is not expected to lead to adverse environmental impacts and the categorical exclusion for information transfer activities can therefore apply.

Recommended Determinations. Following from the analysis above, the following determinations are recommended for activities in this category:

Activity	Recommended Determination
<p>1. Studies, surveys/public health surveillance and other data-gathering assessments and models in support of health programs and activities.</p> <p>EXCLUDES HUMAN SUBJECTS RESEARCH</p>	<p>Categorical Exclusion for activities in this category EXCEPT those involving the collection and/or analysis of blood or body fluid samples (per 22 CFR 216.2 (c)(viii) programs involving nutrition, health care, or population and family planning services).</p> <p>A Negative Determination is recommended for activities in this category that DO involve the collection and/or analysis of blood or body fluid samples. This determination is subject to the following conditions:</p> <p>Epidemiological surveillance supported with USAID funds and involving the collection and/or analysis of blood or body fluid samples must have adequate procedures and capacities in place to properly handle, label, treat, store, transport and properly dispose of blood, body fluids, sharps and other medical waste generated by these activities.</p> <p>Further, in the case of TB sample collection and diagnosis, USAID support must be designed to result in sample collection and handling procedures fully compliant with WHO guidance/standards. The partner(s) involved must actively monitor compliance with these standards and work with the relevant government entity to take immediate corrective actions as required.</p> <p>“Proper Management” of health care wastes is defined as being in substantial conformity with the USAID’s Sector Environmental Guidelines (SEG) “Health Care Waste” (http://www.usaidgems.org/Sectors/healthcareWaste.htm), particularly the section titled, “Minimum elements of a complete waste management program.” Other important references to consult for sound waste management practices are WHO’s Safe Management of Wastes from Healthcare Activities and WHO’s Tuberculosis Laboratory Biosafety Manual (2012 ed or later). (http://apps.who.int/iris/bitstream/10665/77949/1/9789241504638_eng.pdf)</p>
<p>2. Develop strategic activities to:</p> <p>a. Strengthen HIV/AIDS surveillance</p> <p>b. Monitor and evaluate health outcomes</p>	<p>Negative Determination subject to the condition that These activities must anticipate any generation of healthcare waste, and advance and promote provision for appropriate management/handling of this waste in the on-the-ground surveillance and monitoring that these strategic activities are expected to create/strengthen.</p>
<p>2. Develop strategic activities to:</p> <p>c. Improve health management information systems</p> <p>d. Increase transparency and accountability</p>	<p>Categorical Exclusion per 22 CFR §216.2 c(2)(i): technical assistance, education and training.</p>
<p>3. Dissemination of information/lessons</p>	<p>Categorical Exclusion per 22 CFR §216.2 c(2)(v): Document and information transfers.</p>

learned/best practices	
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4.0 GENERAL PROJECT IMPLEMENTATION AND MONITORING REQUIREMENTS

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

1. **IP Briefings on Environmental Compliance Responsibilities.** The Health team shall provide each Implementing Partner (hereinafter IP), with a copy of this IEE; each IP shall be briefed on their environmental compliance responsibilities by their cognizant C/AOR. During this briefing, the IEE conditions applicable to the IP's activities will be identified.
2. **Development of EMMP.** Each IP whose activities are subject to one or more conditions set out in Section 3 of this IEE shall develop and provide for C/AOR review and approval an Environmental Mitigation and Monitoring Plan (EMMP) documenting how their project will implement and verify all IEE conditions that apply to their activities.
These EMMPs shall identify how the IP shall assure that IEE conditions that apply to activities supported under subcontracts and subgrants are implemented. (In the case of large subgrants or subcontracts, the IP may elect to require the subgrantee/subcontractor to develop their own EMMP.)

(Note: The AFR EMMP Factsheet provides EMMP guidance and sample EMMP formats:

http://www.usaidgems.org/Documents/lopDocs/ENCAP_EMMP_Factsheet_22Jul2011.pdf)

3. **Integration and implementation of EMMP.** Each IP shall integrate their EMMP into their project work plan and budgets, implement the EMMP, and report on its implementation as an element of regular project performance reporting.
IPs shall assure that subcontractors and subgrantees 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.
4. **Integration of compliance responsibilities in prime and sub-contracts and grant agreements.**
 - a. The Health team shall assure that any future contracts or agreements for implementation of HSD portfolio activities, and/or significant modification to current contracts/agreements shall reference and require compliance with the conditions set out in this IEE, as required by ADS 204.3.4.a.6 and ADS 303.3.6.3.e.
 - b. IPs 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.

5. **Assurance of sub-grantee and sub-contractor capacity and compliance.** IPs shall assure that subgrantees and subcontractors have the capability to implement the relevant requirements of this IEE. The IP shall, as and if appropriate, provide training to subgrantees and subcontractors in their environmental compliance responsibilities and in environmentally sound design and management (ESDM) of their activities.
6. **Health team monitoring responsibility.** As required by ADS 204.5.4, the Health team 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 team will suspend the activity and initiate appropriate, further review in accordance with 22 CFR 216. USAID Monitoring shall include regular site visits.
7. **New or modified activities.** As part of its Work Plan, and all Annual Work Plans thereafter, IPs, in collaboration with their C/AOR, shall review all on-going and planned activities to determine if they are within the scope of this IEE.
If HSD portfolio activities outside the scope of this IEE are planned, the Health team shall assure that an amendment to this IEE addressing these activities is prepared and approved prior to implementation of any such activities.

Any ongoing activities found to be outside the scope of the approved Regulation 216 environmental documentation shall be modified to comply or halted until an amendment to the documentation is submitted and approved.
8. **Compliance with Host Country Requirements.** Nothing in this IEE substitutes for or supersedes IP, subgrantee and subcontractor responsibility for compliance with all applicable host country laws and regulations. The IP, subgrantees 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.