USAID KENYA DEVELOPMENT OBJECTIVE 2
INITIAL ENVIRONMENTAL EXAMINATION

PROGRAM/ACTIVITY DATA:

Program/Activity Number: 615-002

Program Activity Title: Health and Human Capacity Strengthened

Country/Region: Kenya/East Africa

Functional Objective: 3: Investing In People

Program Elements:

1. Family planning/reproductive health (FP/RH)
2. Maternal, neonatal and child health (MNCH)
3. HIV/AIDS
4. Malaria
5. Water and sanitation
6. Tuberculosis control
7. Human capacity strengthening (Youth and OVC) and Education
8. Technical support for Indoor Residual Spraying (IRS)

Period Covered: 2015-2019

LOP Amount USD$1.8 billion

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IEE Amendment (Y/N): No

Submitted By: Wilkister Magangi, Mission Environment Officer, USAID/Kenya

Current Date March 20, 2015

Expiration Date March 2019

Other Relevant Environmental Compliance Documentation: USAID's *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." Also refer to WHO's "Safe Management of Wastes from Healthcare Activities."

D03 IEE Inclusive, Market-driven, Environmentally Sustainable Economic Growth Portfolio

RIG Audit, USAID Office of Inspector General "Audit of USAID/Kenya's efforts to mitigate environmental impact in its project portfolio", Audit Report no. 4-615-10-008-P. September 29, 2010.

Approved request for Categorical Exclusion for Education activities - Improved Access to Quality Education by Children of Historically Marginalized Populations IEE
http://gemini.info.usaid.gov/egat/envcomp/repository/pdf/39040.pdf

ENVIRONMENTAL ACTION RECOMMENDED

Categorical Exclusion	X	Negative Determination	X
Positive Determination		Deferral	

ADDITIONAL ELEMENTS:

EMMP: X | Conditions: X | PVO/NGO: X | Pesticides:*

**22 CFR 216.3 (b)(1) applies*

SUMMARY OF FINDINGS:

USAID/Kenya finalized the Country Development Cooperating Strategy (CDCS) in 2014. The Development Objective 2 (DO2), of the CDCS focuses on health and human capacity strengthening sectors in the country. DO2 launches a forward-looking phase of USAID/Kenya's engagement in the social sectors, one that fosters mutually accountable partnerships between USAID/Kenya and public and private stakeholders.

Scope. This IEE addresses the entire portfolio of activities anticipated under the USAID/Kenya Health and Human Capacity Strengthening (DO2) portfolio. It applies to all health and human capacity strengthening activities implemented under Kenya's 2014-2018 CDCS. This IEE applies to all anticipated health sector activities under Kenya's 2014-2018 CDCS, with the following note for the following cross-cutting activities:

- The DO3 IEE ("Inclusive, market-driven, environmentally sustainable economic growth ") addresses a set of WASH activities (Section 3.6). This DO2 IEE provides that DO2 WASH activities that match the description of a WASH activity in the DO3 IEE are covered by the DO3 IEE and subject to the determination and conditions it assigns.

- DO2 WASH activities NOT covered by the DO3 IEE are deferred and will require amendment of this IEE. That amendment must be consistent with the analysis of potential adverse impacts and recommended determinations for WASH activities in the DO3 IEE.

This IEE replaces and supersedes the Mission's previous health IEEs; except that ongoing activities operating under an approved environmental mitigation and monitoring plan (EMMP) may continue operating under that EMMP.

Recommended Determinations.

The following table summarizes the recommended determinations for the DO 2 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. Upon approval of this IEE, these recommendations become affirmed Categorical Exclusions and Threshold Decisions, and implementation of recommended conditions becomes mandatory.

Intervention Category	Categorical Exclusion(s)	Negative Determination(s)	Positive Determination(s)	Deferral of Threshold Decision	Link to full analysis
Direct Healthcare Delivery and Healthcare Worker/Delivery Agent Training; Healthcare Workforce Training, Strengthening, and Development	√	√			Click here
Procurement and Supply Chain Strengthening Activities		√			Click here
Behavior Change Communication, Community Mobilization, and Education/Outreach for Health Services	√	√			Click here
Health System Strengthening, Excluding Commodity Procurement/Supply Chain Strengthening	√	√			Click here
Small-scale water supply and sanitation	√	√			Click here
Rehabilitation and Small-Scale Construction, other than Water/Sanitation Activities		√			Click here
Human Capacity-Building (Youth and OVC Empowerment) and Education		√			Click here
Technical support for IRS	√	√			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 monitoring and implementation requirements are summarized as follows:

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 an Environmental Mitigation and Monitoring Plan (EMMP) within 90 days or with the Project workplan, whichever is sooner, and provide for C/AOR review and approval. The EMMP will document how their project will implement and verify all IEE conditions that apply to their activities. An EMMP template is attached.

   These EMMPs shall identify how the IP shall assure that IEE conditions that apply to activities supported under subcontracts and subgrant 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 sub-contractors and sub-grantees integrate implementation of IEE conditions, where applicable, into their own project work plans and budgets and report on their implementation as an element of sub-contract or grant performance reporting.

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 DO 2 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 sub-grantees and subcontractors have the capability to implement the relevant requirements of this IEE. The IP shall, as and if appropriate, provide training to 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 health sector 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 approved.

8. Human subject research is excluded from this DO-level IEE.

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

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED:

(USAID/Kenya Health and Human Capacity Strengthening (DO2) portfolio 2015)

CLEARANCE:

Deputy Mission Director:
USAID Kenya & East Africa — Tina Dooley-Jones — Date: 5/6/2015

Mission Director:
USAID Kenya & East Africa — Karen Freeman — Date: 5/6/2015

CONCURRENCE:

Bureau Environmental Officer:
Global Health — Rachel Dagovitz — Date: 5/29/2015

Approved: ☑
Disapproved ☐

Bureau Environmental Officer:
AFR/SD — Brian Hirsch — Date: 6/8/15

Approved: ☒
Disapproved ☐

FILE Nº: Kenya_DO2_IIP_IEE_060815.doc

ADDITIONAL CLEARANCES:

Mission Environmental Officer:
USAID Kenya — Wilkister Magangi — Date: 4/14/15

DO 2 Team Leader:
USAID Kenya — Pamela Wesonga — Date: 4/15/15

SPA Director:
USAID Kenya & East Africa — Cristina Olive — Date: 4/17/15

Regional Environmental Advisor:
USAID/East Africa — David Kinyua — Date: 04/14/2015

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USAID/Kenya Health Team A/CORs and Activity Managers
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INITIAL ENVIRONMENTAL EXAMINATION

PROGRAM/ACTIVITY DATA:

Program/Activity Number: 615-002

Program Activity Title: USAID/Kenya Health and Human Capacity Strengthening (DO2) portfolio

Country/Region: Kenya/ Africa

Categorization per USG Foreign Assistance Framework:

Functional Objective: DO2: Health and Human Capacity Strengthened

Program Elements:

1. Family planning/reproductive health (FP/RH)
2. Maternal, neonatal and child health (MNCH)
3. HIV/AIDS
4. Malaria
5. Water and sanitation
6. Tuberculosis control
7. Human capacity strengthening (Youth and OVC) and Education
8. Technical support for Indoor Residual Spraying (IRS)

1.0 BACKGROUND AND PROGRAM DESCRIPTION

1.1 Purpose and Scope of IEE

This IEE addresses the entire portfolio of activities anticipated under the USAID/Kenya DO 2: Health and Human Capacity Strengthening portfolio. This IEE applies to all anticipated health and education sector activities under Kenya's 2014-2018 CDCS. 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. Youth and WASH activities cut across the whole of the Mission portfolio in the three DOs. This IEE addresses only the education sector and capacity building in the health sector for youth activities. Youth activities, specifically related to economic growth programs, is a crosscutting activity and as such is addressed in this IEE as well as the DO3 IEE ("Inclusive, market-driven, environmentally sustainable economic growth") (Section 3.11)

For purposes of analysis, this IEE synthesizes current and anticipated DO2 Health and Human Capacity Strengthened Program activities under the office's various projects and initiatives into a set of 7 intervention categories, each of which contains a number of entailed activities. As with all IEEs, and in accordance with 22 CFR 216, it reviews the reasonably foreseeable effects of these 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 team- and project[1]-level implementation procedures intended to assure that conditions in this IEE are translated into activity-specific mitigation measures, and to assure systematic

[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; e.g. the 'Health Policy Strengthening (HPS) Project.' By contrast, in

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)

USAID/Kenya finalized the Country Development Cooperating Strategy (CDCS) in 2014. The Development Objective 2 (DO2), of the CDCS focuses on health and education sectors in the country. DO2 launches a forward-looking phase of USAID/Kenya's engagement in the social sectors, one that fosters mutually accountable partnerships between USAID/Kenya and public and private stakeholders. USAID/Kenya will support Kenyan leadership in social services delivery through joint planning, implementation, and resource leveraging to achieve sustainable health and education results.

There will be an emphasis on working with the youth of today to improve health, increase skills, and develop individual and community resiliency to conflict, violent radicalization and extremism, while simultaneously laying the foundation for the youth of tomorrow. Investments will progressively enable Kenya's people to take advantage of political and economic opportunities in the short term, generating transformational momentum. It will also build the capacity of health and education institutions and systems to sustainably deliver quality and gender responsive services in the long term, strengthening the human capital needed to fuel Kenya's development. Kenya's transition to a new, devolved governance structure will profoundly impact social services delivery over the next five years. This coupled with the promise of Kenya's demographic dividend provides unique opportunities for USAID to do business differently and engage stakeholders in ways that safeguard Kenyan interests and ownership.

The main public health concerns in Kenya include HIV/AIDS, tuberculosis, malaria, maternal and child mortality, respiratory infections, and malnutrition. Life expectancy at birth is 62 for men and 65 for women, while the probability of dying before the age of five is 73/1,000. Environmental deficiencies, such as lack of access to clean water and adequate sanitation, underlie these issues, as well as the presence of vectors and other disease-carrying variables. While 57% of existing facilities (as of 2004) can provide basic child, maternal, reproductive health, and HIV/AIDS services, only 10% of clinics provide 24-hour service, and in rural areas most people live further than 5km from facilities.[2]

In Kenya, health care waste (HCW) is generated by more than 5,500 registered health care facilities (HCF) including hospitals, health centers, dispensaries, and private clinics. While the WHO estimates that 75-80% of HCW should be non-infectious following proper segregation and handling, analysis of HCW in Kenya indicates that infectious waste actually constitutes 35% of waste, as opposed to the 18-20% estimate by WHO. In 2012, 4.7% of GDP was expended on health, but since healthcare waste management (HCWM) is not internalized in most HCFs and HCWM is not integrated into operating budgets, this leads to serious HCWM challenges at the facility level. Kenya currently utilizes an open dump system for waste management, although plans to develop a sanitary landfill are underway. [3]

The implications of poor HCWM in Kenya are exacerbated by the high rate of HIV. Kenya has the fourth greatest HIV epidemic in the world; in 2012, about 1.6 million people were living with HIV, 58,000 died from AIDS-related illnesses and over 1 million orphans were infected. HIV Testing and Counseling has improved dramatically since 2000, although fewer men than women are being tested (in 2012, 35.8 % of men were tested and 47.3% of women). Testing of pregnant women has improved greatly, from 68%

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] WHO Country Cooperation Strategy 2008-2013, Kenya

[3] Health Care Waste Management Costing Analyst for USG-Supported Health Care Facilities in Kenya, April 2014

(2009) to 92% (2013). HIV prevention is considered a success story in Kenya, where new HIV infections are only one third of what they were in 1993 at the peak of the epidemic. Components of Kenya's HIV prevention plan are condom distribution, preventing mother-to-child transmission, voluntary medical male circumcision, and education and increasing awareness. [4]

Education

Unlike the health sector, Kenya's constitution allocates education policy, standards, curricula, examinations, and the granting of university charters to the national government, leaving no room for devolving service delivery to the counties – with the exception of pre-primary education and village polytechnics. The constitution states that: "every person has the right to education"; "every child has the right to free and compulsory basic education"; and "a person with any disability is entitled to access educational institutions and facilities for people with disabilities (PWD) that are integrated into society to the extent compatible with the interests of the person."

The GOK introduced free universal primary education in 2003, increasing total public and private primary student enrollment from 5.9 million 2002 to 9.8 million in 2011. This amounts to a Net Enrollment Rate (NER) of 95.7%. However, the effect of such drastic change on service delivery and instructional quality – including reading – was damaging. Kenya's reading proficiency dropped from second to fifth of the 15 African countries participating in the Standard 6 examination administered by the Southern Africa Consortium for Monitoring Educational Quality between 2000 and 2007. A recent assessment reported that only 30% of Standard 3 children could read a Standard 2 level story in English or Kiswahili.[i] The 95.7% NER masks other challenges: low enrollment rates in the Northeast (near Somalia) and urban informal settlements; and an average of 57 children per teacher. Among the marginalized communities in the arid and semi-arid pastoralist regions and urban slums, very few girls make it to school and of those that do, many drop out by primary grades 4-5 due to cultural practices such as female genital mutilation, teenage pregnancies, early and forced marriages. Meanwhile, the education sector's budget allocation dropped from 16.5% in 2008 to 13.5% in 2011. Since Kenya spends 79% of its education budget on teacher salaries, the resources available for development and quality enhancements are extremely limited.

Access to secondary education depends upon student performance on the primary school leaving exam. Since there are not enough secondary school classrooms and teachers, the exam sifts out the 48% of children who perform well enough to go to secondary school, leaving the rest without access to post-primary education. Only 1.8 million students were enrolled in secondary school in 2011. Although free secondary education for day students was introduced in 2008, the limited capacity means only the highest scorers on the national exam are accepted. Many counties have few day schools, and boarding costs are prohibitive. In 2011, 68.96 % of Kenya's girls transitioned to secondary compared to 71.60 % of boys. Almost eight percent of girls who enrolled in secondary form 1 in 2008 did not make it to form 4 (secondary school final exam class) in 2011 compared to 1.32 % of boys. These gender disparities influence their performance at the tertiary and university levels including in career choices. Only 80,000 students were enrolled in national or private accredited universities in 2011, with another 65,000 enrolled in teacher training colleges, polytechnics, and other technical institutions. Girl students only exceed boy students in national polytechnics in health and applied sciences, information and liberal studies, and in education. In all the other science and engineering courses, boy students exceed girl students. Women also seem to be declining even in traditional careers such as teaching; in 2007 females comprised 50.1% of primary teacher trainees compared to 49.6% in 2011.[ii] Both secondary and higher education emphasize theoretical knowledge rather than practical skills

[4] http://www.avert.org/hiv-aids-kenya.htm

USAID/Kenya will draw upon its rich experience supporting national health and education programs in Kenya to significantly impact health and human capacity in selected counties over the next five years.

1.3 HEALTH AND HUMAN CAPACITY PROGRAM INTERVENTION CATEGORIES FOR PURPOSES OF ENVIRONMENTAL REVIEW

DO2's IRs and sub-IRs are described as follows:

2.1 Increased Kenyan ownership of health, education, and social systems

2.1.1: Expanded partnerships at national and county levels and with the youth bunge network
2.1.2: Strengthened GOK engagement with donors and coordination of support
2.1.3: Expanded innovative means of leveraging private sector resources

2.2 Increased use of quality health and education services

2.2.1: Strengthened national health and education institutional capacity, leadership, and programs to provide increased access to quality services
2.2.2: Improved county-level accountability, institutional capacity, leadership, and management of health and education service delivery
2.2.3: Greater community involvement in social service delivery promotion and utilization

Targeted health and human capacity strengthening issues (sub-sectors): The USAID/Kenya DO2 "Health and Human Capacity Strengthened" incorporates interventions in seven sub-sectors:

1. Family planning/reproductive health (FP/RH)
2. Maternal, neonatal and child health (MNCH)
3. HIV/AIDS
4. Malaria
5. Water and sanitation
6. Tuberculosis control
7. Human capacity strengthening (Youth and OVC; Individual and Household Empowerment; Community Involvement in Service Delivery) including Education
8. Technical Support for Indoor Residual Spraying (IRS)

Individual projects in many instances carry out activities in more than one sub-sector, and the projects are designed to be mutually supportive and synergistic so that the portfolio overall embodies an integrated approach.

1.4 Intervention categories for purposes of environmental review.

Many types of interventions will be undertaken in more than one—and sometimes several—of the health subsectors listed above. For example, procurement of pharmaceuticals may be supported in the malaria, HIV/AIDS, MNCH, and TB areas, all of which also include training of care providers and strengthening health care commodity supply chains.

The potential adverse environmental and health impacts of concern for pharmaceutical procurement, health care provider training, etc. are similar across health subsectors. Analyzing these impacts separately for each sub-sector would be highly redundant and make for an inefficient and unmanageably long IEE. Therefore, for purposes of environmental review and compliance, interventions in the USAID/Kenya DO 2 portfolio are therefore consolidated into the following intervention categories.

1. Direct Support to Healthcare Delivery; Healthcare Worker/Delivery Agent/Workforce Training; Strengthening, and Development
2. Procurement and Supply Chain Strengthening Activities
3. Behavior Change Communication, community mobilization, and education/outreach
4. Health System strengthening, excluding commodity procurement/supply chain strengthening
5. Small-scale water supply and sanitation
6. Rehabilitation and Small-Scale Construction, other than water/sanitation activities
7. Human Capacity Strengthening (Youth and OVC; Individual and Household Empowerment; Community Involvement in Service Delivery) including education
8. Technical support to indoor residual spraying (IRS)

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.

2.0 COUNTRY AND ENVIRONMENTAL INFORMATION (BASELINE INFORMATION)

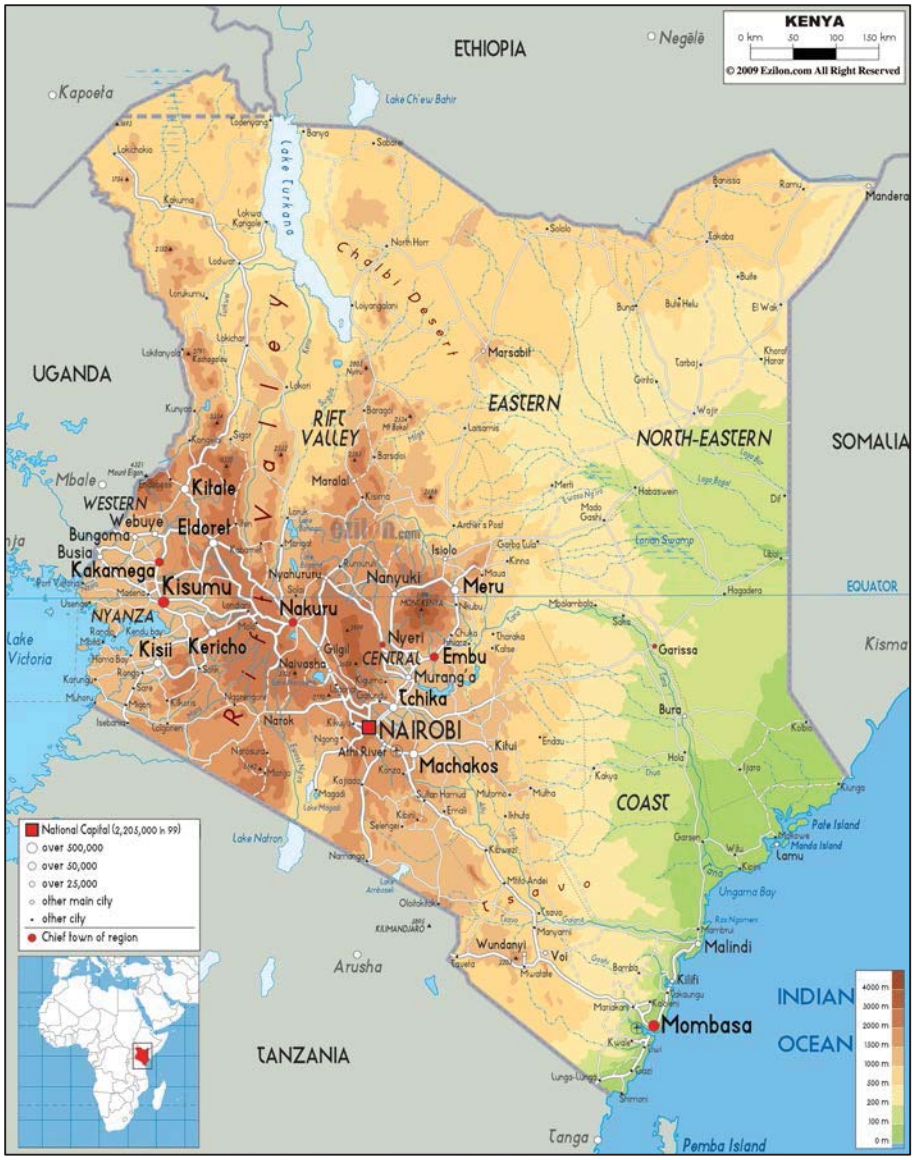
2.1 Environmental Baseline

Geography. Kenya is located in East Africa with 536 km of coastline along the Indian Ocean. It shares borders with Ethiopia and Somalia to the north and northeast, South Sudan and Uganda to the west, and Tanzania to the south. The total area of the country is around 580,000 sq km. Mount Kenya, located in the Kenyan Highlands, is the highest point in the country, and the second highest point in Africa at 5,199 m. Mount Kenya National Park is also listed as a UNESCO World Heritage Site. Kenya is home to low plains in the east along the Indian Ocean, rising to highlands in the center of the country which are divided by the Great Rift Valley, a 6,000 km trench running from northern Syria to central Mozambique. A fertile plateau lies to the west of the country. Kenya has a population of almost 45 million people, 3.4 million of which live in the capital city of Nairobi, located in the central highlands. Mombasa, located on the southeastern coast of Kenya, is the second largest city by population, at almost 1 million. [5]

[5] U.S. Central Intelligence Agency World Factbook. Accessed via the Internet 28 July, 2014 at: https://www.cia.gov/library/publications/the-world-factbook/geos/ke.html

Climate. Due to its location along the Rift Valley and various other landforms, Kenya's variable climate brings frequent droughts and floods, and uneven rainfall. The climate in Kenya ranges from tropical along the coast, to dry in the interior. Average annual rainfall is about 630 mm, ranging from less than 200 mm in northern Kenya, to 1800 mm on Mt. Kenya.[6] Long rains occur from March to June and short rains from October to November. [7]

Ecological zones. Kenya has diverse ecological zones and habitats, including lowlands and mountain forests, wooded and open grasslands, semi-arid scrubland, dry woodlands, inland aquatic, and coastal and marine ecosystems. Wetlands are an important factor in Kenya's economy, affecting agriculture, livestock production, hydroelectric power, fisheries and tourism. The marine waters and mangrove areas along the coast are rich in biodiversity and provide locals the opportunity to fish, although Lake Victoria produces 90% of Kenya's total catch. Forests are even more significant, supporting not only agriculture and tourism, but also watershed functions. Kenyan forests are also home to some of the highest levels of biodiversity in the country.[8]



Soil. Soil type in Kenya varies greatly due to topography and variable rainfall. Soils in Western Kenya are mainly acrisols, cambisols, and their mixtures, and are leached with iron and aluminum oxides. Young nitosol and andosol soils of volcanic origin are located in the

[6] Food and Agriculture Organization of the United Nations. Accessed via the Internet 28 July, 2014 at: http://www.fao.org/nr/water/aquastat/countries_regions/kenya/index.stm

[7] Water for Agriculture and Energy in Africa: the Challenges of Climate Change Conference. Accessed via the Internet 28 July, 2014 at: http://www.sirtewaterandenergy.org/docs/reports/Kenya-Draft2.pdf

[8] Convention on Biological Diversity. Accessed via the Internet 28 July, 2014 at: http://www.cbd.int/countries/profile/default.shtml?country=ke#facts

central highlands while coastal soils are generally coarse and low in organic matter and include arenosols, luvisols, and acrisols. Soils in arid and semi-arid areas include vertisols, gleysols, and phaeozems, and contain pockets of sodicity and salinity. Soils in these areas are characterized by low fertility and vulnerability to erosion. Soil salinity is widespread along the Lake Baringo basin in the Rift Valley and in the Tavetta division in the coastal provinces. [9]

Water resources & Irrigation. Kenya is characterized as a water scarce country, where demand exceeds renewable freshwater sources. Total renewable water resources totaled 30.7 billion m^3/year in 2008.[10] Of this total, 30.2 billion m^3/year is surface water, and 3.5 billion m^3/year is groundwater (most of this is overlap with surface water). Kenya has 9 lakes; most are saline besides Victoria, Naivasha, and Baringo. Additionally, lakes Nakura and Naivasha are designated as Ramsar sites as wetlands of international importance for the conservation of biodiversity. Kenya has 5 main drainage areas: Lake Victoria, the Rift Valley and inland lakes, Athi River and coast, Tana River, and Ewaso Ng'iro River, which is the largest, covering 36.3% of the country.[11] Hydropower accounts for around 61% of Kenya's electricity demand at 677.3MW, whereas hydroelectric potential totals 6,000MW. The largest hydropower station is Gitaru, at 225 MW. [12]

Agriculture is the largest source of water withdrawal, at 79.2%. Irrigation potential in Kenya is estimated at 353,060 ha, with over 50% from the Nile basin (Lake Victoria).[13] While 16% of the land has medium to high potential for irrigation, less than 10% is used, totaling only 2% of total arable land. Smallholder and commercial/private schemes dominate irrigation development; seventy-five percent of Kenya's agricultural output is produced on small-scale farms. A major obstacle to the expansion of irrigation is the rising cost of modern irrigation projects. Due to a lack of investment, the amount of irrigated land in Kenya hasn't changed for 30 years. Consequently, Kenyans depend heavily on rainfed agriculture, which contributes to 80% of the nation's employment. [14] The main irrigated crops are rice, maize, sugarcane, vegetables, bananas, citrus, coffee, tea, cotton and flowers. [15]

Biodiversity. Kenya's vast biodiversity is due to its long evolutionary history, variable climate, and habitat and ecosystem diversity. The Kenya Wildlife Service (KWS) manages the protected areas in Kenya which are home to major biodiversity sites; however, 70% of Kenya's biodiversity falls outside these protected areas. Kenya hosts five globally important hot spots of biodiversity and 61 important bird areas. There are 7000 plants, 25,000 invertebrates, 1,133 birds, 315 mammals, 191 reptiles, 180 freshwater fish, 692 marine and brackish fish, 88 amphibians and 2,000 species of fungi and bacteria in Kenya. Fourteen of Kenya's mammalian species are endemic to the country, which is famous for its large mammals like the African elephant, black rhino, leopard, buffalo and African lion. According to the IUCN

[9] Food and Agriculture Organization of the United Nations. Accessed via the Internet 28 July, 2014 at: http://www.fao.org/nr/water/aquastat/countries_regions/kenya/index.stm
[10] United Nations Environment Programme. Accessed via the Internet 28 July, 2014 at: http://www.unep.org/dewa/Portals/67/pdf/Kenya.pdf
[11] Food and Agriculture Organization of the United Nations. Accessed via the Internet 28 July, 2014 at: http://www.fao.org/nr/water/aquastat/countries_regions/kenya/index.stm
[12] Water for Agriculture and Energy in Africa: the Challenges of Climate Change Conference. Accessed via the Internet 28 July, 2014 at: http://www.sirtewaterandenergy.org/docs/reports/Kenya-Draft2.pdf
[13] Food and Agriculture Organization of the United Nations. Accessed via the Internet 28 July, 2014 at: http://www.fao.org/nr/water/aquastat/countries_regions/kenya/index.stm
[14] Irrigation Potential and Investment Return in Kenya. Accessed via the Internet 28 July, 2014 at: http://www.sciencedirect.com./science/article/pii/S0306919214000712?np=y
[15] Water for Agriculture and Energy in Africa: the Challenges of Climate Change Conference. Accessed via the Internet 28 July, 2014 at: http://www.sirtewaterandenergy.org/docs/reports/Kenya-Draft2.pdf

report, endangered and threatened species in Kenya include 103 species of bird, 51 mammals, eight amphibians and reptiles and 26 fish. [16]

Climate Change. Kenya's 2010 National Climate Change Response Strategy (NCCRS) concluded that "evidence of climate change in Kenya is unmistakable." Notable changes include erratic rainfall, extreme weather events, droughts during the rainy season and extreme flooding. Climactic trends reported by the NCCRS include general warming of land locations (besides the coastal zone) and less cold extreme temperatures in the arid and semi-arid lands.[17] Climate change is already responsible for the melting of 11 Mt. Kenya glaciers, and resulting decline in water levels in the Athi and Tana Rivers. Kenya's major forests are also at risk, as their distribution is determined by rainfall. Climactic conditions also influence forest fires, which recently damaged the Mount Kenya Forest in early 2012. Local environmental degradation also exacerbates climate change issues. Deforestation, pollution, overgrazing and habitat loss are major challenges in Kenya; forest cover has decreased from 12% in the 19060's to just 6% in 2013.

Climate change in Kenya has also had socioeconomic impacts. Prolonged droughts, receding lake levels, and frost in productive agricultural areas, among other impacts, have forced communities to migrate to other areas, leading to conflicts over natural resources. In addition, Kenya's economy relies heavily on climate-sensitive sectors such as agriculture, tourism and energy. Kenya depends on rain-fed agriculture for food, meaning pastoral and marginal agricultural areas are especially vulnerable to drought. The tourism industry is based on wildlife populations that are greatly affected by climate change, while the hydropower sector (contributing to 50% of Kenya's energy production) is likewise impacted by droughts and erratic rainfall. In general, extreme climactic events could end up costing Kenya's economy US$500 million/year from factors such as loss of crops and livestock, forest fires, fisheries damage and reduced hydropower potential. [18]

Kenya's National Climate Change Action Plan 2013-2017 (NCCAP) [19] was developed to implement the NCCRS and help Kenya reach its long-term development goals, including a secure environment. The "low carbon climate resilient development pathway" outlined in the NCCAP describes strategies Kenya can use to contribute to efforts to reduce greenhouse gas emissions.

2.2 Environmental Laws in Kenya

Kenya's Environmental Management and Coordination Act (EMCA), established in 1999, provides the legal and institutional framework for environmental management, as well as provisions for environmental protection and conservation.[20] EMCA established the National Environmental Council for environmental policy formulation and national environmental goal setting, Provincial and District Environment Committees(which are likely to change to County Environmental Committees with devolution) to help decentralize environmental management and enable local communities, a Public Complaints Committee to provide administrative mechanisms for addressing environmental harm, and the National Environment Management Authority (NEMA) as the main governmental instrument for implementing environmental policies. NEMA has authority for supervision and coordination of all environmental matters, and acts as the main instrument of the government for the implementation of

[16] Kenya State of the Environment and Outlook 2010, National Environmental Management Authority (NEMA), Kenya

[17] The NCCRS notes that a major variable to these observations is urbanization, which could also be an indicator of these observed trends.

[18] http://cdkn.org/wp-content/uploads/2013/03/Kenya-National-Climate-Change-Action-Plan.pdf

[19] See the full Climate Change Action Plan here: http://cdkn.org/wp-content/uploads/2013/03/Kenya-National-Climate-Change-Action-Plan.pdf

[20] A full list of can be found here: http://www.nema.go.ke/images/documents/emca.pdf

environmental policies. Kenya is also party to international agreements including biodiversity, climate change, desertification, endangered species and hazardous waste. [21]

Kenya's Environmental Impact Assessment (EIA) regulations require that all projects likely to have a negative environmental impact, or those for which an EIA is required by the EMCA, produce an EIA which must be approved before implementation. Similarly, licensing authorities cannot issue trading, commercial or development permits or licenses for any projects with likely negative impacts or ECMA EIA requirements that do not have an approved EIA. The EIA act lists projects that must produce an EIA (along with those that are generally likely to have negative environmental impacts); this list includes urban development projects, projects using water resources, forestry and agriculture activities, processing and manufacturing industry projects, electrical infrastructure projects, fuel management projects, natural conservation area projects, and major biotechnology developments (including GMO testing). The act also lays out the EIA process and environmental issues to consider. [22]

2.3 Environmental Regulations Relevant to Proposed Activities in Kenya

2.3.1 Subsidiary Legislation under the Environmental Management and Coordination Act of 1999

The Environmental Management and Coordination Act (EMCA) of 1999 is an Act of Parliament to provide for the establishment of an appropriate legal and institutional framework for the management of the environment. EMCA outlines the rights and responsibilities of all Kenyan citizens in the protection and assurance of a clean and healthy environment. EMCA provides guidance on resources monitoring, access rights, reporting requirements, and mitigation, compensation, and restoration activities as well as the regulatory and management structures responsible safeguarding Kenya's natural resources. This Act created the National Environmental Management Authority (NEMA) as the administrative body tasked with implementing the EMCA 1999.

Specific regulations outlined by EMCA of importance to this sub-award include:

- Environmental Management and Co-ordination (Water Quality) Regulations, 2006
- Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006.
- Environmental Management and Co-ordination (Waste Management Regulations), 2006
- Environmental Management and Co-ordination (Wetlands, River Banks, Lake Shores and Sea Shore Management) Regulation, 2009
- Environmental (Impact Assessment and Audit) Regulations, 2003.

2.3.2 Water Management

Kenya's Environmental Management and Coordination, (Water Quality) Regulations were finalized in 2006. These Regulations are to ensure that all natural water sources are protected. They apply to drinking water, and to water used for industrial, agricultural, recreational and other *purposes (http://www.elaw.org/assets/pdf/ke.WaterQualityReg.pdf).* This regulation has set standards for the quality of waste water discharged into the environment, providing for the parameters to be regulated in each sector.

In accordance with EMCA, the Minister for Environment and Natural Resources created water quality regulations that define water quality standards for domestic, industrial, agricultural, and recreational

[21] CIA World Factbook, Kenya

[22] http://www.nema.go.ke/images/documents/emca.pdf, accessed 4 August 2014

use. To protect sources of drinking water, the regulations set forth measures to prevent water pollution, and include standards for the maximum allowable levels of substances in the water. The regulations require NEMA to maintain water quality monitoring records for domestic water sources twice a year. For industrial water use and discharge, standards are defined for maximum allowable limits of substances in effluent to be discharged into the environment.[1]
http://www.nema.go.ke/images/documents/water_quality_regulations.pdf

2.3.3 Healthcare Waste.

Kenya has a National Health Care Waste Management Plan (2008-2012), and the EMCA has provisions to regulate effluent and hazardous waste. These regulations require that any owner or operator of a trade or industry that discharges effluents, waste, or other pollutants into the environment apply for an effluent discharge and waste disposal license from NEMA. NEMA considers the effects of these pollutants on the quality of water courses and local water requirements before approving licenses.[23]

In an additional effort to manage the potential risk from HCW, Kenya has made progress with the completion of a short-term National Health Care Waste Management Plan 2008-2012[24] (Kenya Ministry of Health, undated), long-term National Health Care Waste Management Plan 2006-2015 (World Bank, 2007), National Guidelines on Medical Waste Management, Injection Safety and Medical Waste Management Policy[25], the formalization of a National Steering Committee and Working Group on Health Care Waste (HCW) Management, approval of the Environmental Sanitation and Hygiene Policy,[26] and formation of an Inter-Sectoral Working Group on health care waste management.[27]

2.4.4 Air Quality.

EMCA outlines a process for which air quality standards should be developed. The Standards and Enforcement Review Committee is responsible for advising NEMA on how to establish criteria and procedures for measuring air quality, which are currently in draft form.[28] This includes ambient, occupational, and emission standards for various sources, as well as criteria for reducing existing sources of air pollution and greenhouse gases. Owners of operators of trades that emit substances likely to cause air pollution are required to apply for a license from NEMA, who will consider the effect of emission on air quality and require the applicant to submit an EIA, as necessary. [29]

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[1] See complete water quality regulations here:
http://www.nema.go.ke/images/documents/water_quality_regulations.pdf

[23] ibid

24 Available online at:
http://nascop.or.ke/library/PEP/National%20Health%20Care%20Waste%20Management%20Plan%20for%20Kenya%202008-2012%20a.pdf\

[25] Available online at: http://www.path.org/files/Kenya-NationalPolicyoninjection.pdf.

[26] Available online at: http://docs.watsan.net/Scanned_PDF_Files/Class_Code_8_Countries/824-KE07-19289.pdf.

[27] Paragraph pulled directly from Health Care Waste Management Costing Analyst for USG-Supported Health Care Facilities in Kenya, April 2014

[28] http://www.nema.go.ke/index.php?option=com_content&view=article&id=141&Itemid=493

[29] Kenya Environmental Management and Coordination Act, 1999

3.0 Potential Environmental Impacts & Recommended Determinations, Including Conditions

As set out in section 1.4, for the purpose of environmental review, current and anticipated activities in the USAID/Kenya DO2 portfolio are grouped into the following intervention categories, labelled by section number:

3.2 Direct Support to Healthcare Delivery; Healthcare Worker/Delivery Agent/Workforce Training; Strengthening, and Development

3.3 Procurement and Supply Chain Strengthening Activities

3.4 Behavior Change Communication (BCC), community mobilization, and education/outreach

3.5 Health System strengthening, such as direct and management capacity-building support for health service delivery and access, excluding commodity procurement/supply chain strengthening

3.6 Small-scale water supply and sanitation

3.7 Rehabilitation and Small-Scale Construction, other than water/sanitation activities

3.8 Human Capacity Strengthening (Youth and OVC; Individual and Household Empowerment; Community Involvement in Service Delivery) and Education

3.9 Technical Support for IRS

Each category contains a number of entailed activities. In sections 3.2-3.9, 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 CARE SERVICE DELIVERY DUE TO FAILURE TO PROPERLY MANAGE RESULTING WASTE

This section is a general discussion and analysis of waste-related impacts of health care activities. It is referenced at several points in the analyses of the specific intervention categories that follow in sections 3.2—3.8. 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 waste generated. This waste generally falls 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 waste 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 waste, 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 have 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 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 waste: 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 DIRECT SUPPORT TO HEALTHCARE DELIVERY; HEALTHCARE WORKER/DELIVERY AGENT/WORKFORCE TRAINING; STRENGTHENING AND DEVELOPMENT

Entailed Activities: This intervention category consists of the following activities:

1. **Training/supportive supervision of health care providers** on clinical interventions and norms for

service delivery to improve quality of care and expand care to a greater number of facilities/communities. Health care "providers" refers both to clinical workers in the formal health system as well as NGO staff, birth attendants, community members and others who provide care. Training/supportive supervision areas may include, but are not limited to:

a. Related to maternal and child health (MCH), anticipated activities include prevention of mother-to-child transmission, including counseling and support for maternal nutrition and safe infant feeding practices, family planning counseling or referral; treatment and referral services for Orphans and Vulnerable Children (OVC), including nutritional support and health services targeted at OVC;
b. Referral to care services, both clinic-and home-based, for HIV-infected family members, including for opportunistic infections;
c. Training of clinical and home-based caregivers in line with MOH standards, including physical care for chronically ill AIDS patients, including support to family caregivers, volunteers, and clinical and implementing partner staff;
d. Improved maternal neonatal and child health (MNCH), including antenatal care, skilled birth attendance, essential newborn care and post-partum care and emergency obstetric care at the community and facility levels;
e. Training of healthcare workers in voluntary family planning skills and knowledge;
f. Technical assistance, mentoring, and training on hygiene and sanitation, including promotion of hygiene practices linked to point-of-use water products and community-led sanitation;
g. Training for and provision of methadone substitution therapy services for injection drug users.

2. **HIV/AIDS Support**: Counseling and rapid HIV/AIDS testing, including technical assistance and service delivery.
3. **TB Support:** Technical assistance and service delivery in provision of clinical care in TB service settings, including examinations, clinical monitoring, treatment and prevention of TB in basic health care settings, related laboratory services as well as TB diagnostic and testing services.
4. **Palliative care training in and service delivery support for**, especially social and material support, such as counseling in nutrition, legal aid, and housing.

Note: Facility Rehabilitation and Equipment and Supplies Procurement Associated with Training *is covered under the construction section (Section 3.7) and subject to the relevant conditions described therein. Procurement of equipment and/or supplies associated with training is covered under the procurement section and subject to the relevant conditions described therein (Section 3.3).*

Activities to strengthen healthcare systems *are addressed in section 3.5.*

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 detailed 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., consistent separation of sharps and "red bag" waste, etc. Training therefore must, as appropriate, address proper handling, use and disposal of health care waste, including proper disposal of blood, sputum, and sharps.

While USAID does not have control over the actions of health care providers/service delivery agents/managers post-training, it can a assure that the curricula, training and leadership programs fully and appropriately integrate sound management of health care waste.

Activities in this intervention category **that *provide other capacity-building support to health service delivery (e.g., HIV/AIDS support, TB support, and palliative care support) or provide direct support to such delivery*** 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 delivering health benefits—may result in adverse impacts on the environment and present health risks to the community, health workers and patients arising from improper handling of medical waste. .

These impacts may be direct or indirect, thus **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.

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.

Recommended Determinations. Per the above analysis, the following **threshold determinations** are recommended for activities in this intervention category:

Activity	Recommended Determination
1. **Training/supportive supervision/ curricula development in the areas of HIV/AIDS, MNCH, palliative care, and hygiene and sanitation, methadone substitution therapy services**	**Negative determination** with the following **conditions:** • Any healthcare waste directly generated by USAID-funded training activities must be appropriately managed.* • Training, supervision, curricula development and other health care worker/work force 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). Note that this condition applies to activities targeting home care AND community health workers, not just those in clinics and health facilities. 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.
2. **Direct provision of care in the above areas**	**Negative determination** with the following **conditions:** • **Direct provision of care, including direct funding of CSOs for care delivery.** Where USAID directly provides healthcare services the HCW generated as a result of that care must be appropriately managed. In particular, adequate procedures and capacities must be in place to appropriately* handle, label, treat, store, transport and dispose of blood, sharps and other medical waste and that norms and training include environmental health considerations.

3. **Training/supportive supervision/curriculum development & direct support to TB Testing, Diagnosis & Care** **NOTE: Does not include WASH infrastructure, which is covered in section 3.6**	**Negative determination** with the following **conditions:** • **Other support to health facilities and service delivery.** In cases where USAID is supporting health facilities and service delivery but not directly providing care, the health team must ensure, to the greatest extent feasible, ensure that the medical facilities and operations benefitting from USAID support have adequate procedures and capacities in place to appropriately* handle, label, treat, store, transport and dispose of blood, sharps and other medical waste and that norms and training include environmental health considerations. • Additional conditions for tuberculosis activities. In addition to being subject to the conditions above: Training/curricula/supervision in the area of TB diagnosis and care must address standards for diagnosis, including risk factors for TB, appropriate diagnostic testing for persons with symptoms, and appropriate clinical evaluation procedures. See mandatory references below. Where USAID directly supports diagnostic testing, 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 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) ***For all activities in this category**, **"Appropriate 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."
4. **Orphans and Vulnerable Children training and support**	**Categorical Exclusion** per 22 CFR 216.2(c)(2)(i) Education, technical assistance or training programs

3.3 PROCUREMENT AND SUPPLY CHAIN STRENGTHENING ACTIVITIES

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

1. **Procurement of pharmaceuticals and supplies** including:
    a. Provision of Anti-Retroviral (ARV) prophylaxis for HIV-infected pregnant women and their newborns and referral to ARV treatment;
    b. Purchase and promotion of condoms to high-risk groups, through social marketing and through free distribution;
    c. Procurement and provision of pharmaceuticals and other supplies to support and manage HIV/AIDS and associated complications. These may include anti-retrovirals, Artemesinin Combined Therapy (ACT) drugs, and drugs for opportunistic infections;
    d. Procurement of insecticide-treated bed nets (LLINs) and simple household water purification kits to reduce water-borne infections;
    e. Procurement of child survival interventions, including vitamin A and immunizations;
    f. Family planning products, including contraceptives to those that seek them
    g. Procurement of rapid test kits for HIV/AIDS;
    h. Procurement of clinical equipment and supplies to strengthen HIV/AIDS surveillance, health management information systems, family planning and maternal health, and monitoring and evaluation;
    i. Procurement of methadone substitution therapy services;
    j. Voluntary medical male circumcision kits;
    k. Equipment for provision of maternal and newborn services at healthcare facilities.
2. **Procurement and Distribution of pharmaceutical and other supplies for treatment and prevention of TB in basic health care settings**; this includes procurement of diagnostic testing kits.
3. **Support and strengthening of Ministry of Health (MOH) and other key organizations** to manage the supply chain to ensure reliable ARV supplies for treatment scale-up

Note that USAID direct control over commodities may end immediately after procurement, particularly in the case of commodities turned over to governmental entities. In other cases, USAID may directly fund and have control over the care delivery activity in which the commodities (e.g. pharmaceuticals) are used.

Note also that this intervention category does NOT include construction or rehabilitation of warehouses, or other storage facilities, which is covered under section 3.7.

Potential Adverse Impacts & Considerations Regarding Recommended Determinations. The environmental impacts of activities associated with procurement and distribution of pharmaceuticals, nutritional supplements, and medical devices are discussed in Section 3.1.

Many procured commodities inevitably end up as waste (e.g. condoms, LLINs, laboratory chemicals, test kits), generate waste as a consequence of their use (e.g., injectable pharmaceuticals) or have the potential to end up as waste due to spoilage or expiration (i.e., all pharmaceuticals). Improper disposal of potentially infectious and pharmaceutical wastes has potentially significant adverse impacts, as discussed in section 3.1.

As noted above, the extent of USAID control of these commodities once they enter the in-country supply chain and during their use ranges from complete to partial, depending on the programming context. To the greatest degree practicably permitted by this level of control, USAID must work to assure appropriate management of commodity waste streams from acquisition to disposal.

With respect to LLINs, the distribution of LLINs has been shown to be a cost-effective and efficacious approach to malaria vector control in many situations, and as such provides significant public health benefits. Along with these benefits, however, the use of these treated materials with insecticides creates tangible risks to human health and the environment throughout the life cycle of the insecticide products. Continuous exposure to LLINs may have some risks that need to be monitored over time. In addition to concerns regarding distribution and use of LLINs, disposal of bed nets, particularly by burning, can result in adverse environmental and human health effects. Adverse health effects also arise from conversion of LLINs to improper use (e.g. use as fishnets, clothing, and wrapping.)

These issues have been considered and mitigation measures specified in USAID's Malaria Vector Control Programmatic Environmental Assessment (MVC PEA).[30] Note that agency guidance on preferred final disposal of used and contaminated bed nets is still evolving.

Recommended Determinations. Per the above analysis, the following **threshold determinations** are recommended for activities in this intervention category:

Activity	Recommended Determination
1. Procurement and/or management of pharmaceuticals and supplies, excluding LLINs and TB-related supplies	**Negative Determination** subject to the following **conditions**: • **In any instance that a USAID project controls commodities at end-of-life, appropriate end-of-life management must be assured.** • Otherwise, and in all cases, implementing partners conducting activities involving procurement, storage, management and/or disposal of public health commodities, including pharmaceutical drugs, immunizations and nutritional supplements, must ensure, to the greatest extent practicable, that they and/or the medical facilities and operations involved, as appropriate, have adequate procedures and capacities in place to properly manage and dispose of such commodities. • Consignees for any pharmaceutical drugs procured under these activities must be advised: (1) to store the product according to the information provided on the manufacturer's Materials Safety Data Sheet (MSDS); (2) that, if disposal is required due to expiration or any other reason, the preferred method of disposal is to return to the manufacturer. If that is not possible, then the preferred disposal method is as per the *WHO Guidelines for Safe Disposal of Unwanted Pharmaceuticals.* (*www.who.int/water_sanitation_health/medicalwaste/unwantpharm.pdf)* *Mandatory references for "appropriate end of life management": WHO Guidelines for Safe Disposal of Unwanted Pharmaceuticals.* *www.who.int/water_sanitation_health/medicalwaste/unwantpharm.pdf* *"Healthcare Waste" chapter, USAID Sector Environmental Guidelines* *www.usaidgems.org/Sectors/healthcareWaste.htm*
2. Procurement and/or management of	**Negative Determination** subject to the following **conditions**: • **Procurement and distribution of TB-related commodities** must conform with the WHO-approved list of drugs and treatment regimens (WHO

[30] INTEGRATED VECTOR MANAGEMENT PROGRAMS FOR MALARIA VECTOR CONTROL (2012 UPDATE). http://gemini.info.usaid.gov/egat/envcomp/repository/pdf/39185.pdf

pharmaceutical and other supplies for treatment and prevention of TB	Standard for Treatment: World Health Organization's International Standards for Tuberculosis Care (http://www.who.int/tb/publications/ISTC_3rdEd.pdf?ua=1). • Management and Disposal of pharmaceuticals and other supplies for treatment and prevention of TB are subject to the conditions for procurement and waste management conditions set out in #1 above.
3. Procurement and/or distribution of LLINs	**Negative Determination** subject to the following **condition**: The implicated IP(s) is/are required to purchase and use only WHO-approved brands of long-lasting treated nets (LLINs) and adhere to all relevant stipulations made in the USAID Malaria Vector Control PEA 2012 update, included as Annex A to this IEE.
4. Supply chain strengthening activities	**Negative Determination** subject to the following **conditions:** All efforts to strengthen health commodity supply chains, including storage infrastructure, must address and take all practicable efforts to assure that adequate facilities, procedures and capacities are in place to properly manage expired, used, obsolete or surplus commodities and/or that plans and strategies incorporate and provide for such management. In any instance that a USAID project controls commodities at end-of-life, appropriate end-of-life management must be assured. *Mandatory references for "appropriate end of life management": WHO Guidelines for Safe Disposal of Unwanted Pharmaceuticals. "Healthcare Waste" chapter, USAID Sector Environmental Guidelines www.usaidgems.org/Sectors/healthcareWaste.htm*
Note: this activity category does NOT include construction or rehabilitation of warehouses, or other storage facilities, which is covered under section 3.7.	

3.4 BEHAVIOR CHANGE COMMUNICATION, COMMUNITY MOBILIZATION AND EDUCATION/OUTREACH FOR HEALTH SERVICES

The anticipated activities described in Section 3.4 are focused on health outcomes, whereas human capacity building activities focused on economic growth-type activities are described and analyzed in Section 3.8.

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

1. **Abstinence/Be Faithful activities** include community mobilization, training, information, education, and communication, community outreach activities, and mass media campaigns to promote abstinence, fidelity, delay of sexual activity, partner reduction messages, management of sexually transmitted disease, and related social and community norms.
2. **HIV/AIDS-related activities**:
    a. Mobilizing mutual support and community support for Prevention of Mother-to-Child Transmission (PMTCT) clients to improve health outcomes and reduce stigma and discrimination;
    b. Prevention and awareness activities include behavior change information, education, and communication through community outreach and mass media programs that focus on individual risk perception, ability to negotiate condom use, etc.;
    c. Community mobilization and outreach to promote uptake of the services and to reduce stigma and discrimination of palliative care for HIV/AIDS;
    d. Mobilizing and strengthening local community-based organizations to provide psychosocial and peer support and follow-up that can increase uptake of the antiretroviral therapy (ART) services and help ensure treatment adherence and successful outcomes for the patient.
3. **Malaria prevention activities** include: intensive information, education, and communication (IEC) activities, including household and community mobilization, to encourage preventive and appropriate health-seeking behavior and to promote early and effective treatment of malaria and treatment adherence.
4. **Expand youth and vulnerable population's access to essential services** via healthy behaviors, such as good personal and community hygiene behaviors, abstinence/fidelity/consistent condom use, etc., resulting in the following:
    a. Increased knowledge of Kenyan youth regarding relevant services available to them;
    b. Increase knowledge of youth about HIV/AIDS, family planning, nutrition, childhood diseases, and malaria to increase demand for and use of beneficial products and services;
    c. Facilitate engagement of women, youth, and people with disabilities (PWDs) for access to essential services.
5. **Enhancing community involvement in social service delivery, promotion, and utilization** via social marketing, behavior change communication (BCC), and capacity building to increase demand for social services.
6. **Development and implementation of behavior change communications (BCC) strategy** to achieve project objectives which leverages and complements investments under USAID/Kenya health programming.
7. **Nutrition interventions.** USAID works at national and county levels to create a heightened profile for nutrition and strengthen budgeting, planning and monitoring and evaluation to allow the GOK to gradually manage nutrition service provision on its own. USAID will assist the GOK to roll out nutrition assessment counseling and support services. Specific interventions include:
    a. Assist the GOK to roll out nutrition assessment and counseling support services;

b. Improve access to and demand for quality nutrition interventions at community and facility levels through health promotion and other approaches;
c. Strengthen nutrition commodity management;
d. Improve food and nutrition security—working in conjunction with the Feed the Future program;
e. Procure, package and distribute food commodities to targeted populations;
f. Support distribution of vitamin A and other micronutrients;
g. Promote messaging that will encourage the consumption of nutrition-dense foods;
h. Communicate first 1,000 days of life information to stress maternal health, breastfeeding and infant care;
i. Conduct operational research that discovers evidence around the agricultural-nutrition linkage.

8. **Promote adequate complementary feeding practices** including appropriate food groups/dietary diversity, frequency, nutrient density and safe preparation methods for children and lactating mothers.

Potential Adverse Impacts & Considerations Regarding a Recommended Determination

Public awareness, education, and related social marketing initiatives are essential complements to activities that strengthen and expand care delivery systems and the healthcare workforce. All activities in this category are "programs involving nutrition, health care, or population and family planning services" and/or "education, training and technical assistance" and thus may be considered for categorical exclusion under 22 CFR 216.2 (c).

However, in many cases, these initiatives promote use of medical/public health commodities such as condoms, drugs, and insecticide-treated nets. Improper disposal of these items by end-users (the targets of the marketing message) has adverse environmental impacts; see discussion under 3.1 above. (For example, in a medical context, a used condom would be treated as infectious waste.) The use and subsequent disposal stimulated by these programs is often geographically dispersed, and USAID/IPs have very limited control over end-user actions. The former factor reduces the intensity of the impact, and the latter limits, but does not eliminate USAID responsibility for these impacts and potential mitigation measures.

As such, the categorical exclusion to which communication/education/outreach activities normally qualify is not applicable in the case where activities are promoting use of medical/public health commodities. However, nor can USAID assure appropriate disposition/disposal. Rather, behavior change activities must include, as appropriate, messages that emphasize the proper storage, use, and disposal of these products, and otherwise promote their use in a manner consistent with appropriate management.

LLINs are a special, and more significant case: promotion of LLINs is promotion of a pesticide product whose misuse does present health risks to the user, household and potentially the community at large (e.g. . the use of LLINs for clothing, fish nets or wrapping; these and other risks are detailed in USAID's 2012 Malaria Vector Control Programmatic Environmental Assessment (MVC PEA)[31] As such, USAID/IPs must ensure the SBCC for LLINs is consistent with the framework for LLIN use established by the MVC PEA. Procurement and distribution of LLINs is covered in section 3.3.

[31] INTEGRATED VECTOR MANAGEMENT PROGRAMS FOR MALARIA VECTOR CONTROL (2012 UPDATE). http://gemini.info.usaid.gov/egat/envcomp/repository/pdf/39185.pdf

Recommended Determinations

Per the above analysis, the following **threshold determination is** recommended for activities in this intervention category:

Activity	Recommended Determination
1. Abstinence/Be Faithful Activities include community mobilization, training, information, education, and communication, community outreach activities, and mass media campaigns to promote abstinence, fidelity, delay of sexual activity, partner reduction messages, and related social and community norms. **2. HIV/AIDS-related activities**: including community mobilization and support activities. **3. Malaria prevention activities** include: intensive information, education, and communication (IEC) activities, including household and community mobilization, to encourage preventive and appropriate health-seeking behavior and to promote early and effective treatment of malaria and treatment adherence. **4. Expand youth access to essential services** via healthy behaviors, such as good personal and community hygiene behaviors, abstinence/fidelity/consistent condom use.	**Negative determination with condition** that activities promoting the distribution and/or use or medical commodities and equipment must do so in a manner that aligns with appropriate management of those products, including proper disposal. To that end, BCC activities must be consistent with IEE conditions established for commodity distribution and use. This includes, but is not limited to, assuring that behavior change activities include, as appropriate, messages that emphasize the proper storage, use, and disposal of these products.
5. Enhancing community involvement in social service delivery, promotion, and utilization to increase demand for social services**.**	**Categorical Exclusion** per 22 CFR 216.2 (c)(viii): Programs involving nutrition, health care, or population and family planning services Note: This excludes procurement of condoms or other pharmaceuticals, the conditions for this type of activity are set out in Section 3. 3.
6. Development and implementation of behavior change communications (BCC) strategy.	**Categorical Exclusion** per 22CFR 216.2(c)(viii) Programs involving nutrition, health care, or population and family planning services
7 (a)Nutrition activities including nutrition assessment counseling and support services, promotion of nutritious foods and infant care as well as operational research	**Categorical Exclusion** per 22CFR 216.2(c)(viii) Programs involving nutrition, health care, or population and family planning services; 22CFR 216.2(c)(xi) Programs of maternal or child feeding; and, 22CFR 216.2(c)(iii) Analyses, studies and academic workshops

7(b) Nutrition commodity management including packaging, warehousing and distribution.	**Negative determination with condition** that all nutrition warehousing activities will be carried out as per the requirements of the USAID Global Fumigation Programmatic Environmental Assessment (PEA) that will be integrated in the workplan, to cater for pesticide use in fumigation. A fumigation PERSUAP authorizing the pesticides in use shall be prepared
8. Promote adequate complementary feeding practices for children and lactating mothers.	**Categorical exclusion** per 22CFR 216.2(c)(viii) Programs involving nutrition, health care, or population and family planning services, or; 22CFR 216.2(c)(xi) Programs of maternal or child feeding.

3.5 HEALTH SYSTEM STRENGTHENING, EXCLUDING:

(1) COMMODITY PROCUREMENT/SUPPLY CHAIN STRENGTHENING, and (2) DIRECT SUPPORT FOR SERVICE DELIVERY

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

1. **Support for 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. **Strategic information activities** are aimed at strengthening HIV/AIDS surveillance, health management information systems, and monitoring and evaluation, excluding human subject research. These activities include:
    a. Implementation of surveys and studies, including facility surveys, and publication/dissemination of results;
    b. Development of improved tools and models for collecting, analyzing, and disseminating HIV/AIDS behavioral and biological surveillance and monitoring information as well as family planning data and monitoring;
    c. Strengthening country monitoring and evaluation or surveillance systems, including data collection including collection, management or transport of physical samples;
    d. Developing and disseminating best practices to improve program efficiency and effectiveness in any PEPFAR programmatic area;
    e. Evaluating national prevention, care, and treatment efforts related to the efficiency and effectiveness of health interventions, especially for HIV/AIDS;
    f. Analysis and quality assurance of demographic and health data related to HIV/AIDS;
    g. Monitoring and evaluation and studies focused on Orphaned and Vulnerable Children (OVC);
    h. Operational research in maternal health.

3. **Support health systems via strengthening national policies and systems** that are essential to service expansion, such as
    a. Governmental management capacity, training and leadership development for regional and district entities;
    b. Capacity building of local organizations to improve effectiveness and sustainability and technical assistance in a range of areas;
    c. Addressing human resources constraints to scaling up services and support in development of policies and advocacy;
    d. Strengthen health financing via planning and budgeting at the national and regional levels via:
        i. Support completion of the health care financing strategy and the potential policy actions related to it;
        ii. Building the Ministry of Health's (MOH) capacity on health financing tools;
    e. Support development and/or expansion of public and private health insurance plans;
    f. Provide support to the GoK/Department of Environmental Health on policy and coordination related to hygiene and sanitation across the country;
    g. Support the revision of the Kenya Adolescent and Youth Sexual and Reproductive Health Policy to ensure that resources are made available for their health, e.g., contraception to reduce unwanted pregnancies, prevention programs to reduce health risk behaviors leading to HIV and substance abuse, and to create opportunities to enhance their autonomy, decision-making capabilities, and economic prospects;
    h. Support development of KEMSA's capacity to distribute contraceptives to the public sector.

NOTE: activity classes 1-3, above, do NOT include support for on-the-ground care delivery or WASH interventions. See sections 3.2 (care delivery), 3.6 (WASH), and 3.7 (Construction and rehabilitation).

4. Strengthening Kenya's **laboratory network** to improve HIV/AIDS patient monitoring.

Note: this intervention category does NOT include human subjects research

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. While support for strengthened referral systems may include data collection, synthesis, and reporting**, it does not include human subject research**. It does not address, have control over service delivery nor infrastructure at referral facilities. As such, it does not have foreseeable adverse environmental impacts.

Strategic information activities are intended to provide government with a more accurate representation of health care delivery effectiveness in Kenya. Part of this assessment would entail evaluation of health care waste management and how HCWM practices are being implemented.

Generally, strategic information activities do not present foreseeable adverse impacts except when they involve collection or handling of blood or other potentially infectious biological samples. Collection of biological samples can present adverse impacts related to transmission of disease and health care waste management. Transmission of disease through infectious specimens is a significant threat from healthcare waste (See Section 3.1).

Note that human subjects research does not present unique environmental risks per se, but can present differential risks of disease or adverse outcomes to different study cohorts; inappropriate disclosure of

personally identifiable information may result in, for example, stigma, discrimination and adverse impacts on livelihood. For these reasons, human subjects research is subject to specific ethical review and other legal requirements, and good practice obligations, and must be evaluated on an individual basis. *For this reason, human subjects research is excluded from this DO-level IEE.*

Activities to Strengthen National Policies and Systems. The intended effect of these technical assistance activities is that strengthened policies and systems will result in expanded delivery of and/or access to health care services. As detailed in Section 3.1, health care services presents a set of potentially significant adverse environmental and health impacts, particularly related to medical waste. Therefore, these TA activities do present potential for indirect adverse environmental impacts. As such, they are not eligible for categorical exclusion under 22 CFR 216.2(c)(2)(i).

The national systems and structures governing health care waste have significant influence over whether – or not—health care wastes are appropriately managed on the ground. Therefore, 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.

Strengthening laboratories network– presents the same concerns regarding health and environmental hazards as direct support to service delivery and strengthening the capacity of care delivery organizations. For example, laboratory work will likely involve the handling and analysis of infectious samples which will require proper waste management.

Recommended Determinations

Per the above analysis, the following **threshold determinations** are recommended for activities in this intervention 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. Strategic information activities, excluding human subject research	A **Negative Determination** subject to the following **conditions:** **Any assessments and data collection activities** must, wherever relevant, characterize management and disposition of HC wastes and promote effective, appropriate management and disposition. **Epidemiological surveillance and/or data collection directly funded by USAID and involving the collection and/or analysis of blood or body fluid samples** must have adequate procedures and capacities in place to appropriately* handle, label, treat, store, transport and dispose of blood, body fluids, sharps and other medical waste generated by these activities. 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.

Activity	Recommended Determination
	USAID support to surveillance and epidemiological monitoring systems is subject to the determinations established immediately below for "strengthening governmental management capacity." "Appropriate 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 edition or later). (http://apps.who.int/iris/bitstream/10665/77949/1/9789241504638_eng.pdf)
3. Strengthening governmental management capacity, including leadership development for regional and district entities, in the health sector	**Negative Determination** subject to the **Condition** that: The capacity-strengthening must involve all feasible efforts to assure that these systems: • 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; • Prioritize environmental health considerations It is understood that the USAID support to health delivery and management systems and organizations does not, in most cases, equate to direct USAID control over these systems and organizations. However, IPs must proactively advance these principles in their analysis, recommendations, and technical support. As discussed in 3.6, support focused on WASH-related governmental capacity and systems is not covered in this IEE. Please refer to the IEE for DO3: Inclusive, market-driven, environmentally sustainable economic growth Portfolio, Section 3.6 Water, Sanitation, and Hygiene (WASH) and Sustainable Water Resource Management for indicative activities and associated conditions. *Mandatory reference:* 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." Other important references to consult in establishing a waste management program are "WHO's Safe Management of Wastes from Healthcare Activities."

Activity	Recommended Determination
4. Strengthen laboratory networks	**Negative Determination** subject to the **Conditions** that: • All conditions for "Strategic information activities," above, also apply. • Where capacity is built in general terms for laboratory networks, this must include building systems and human capacity for compliance with host country requirements and accepted international good laboratory practice.

3.6 SMALL-SCALE WATER SUPPLY AND SANITATION

No information was available regarding WASH activities under DO2 at the time of IEE development. Potential DO2 WASH activities might include water supply, hand washing stations, shower facilities, latrines and small-scale drainage and wastewater treatment. DO2 WASH activities will be clarified in the forthcoming DO 2: Health and Human Capacity Strengthening PADs.

The DO3 IEE ("Inclusive, market-driven, environmentally sustainable economic growth ") does address a set of WASH activities (Section 3.6). DO2 WASH activities that match the description of a WASH activity in the DO3 IEE are covered by the DO3 IEE and subject to the determination and conditions it assigns. DO2 WASH activities NOT covered by the DO3 IEE are deferred and will require amendment of this IEE. That amendment must be consistent with the analysis of potential adverse impacts and recommended determinations for WASH activities in the DO3 IEE.

Recommended Determinations

Pursuant to the analysis above, the following determinations are recommended for this intervention category.

Activity	Recommended Determination
1. Technical assistance for WASH activities – promotion of household-level diarrheal control strategies, and point of use water treatment.	**Categorical Exclusion per** **22 CFR 216.2 (c)(viii) programs involving nutrition, health care, or population and family planning services.**
2. WASH activities involving infrastructure development	**Negative Determination** subject to the following **conditions**: **1. Good-practice design standards** must be implemented for new construction and rehabilitation works, generally consistent with USAID's *Sector Environmental Guidelines: Water Supply & Sanitation:* http://www.usaidgems.org/Sectors/watsan.htm. These standards must be specified in the EMMP (see Section 4 of this IEE). • For water supply, they 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. • For latrines, they must include provisions to prevent contamination of water supplies, appropriate choice of latrine type given local environmental conditions (e.g. pit latrines are rarely suitable in locations where the water table is high), provision of hand wash stations, and development and implementation of a system for ongoing latrine cleaning and maintenance **2. Water Quality Assurance Plan.** For water supply activities, the IP will implement the USAID Kenya Water Quality Assurance Plan (WQAP) and comply with all relevant GOK standards. 3**. Capacity-building in equipment/system maintenance** must be co-programmed with construction/installation of small-scale water supply and sanitation infrastructure

3.7

REHABILITATION AND SMALL-SCALE CONSTRUCTION, OTHER THAN WATER/SANITATION INFRASTRUCTURE

This intervention category consists of construction and/or rehabilitation of facilities at various potential scales (i.e., very small scale, small scale, large scale) with the aim to expand capacity for health care delivery, including facilities delivering healthcare services and those supporting the supply chain (e.g., warehouses, etc.). For example, this may include construction/rehabilitation of facilities to expand capacity to provide HIV/AIDS services, maternal and child health services, and/or storage facilities for health care commodities, among others.

Note that equipment and supplies procurement associated with rehabilitation/refurbishment are subject to the requirements of section 3.3.

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/water body, 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 water body.

- *Standing water.* Construction may result in standing water on-site, which readily becomes breeding habitat for mosquitoes and other disease vectors; this is of particular concern as malaria is endemic in many areas of Kenya.

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 FHP 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,[32] USAID AFR Bureau has concluded that very small-scale general construction involving a total "disturbed area" of less than 1000m^2 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.

[32] 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.

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/Kenya DO 2 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., 2000m^2 and above); health sector construction at these scales has a higher probability of requiring more complex environment, health and safety mitigations.

Recommended Determinations

Pursuant to the analysis above, the following determinations are recommended.

Activity	Recommended Determination
"VERY SMALL-SCALE CONSTRUCTION" Technical and financial assistance for very small-scale construction (less than1000m^2 total disturbed area) with no complicating factors. ***NOTE: Does NOT apply to facilities delivering health care services, serving as diagnostic laboratories, or providing practical or lab-based health training***	**Negative Determination** subject to the following **conditions :** **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. Construction will be undertaken** in a manner generally consistent with the guidance for environmentally sound construction provided in the Small Scale Construction chapter of the USAID 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. *Asbestos*.** 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 MIHP team, in consultation with the MEO and REA. All results of the testing for asbestos shall be communicated to the C/AOR. **4. *Paint*.** 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. **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, including health care waste and appropriate sanitation facilities as per GOK and WHO requirements. **Note: *Water and sanitation components of such construction, if any, are subject to the provisions of section 3.6.***
"SMALL SCALE CONSTRUCTION" Technical and financial assistance for small-scale construction <u>larger</u> than 1000m^2 total disturbed area and/or with one or more complicating factors but in all cases <u>less</u> than 2000m^2. ***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***	**Negative determination** subject to the following **<u>conditions</u>** 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) **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 (section 3.7) will also be observed. **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 (see Section 3.1) per GOK and WHO requirements. The conditions applying to sanitation infrastructure apply to sanitation interventions undertaken with such construction; ***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.*** **Note that equipment and supplies procurement** associated with rehabilitation/refurbishment is addressed in and subject to the requirements of section 3.5.
Note that equipment and supplies procurement associated with rehabilitation/refurbishment are subject to the requirements of section 3.3.	

3.8 HUMAN CAPACITY-BUILDING (YOUTH AND OVC; INDIVIDUAL AND HOUSEHOLD EMPOWERMENT; COMMUNITY INVOLVEMENT IN SERVICE DELIVERY) AND EDUCATION

This intervention category consists of the following activities:

1. **Youth empowerment for social and economic development**, (as per the PERFAR guidance for OVC programming) including identification of opportunities for economic empowerment and household economic strengthening, and training and support to exploit these opportunities. Subcategories in this intervention category include the following:
    a) **Technical support, training, and capacity building for livelihoods, entrepreneurial activities, and civic engagement** that **do not include** financing for activities with a direct impact on the environment. Illustrative activities include: development of entrepreneurial skills ; civic engagement in local and national issues; capacity building for practical knowledge, skills and behaviors for employment; building leadership and communication capacity of the youth organizations at local and national levels; increasing gender equality and female empowerment; support youth to engage governments on design and oversight of development plans; seek opportunities for youth to benefit from GOK resources and policies, including linkages with education institutions and the private sector; increase access to secondary and tertiary education for youth from marginalized backgrounds; support activities to close gender gaps and improve access to and quality of learning.
    b) **Technical support, training, and capacity building** for healthy lifestyles, including trainings to equip educators, healthcare professionals, and community members with knowledge and skills to support healthy lifestyles in children and youth;
    c) Any empowerment activities that **may directly affect the environment** such as support for business that are directly linked to natural resources such as support NRM, agricultural activities, brick making, etc. Furthermore, this includes any capacity-building to participate in economic growth activities and/or related to small grants.
    d) **Small grants** for social issues and leveraging of public-private partnerships (PPPs), including establishment of a youth action fund to provide grants to youth organizations to address youth-identified social issues and build on existing PPP relationships.
2. **Direct support for orphans and vulnerable children to attend school or obtain vocational training**. (e.g. stipend, payment of school fees), including work with PEPFAR and other USG initiatives to provide scholarships and leadership training to orphans and vulnerable children; strengthen HIV/AIDS and life skills curricula and policies; psychosocial support; shelter and security; promote access to boarding facilities.
3. **Improved access to quality education activities such as Early Grade Reading (EGR) Programs:** EGR will create a number of interventions, including media support such as Sesame Street, and relevant technical assistance that expand and bring to scale several research-based improvements in reading development. This includes the production and distribution of materials; training of nearly 100,000 education personnel; community engagement initiatives; and the development of high quality assessments and evaluations to measure the impact of the various components. EGR programs will leverage the economy of scale to update the supply chain for reading materials and include additional, low-cost materials to parents and community partners via print, radio, and television mechanisms. These interventions include media support and relevant technical assistance that expand and bring to scale several research based improvements in reading development. This is an ongoing activity.
4. **Technical support to the national education sector capacity building:** USAID will support the

Ministry in charge of Education and the SAGAs to acquire technical and training support for the development and implementation of education sector policy reforms and strategies, specifically those aimed at improving math and reading. This is an ongoing activity

5. Activities to **increase demand for social services**, such as communications campaigns, membership drives, etc. These may include awareness campaigns via social media, radio, or other means; educational campaigns; membership drives; other events to increase awareness of available social services or technical assistance. No adverse environmental impacts are anticipated related to the described activities and qualify for a **categorical exclusion.**
6. **Conduct assessments** (youth unemployment, drivers of conflict, informal sector employment opportunities, industry job skills gaps, and lessons learned from past youth intervention programs, local capacity development need, etc.). These activities are research activities. No adverse environmental impacts are anticipated and activities qualify for a categorical exclusion.
7. **Support to youth through youth owned institutions** (Savings cooperatives, Development Credit Authority, etc.). These activities are designed to plan, implement, and provide financial backing for SACCOs and DCAs that may fund wide-ranging activities. This financing is intended to expand service offerings to, and reach, otherwise underserved youth. In these cases, USAID is not providing direct financial support for activities receiving loans. However, there is risk that new financing may be used for activities—including construction, agriculture, and acquisition of equipment—that could have adverse environmental impacts, so these activities warrant a negative determination with conditions. USAID has a responsibility to ensure that financial institutions have functional environmental due diligence processes in place, and comply with host country requirements.
8. **Capacity development and support to key youth organizations**. From an environmental risk standpoint these activities consist of the following three components:
    a. Subcategory 8a: Technical assistance and capacity development to key youth organizations is anticipated to include activities at the village or county level and may address organizational capacity through learning by doing, leadership development, membership drives, communication and resource mobilization skills, as appropriate. As technical assistance, these activities qualify for a categorical exclusion.
    b. Subcategory 8b: Small grants programs targeting youth are anticipated to support innovative ideas, new products, and services that spur youth involvement and energize the local economy. Considering the wide range of activities that could be financed with the small grants (each less than US$500) there is a risk that the grants could fund activities or the acquisition of equipment that could have adverse environmental impacts. Therefore small grants programs warrant a negative determination with conditions.
    c. Subcategory 8c: Other support to key youth organizations is inadequately specified and qualifies for a deferral.

Recommended Determinations

Pursuant to the analysis above, the following determinations are recommended.

Activity	Recommended Determination
1a. Technical support, training, and capacity building for livelihoods, entrepreneurial activities, and civic engagement that **do not include** financing for activities with potential environmental impacts **1b. Technical support, training, and capacity building** for healthy lifestyles.	***Applicable to activities in subcategories 1a and 1b:*** **Categorical Exclusion** per 22 CFR 216.2(c)(2) for education, training and technical assistance activities.
1c. Any youth empowerment activities that **may directly affect the environment** **1d. Small grants**	***Applicable to activities in subcategories 1c and 1d*:** **Negative determination subject to the following conditions** for any direct financing and/or grant making activities. 1. Prior to undertaking interventions in this area, the IP must submit an Environmental Review Form (ERF) (located at http://www.usaidgems.org/compliance.htm) for the proposed small-scale economic development activities to the C/AOR and MEO setting out design and management measures that will provide a high level of assurance that the small grants will not finance activities likely to have an adverse effect on the environment, or that appropriate mitigation requirements will be associated with each grant. This statement must be reviewed and approved by the C/AOR and MEO. The IP must implement and report on the measures so specified. Small grants, microcredit, and/or financing does NOT cover support for acquisition of land-clearing equipment, PPE, pesticides, fishing equipment, irrigation materials, or other similar tools that may cause unintended environmental impacts. 2. Before the implementation of a small grants activity, the IP must reference the Yes Youth Can "Protect Your Environment Tool kit" and the USAID Sector Environmental Guidelines at http://www.usaidgems.org/sectorGuidelines.htm to determine if that activity is included. The IP must work with awardee to ensure mitigation measures are implemented, and the IP must monitor implementation. IPs are responsible for reporting to USAID on environmental compliance status of small grants activities. For activities not included in either guidance, the IP must either draft a) an EMMP or b) a document akin to the Yes Youth Can DIY Toolkit for that activity. USAID has a responsibility to ensure the financial institutions awarding grants and/or financing have adequate and appropriate

	environmental management safeguards in place. The Environmental Review Form (ERF) can be found at http://www.usaidgems.org/compliance.htm.
2. Direct support for orphans and vulnerable children to attend school or obtain vocational training	**Categorical Exclusion** per 22 CFR 216.2(c)(2) for education, training and technical assistance activities.
3. Improved access to quality education activities such as Early Grade Reading	**Categorical Exclusion** per 22 CFR 216.2(c)(2) for education, training and technical assistance activities
4. Technical support to the national education sector capacity building	**Categorical Exclusion** per 22 CFR 216.2(c)(2) for education, training and technical assistance activities
5. Activities to increase demand for social services	**Categorical Exclusion** per 22 CFR 216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, waste water treatment, etc.)
6: Conduct youth workforce assessment assessments	**Categorical Exclusion** per 22CFR 216.2(c)(2)(iii)Analyses, studies, academic or research workshops and meetings;
7. Support to youth through innovative financial instruments (SACCOs and DCAs)	**Negative Determination**, subject to the following **conditions:** 1. Ensure that the Guaranteed Party or Parties have environmental screening system sufficient to demonstrate compliance with host government environmental laws and to enable USAID to make an assessment of the environmental impact of such activities and shall submit to the A/COR and MEO their proposed policies and procedures to assure that the projects financed are environmentally sound and comply with applicable laws and procedures. 2. In the event a SACCO or DCA is to be established, refer to guidance on the GEMS website, http://www.usaidgems.org/complianceTopics.htm, and consult with the MEOs, REAs and BEO, as appropriate. 3. Corporate Environmental and Social Responsibility will be promoted.
8a: Technical assistance and Capacity development to key youth organizations	**Categorical Exclusion** per 22CFR 216.2(c)(i) Education, technical assistance, or training programs.

8b: Youth program and other small grants programs targeting youth	**Negative Determination**, subject to the following **conditions**: 1. Prior to undertaking interventions in this area, the IP must submit a memorandum to the C/AOR and MEO setting out design and management measures that will provide a high level of assurance that the small grants will not finance activities likely to have an adverse effect on the environment, or that appropriate mitigation requirements will be associated with each grant. This statement must be reviewed and approved by the C/AOR and MEO; The IP must implement and report on the measures so specified. 2. Before the implementation of a small grants activity to youth, the IP must reference the Yes Youth Can "Protect Your Environment Tool kit" and the USAID Sector Environmental Guidelines at http://www.usaidgems.org/sectorGuidelines.htm to determine if that activity is included. The IP must work with awardee to ensure mitigation measures are implemented, and the IP must monitor implementation. IPs are responsible for reporting to USAID on environmental compliance status of small grants activities. For activities not included in either guidance, the IP must either draft a) an EMMP or b) a document akin to the Yes Youth Can DIY Toolkit for that activity.
8c: Other support to key youth organizations is inadequately specified	**Deferral**

3.9 TECHNICAL ASSISTANCE TO INDOOR RESIDUAL SPRAYING (EXCEPT IRS EFFECTIVENESS/EFFICACY STUDIES)

The activities occurring in this category include support of IRS activities Kenya under a Washington DC-based and centrally managed IRS program. The category includes the following:

- Coordinate activities with the Ministry of Health, county health officials, and local communities
- Provide training to spray operators on safe application
- Social marketing to encourage community member participation in IRS programs through distribution of posters and fliers

Potential Adverse Impacts & Considerations Regarding Recommended Determinations

The potential adverse impacts of IRS are well-documented by USAID's Programmatic Environmental Assessment for Malaria Vector Control (MVC PEA; http://gemini.info.usaid.gov/egat/envcomp/repository/pdf/39185.pdf). They are significant and include health impacts on householders and spray operators, particularly women, environmental damage and human exposures from pilferage of IRS pesticides, contamination of water supplies and consequent human exposure from rinsing and mixing operations, among other impacts.

The MVC PEA establishes a set of environmental, health and safety management and monitoring conditions that apply to IRS programs. Kenya's support to IRS operates under this PEA and its requirements. This is true even though IRS activities do not include direct support for spray operations.

Recommended Determination

Pursuant to the discussion above, the following determinations are recommended:

Activity	Recommended Determination
Technical Support to Indoor Residual Spraying	**Negative determination subject to the following conditions** for IRS activities that may involve use of pesticides that are subject of the Malaria Vector Control PEA of 2012. **The conditions are that the Mission shall carry out the Kenya Malaria Vector Control Supplemental Environmental Assessment.** As such, IRS activities must comply with the requirements of the 2012 Malaria Vector Control PEA and the Kenya SEA. Inter alia, • Training of spray operators must conform to PMI Best Management Practices for IRS, available at: www.fightingmalaria.gov/technical/pest/bmp_manual_aug10.pdf • Social marketing for program participation must include, as appropriate, health and safety messaging regarding appropriate preparation of residences for and precautions to observe following IRS.

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:

5. **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.

6. **Development of EMMP.** Each IP whose activities are subject to one or more conditions set out in section 3 of this IEE shall develop within 90 days or with the Project workplan, whichever is sooner 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 will assure that IEE conditions that apply to activities supported under subcontracts and subgrant 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)

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

8. 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 DO 2 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.

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

11. **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.

12. **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 health sector 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 approved.

13. **Human subject research** is excluded from this IEE.

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

Attachment A. LLIN Mitigation Measures per the 2012 Malaria Vector Control Pea

Potential Negative Activities/Impacts	Recommended Mitigation Actions
Efficacy of LLINs	
Environmental and human health Exposure to LLIN pesticide from washing LLIN	Training of residents in correct method for washing mosquito net (as per WHO guidelines)
	Human behavior monitoring and post distribution follow-up campaigns (to determine need for behavior change training)
Misuse of LLINs	
Community and environmental exposure to LLIN pesticides from using nets for other uses than intended	Training of residents on proper use of the mosquito net
	Human behavior monitoring and post distribution follow-up campaigns (to determine need for behavior change training)
	Development and implementation of environmental monitoring plan (to determine pesticide impacts on the environment)
	Development and implementation of a human health monitoring plan (to determine pesticide impacts on residents)
Special Considerations	
LLIN intervention	Training for implementation following "cascade pattern" to address the needs of the different levels of the delivery system.
Storehouse fire, inhalation of toxic fumes from LLIN fire	Construction or renovation of central, permanent storage facilities according to UNFAO's *Pesticide Storage and Stock Control Manual*
	Construction or renovation of temporary storage facilities using main principles of UNFAO's *Pesticide Storage and Stock Control Manual* as a general guideline
	Procurement and distribution of emergency equipment to LLIN storage facilities
	Training of storekeepers
	Development and implementation of environmental reporting system
Flooding of storehouse, leading to environmental contamination	Storage facility sites located on high ground, outside of floodplain
Insecticide Quality and Resistance	
Decreased effectiveness of LLIN, lessening impact on malaria incidence	Random Laboratory testing of LLIN to ensure quality control
	Entomological monitoring of resistance
	Data recording on agricultural pesticides for the purpose of knowing how they may contribute to resistance
	Construction or renovation of storage facilities according to UNFAO's *Pesticide Storage and Stock Control Manual*
	Development and implementation of environmental reporting system for Environmental Mitigation and Monitoring Plan (see Section 6.2)
Collection and redistribution of new nets, once nets are no longer viable	Development and implementation of collection and disposal plan during redistribution campaigns
Packaging	
Environmental contamination; human exposure via improper disposal of packaging	Assess the locally existing options for the safe recycling/disposal of bags. Do NOT burn LLIN bags in open air; Do NOT incinerate LLIN bags unless the

Potential Negative Activities/Impacts	Recommended Mitigation Actions
	proper incineration conditions are available; Do NOT re-use LLIN bags for ar other purpose. Preferred methods include: Burn LLIN bags according to FAO/WHO and Basel Convention guidelines; Investigate local recycling opti for safe applications; Store LLIN packaging only if safe incineration or recycl is expected in the near future; If recycling or incineration is not possible; Bu locally. (WHO/ Global Malaria Programme).
Communications	For all of these potential adverse impacts, printed insert materials will be distributed to all beneficiaries receiving LLINs. These materials will contain t basic components of the safe and effective use of the LLINs in the simplest language and pictorial representation to address different languages and literacy/numeracy competencies.

[i] Uwezo Kenya, 2011, Are Our Children Learning?
[ii] USAID 2012, Kenya Gender Analysis and Action Plan; p. 55