

COVER SHEET

INITIAL ENVIRONMENTAL EXAMINATION

APPROVAL DOCUMENT

PROGRAM/ACTIVITY DATA

–Program Activity Title: USAID/Botswana Health Project

Country/Region: Botswana

Functional Objective: Strengthen the Response to the HIV/AIDS Epidemic

Program Elements: AO47

Period Covered: 2015-2020

LOP Amount \$92.3 million

IEE Prepared By: Josh Habib and Ashley Fox, GEMS Project, The Cadmus Group, Inc.
Josh.Habib@CadmusGroup.com

IEE Amendment (Y/N): No

Submitted By: William Roden, Director, Health Office USAID Botswana

Current Date June 2015

Expiration Date May 2020

Other Relevant Environmental Compliance Documentation: Environmental Guidelines for Healthcare Waste (<http://www.usaidgems.org/Sectors/healthcareWaste.htm>) contains guidance, which must inform compliance with these conditions, particularly in the section titled, “[Minimum elements of a complete waste management program](#).” See also World Health Organization’s (WHO’s) “Safe Management of Wastes from Healthcare Activities” (http://www.who.int/water_sanitation_health/medicalwaste/wastemanag/en/).

Programmatic Environmental Assessment of Global Integrated Vector Management Programs for Malaria Vector Control (2012 Update):
<http://gemini.info.usaid.gov/egat/envcomp/repository/pdf/39185.pdf>

REGIONAL HIV/AIDS PROGRAM (RHAP) IEE (Southern Africa), approved 8/31/2015:
http://gemini.info.usaid.gov/egat/envcomp/document.php?doc_id=44831

ENVIRONMENTAL ACTION RECOMMENDED

Categorical Exclusion	<u> X </u>	Negative Determination	<u> X </u>
Positive Determination	<u> </u>	Deferral	<u> </u>

ADDITIONAL ELEMENTS:

EMMP: X | Conditions: X | PVO/NGO: X | Pesticides:*
*22 CFR 216.3 (b)(1) applies

SUMMARY OF FINDINGS

Scope. This IEE addresses the entire portfolio of activities anticipated under the USAID/Botswana Health Project. It applies to all health and human capacity strengthening activities implemented under the USAID/Southern Africa Regional Development Cooperation Strategy (RDCS) 2011-2016, within Development Objective (DO) 2: Reduced impact of HIV/AIDS on the region; and specifically under Intermediate Result (IR) 2.1: *Mitigate the spread and impact of HIV/AIDS in non-presence countries*. Within the USAID/Botswana Health Project, the DO is to “Strengthen the Response to the HIV/AIDS Epidemic.” This IEE replaces and supersedes the Mission’s previous 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 health portfolio, per the intervention categories established by this IEE for purposes of environmental review. For each, a link is provided to the entailed activity descriptions, analysis of potential environmental impacts, and activity-by-activity determinations and conditions within section 3 of the IEE.

Intervention Category	Categorical Exclusion(s)	Negative Determination(s)	Positive Determination(s)	Deferral of Threshold Decision	Link to full analysis
Direct healthcare delivery and healthcare worker/delivery agent training; healthcare workforce training, strengthening, and development		✓			Click here
Direct and capacity building support for health system strengthening,	✓	✓			Click here

Intervention Category	Categorical Exclusion(s)	Negative Determination(s)	Positive Determination(s)	Deferral of Threshold Decision	Link to full analysis
delivery and access to health services, excluding commodity procurement/supply chain strengthening					
Procurement and supply chain strengthening activities		√			Click here
Behavior change communication, community mobilization, and education/outreach for health services	√				Click here
Policy & strategy development and assistance; health system information and knowledge management	√	√			Click here
Studies, surveys/public health surveillance and other data-gathering assessments, models, & capacity-building in support of all areas above. Dissemination of resulting information/lessons learned/best practices	√	√			Click here

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

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

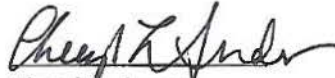
The full IEE is attached to this coversheet.

APPROVAL OF ENVIRONMENTAL ACTION RECOMMENDED

(USAID/ Botswana Health Project)

CLEARANCE

Mission Director:


Cheryl Anderson

Date: 8/26/15

Acting USAID Representative:


Michael Park

Date: 8/18/15

CONCURRENCE:

AFR Bureau Environmental Officer:


Brian Hirsch

Date: 9/16/15

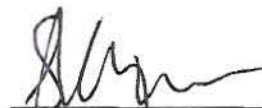
Approved: ☒
Disapproved: ☐

FILE N°:

Botswana Health Project IEE 9.16.15

ADDITIONAL CLEARANCES:

Environmental Specialist:


Segametsi Duge

Date: 08-18-2015

Health Office Director and
Mission Environmental Officer:


William Roden

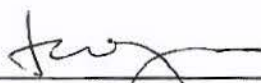
Date: 8/18/15

Regional Environmental Officer:
USAID/Southern Africa


Diana Shannon

Date: Aug. 18, 2015

Deputy Mission Director (Regional):
USAID/Southern Africa



Littleton Tazewell

Date: 8/20/15

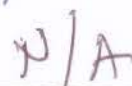
Deputy Mission Director (Bilateral):
USAID/Southern Africa



Alonzo Wind

Date: 8/23/2015

Global Health Bureau Environment Officer:



Rachel Dagovitz

Date: _____

Distribution List:

Blake Chastal, William Roden, Michael Park, Segametsi Duge, Diana Shannon

INITIAL ENVIRONMENTAL EXAMINATION

PROGRAM/ACTIVITY DATA:

Program/Activity Title: USAID/Botswana Health Project
Country/Region: Botswana
USG Foreign Assistance Framework: Strengthen the Response to the HIV/AIDS Epidemic
Program Area - 3.1.1-HIV/AIDS
Program Element – A047
Period covered: 2015-2020
Life of Project Amount: \$92.3 million

1.0 BACKGROUND AND ACTIVITY/PROGRAM DESCRIPTION

1.1 Purpose and Scope of IEE

This IEE addresses the entire portfolio of activities anticipated under the USAID/Botswana Health Project. It applies to all health and human capacity strengthening activities implemented under the USAID/Southern Africa Regional Development Cooperation Strategy (RDCS) 2011-2016, within Development Objective (DO) 2: Reduced impact of HIV/AIDS on the region; and specifically under Intermediate Result (IR) 2.1: *Mitigate the spread and impact of HIV/AIDS in non-presence countries*. 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.

Within the USAID/Botswana Health Project, the Development Objective is to “Strengthen the Response to the HIV/AIDS Epidemic.” To fulfill this DO, USAID/Botswana is aligning its technical and financial resources with three intermediate results (IR):

- IR 1: Strengthened community agency to seek, support and provide HIV/AIDS-related services
- IR 2: Enhanced local NGO capacity to complement the HIV/AIDS response
- IR 3: Strengthened Government of Botswana's capacity to manage the HIV/AIDS response.

For purposes of analysis, this IEE synthesizes current and anticipated DO2 Health Project activities under the office's various projects and initiatives into a set of 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 each activity on the environment. On this basis, this IEE recommends Threshold Decisions and, in some cases, attendant conditions, for these activities.

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

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

1.2 Background (Context and Justification)

Botswana ranks 109 out of 187 countries on the Human Development Index (HDI) and faces a significant burden of disease and shortage of healthcare resources, similar to most countries in sub-Saharan Africa. Botswana has one of the world's highest HIV/AIDS burdens; recent government studies estimate that Botswana over the age of 18 months have an HIV/AIDS infection rate of 18.5 percent. With Botswana's population of approximately two million people, this means that approximately 320,000 people are living with HIV; based on an estimated 1.35 percent annual growth, there are approximately 9,170 new infections each year. USAID Programs focus on the alleviation of HIV/AIDS in the country, working with NGOs and the Government of Botswana by bringing technical expertise and financial support to support the country's response to the HIV/AIDS epidemic.

USAID/Botswana's health sector activities are a response to these human and development needs and are in line with the identified priorities of the Government of Botswana (GOB) for the health sector as stated in the USAID/Botswana Project Appraisal Document.

1.3 Summary of Activities

Targeted health and capacity strengthening activities (sub-sectors): The USAID/Botswana Health Project portfolio incorporates interventions in six sub-sectors, including the following:

1. HIV/AIDS, with regards to Gender Based Violence (GBV), Orphans and Vulnerable Children (OVC), Voluntary Medical Male Circumcision (VMMC), prevention of mother-to-child transmission of HIV (PMTCT), Voluntary Counseling and Testing (VCT), female sex workers (FSWs) and men who have sex with men (MSM).
2. Malaria
3. Tuberculosis prevention and control
4. Procurement and supply chain strengthening activities
5. Policy and strategy development
6. Health surveillance and other data-gathering assessments

Individual projects² 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 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 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 See footnote 1 regarding use of the terms "projects" and "activities" throughout this IEE.

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, 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 these 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/Botswana portfolio are therefore consolidated into the following intervention categories. No WASH or construction activities are anticipated for this portfolio; if the scope of the Botswana Health Project should change to include WASH or construction activities, this IEE would require amendment to address the anticipated activities.

1. Direct Healthcare Delivery and Healthcare worker/delivery agent training; healthcare workforce training, strengthening, and development
2. Direct and Capacity Building Support for health system strengthening, delivery and access to health services, excluding commodity procurement/supply chain strengthening
3. Procurement and supply chain strengthening activities
4. Behavior change communication, community mobilization, and education/outreach for health services
5. Policy & strategy development and assistance; health system information and knowledge management
6. Studies, Surveys/Public Health Surveillance and other Data-gathering Assessments, Models, & Capacity-Building in support of all areas above. Dissemination of resulting information/lessons learned/best practices

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 Botswana Environmental Profile

Geography.³ Botswana is a landlocked country in central Southern Africa, sharing borders with South Africa, Namibia, Zambia and Zimbabwe. The country covers 582,000 km² and is generally flat, at 900 m above sea level. Eastern Botswana contains hills and

³ Southern African Development Community, Botswana, Accessed <http://www.sadc.int/member-states/botswana/>



deep valleys, and ranges from 500 to 1,500 m while Western Botswana is semi-arid with rocky outcrops. More than 70 percent of the country is covered by the Kalahari Desert.

Demography.⁴ Botswana has a population of 2.16 million, which is growing at a rate of 1.26 percent. The annual rate of urbanization is roughly 2.07 percent, with 61.7 percent of people living in urban areas, mainly the capital city of Gaborone, which had a population of 202,000 in 2011. One-fifth of the population is under five years of age, and one-third are younger than 15. Eighty-five percent of the population over age 15 is literate, and the unemployment rate is 13.6 percent. Major ethnic groups are the Tswana (79 percent), Kalanga (11 percent) and Basarwa (3 percent).

Partially due to the spread of HIV/AIDS, life expectancy at birth is only 54 years. In 2011 almost one quarter of the population aged 15 and over was living with HIV. Other diseases of concern in Botswana are bacterial diarrhea, hepatitis A, typhoid fever and malaria.

Figure 1: Map of Botswana

Climate.⁵ Botswana's climate ranges from dry months in the winter (April to September) to humid subtropical weather mixed with dry periods of hot weather during the summer (October to March). Winters are dry with temperatures reaching as low as seven degrees Celsius, while summer temperatures are around 39 degrees Celsius. The wet season occurs variably, with frequent periods of severe drought. Rainfall ranges from 250 mm in the south west to more than 600 mm in the north east. Rains occur almost exclusively during summer downpours between December and March, and coincides with the plowing and planting season.

Ecosystems. Botswana has seven eco-regions (see Figure 2 below): Kalahari xeric savanna, Kalahari Acacia-Baikiaea woodlands, Southern Africa bushveld, Zambezan and Mopane woodlands, Zambezan halophytics, Zambezan Baikiaea woodlands and Zambezan flooded grasslands.⁶ The Zambezan zone in the north has a higher species diversity than the drier south, including the dry deciduous woodlands and the vegetation of the Okavango Delta and Makgadikgadi salt pans. The drier Kalahari-Highveld zone in

central and southern Botswana contains mostly acacia bush, wooded grassland and arid shrub savanna in the dunes and drought-resistant scrub, shrubs and grasses in the Kgalagadi area.⁷

Botswana accounts for the lower end of the river basin system where the Okavango delta represents one of the most biodiversity-rich wetland ecosystems in the World with significant social, economic and ecological values. While it is unknown how

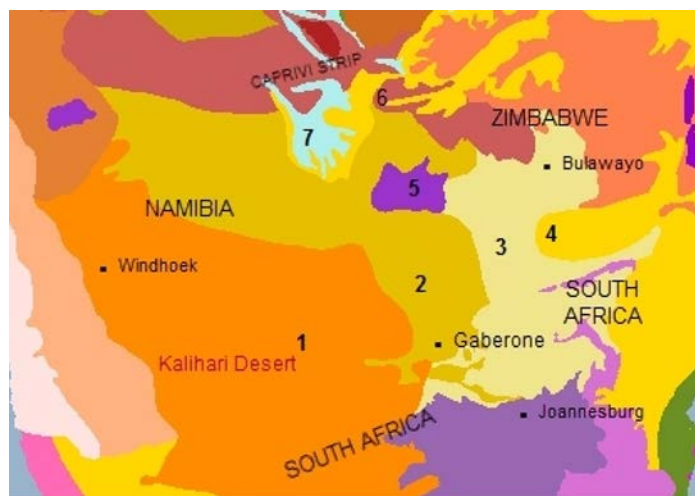


Figure 2: Location of Ecoregions in Botswana.

KEY: 1) Kalahari xeric savanna; 2) Kalahari Acacia-Baikiaea woodlands; 3) Southern Africa bushveld; 4) Zambezan and Mopane woodlands; 5) Zambezan halophytics; 6) Zambezan Baikiaea woodlands; and 7) Zambezan flooded grasslands

⁷ Botswana Country Report; SAIEA; accessed via the internet on 13 April 2015 at: <http://www.saiea.com/saiea-book/Botswana1.pdf>

3 April 2015 at:

eos/bc.html

internet on 13 April 2015 at:

<http://www.eoearth.org/view/article/151986>

many rare or threatened species of flora and fauna exist in the Delta, the wetland ecosystem as a whole is a critically endangered environment of international significance.⁸

Biodiversity. There are about 150 species of mammals in Botswana, ranging from 30 species of bats to 27 species of rodents and more than 30 species of large mammals. The Okavango delta, considered a biodiversity hotspot, is home to some of the most endangered large mammals in the world, such as the cheetah, white rhinoceros, black rhinoceros, African wild dog and lion. There are more than 460 species of birds and more than 200 species of reptiles and amphibians. There are over 80 species of fish, none of which are endemic. The main fish in the northern rivers are tilapia, catfish and the tigerfish.⁹

Approximately 40 percent of the national territory is rich in wildlife but a number of constraints have inhibited biodiversity conservation. For example, the decentralized nature of resource management departments and agencies has led to a lack of harmony in policies and uncoordinated activities.¹⁰

Soils.¹¹ Soils in eastern Botswana consist of dry red loamy *mokata* soils on the plains and chalky/sandy *chawana* soils with brown rocky *seloko* soils on and around hills. The *seloko* soils are the best for growing crops, but soil fertility in general is limited by the amount of rainfall, which can be inadequate to support cultivation in the east. The alluvial soils in the lake beds include gray loamy soils in the wetlands, gray-green saline soils on the pans, gray clay soils to yellow sandy soils around the wetlands and chalky light gray soils around the pans. In former wet areas, such as those near Pandamatenga, soils are gray to black cracking clay.

Water Resources.^{12,13} Botswana's water sources consist mainly of surface water from rivers, pans and dams and groundwater in aquifers, some of which are of fossil nature and have low recharge rates. Rural areas are mainly supplied with borehole water while almost all urban areas use surface water. Current extraction rates of groundwater (for human consumption, livestock and the mining sector) are currently exceeding sustainable levels for aquifers. Dikgatlong is the largest Dam in the country with a capacity of 400 Mm³, about half of the country's total dam-water capacity. All of the perennial rivers in the Botswana are shared with neighboring countries. Shared river-basins include Okavango, Zambezi, Orange-Senqu and Shashe-Limpopo.

Botswana has one of the lowest storage water capacities in Southern Africa due to its flat topography. This, coupled with low rainfall and high evaporation rates has made Botswana one of the most water-scarce countries in Southern Africa. Despite this, currently 95 percent of the population has access to improved water, the highest in the region. However, an increasing population, climate change and

⁸ Excerpt from USAID/South Africa SAREP IEE, 2011

⁹ Botswana; Plant and animal life; Encyclopedia Britannica; accessed via the internet on 13 April 2015 at: <http://www.britannica.com/EBchecked/topic/75170/Botswana/43880/Plant-and-animal-life>

¹⁰ Botswana; Globe International; accessed via the internet on 13 April 2015 at: <http://www.globeinternational.org/country-chapters/botswana>

¹¹ Botswana; Soils; Encyclopedia Britannica; accessed via the internet on 13 April 2015 at: <http://www.britannica.com/EBchecked/topic/75170/Botswana>

¹² Botswana; Globe International; accessed via the internet on 13 April 2015 at: <http://www.globeinternational.org/country-chapters/botswana>

¹³ Water Policy Brief, Reflecting on the Challenges of Attaining a Green Economy for Botswana; UNDP; accessed via the internet on 13 April 2015 at: [https://sustainabledevelopment.un.org/content/documents/1007National%20Report%20\(Water\)%20-%20Botswana.pdf](https://sustainabledevelopment.un.org/content/documents/1007National%20Report%20(Water)%20-%20Botswana.pdf)

economic expansion mean that pressures on water resources are increasing. A number of wastewater systems are exceeding their design limits, meaning they are likely under-treating effluent. The Kasane and Gumare systems are examples of this, and both are located within wetlands of national and international importance (Chobe and Okavango, respectively) thus increasing the risk of polluting these water tables.

Protected Areas. Protected areas in Botswana cover 18 percent of the land area, while an additional 22 percent of the land is designated as Wildlife Management Areas (WMAs), as buffers between protected area and areas of intensive agricultural activities. There are several national parks and game reserves in Botswana. The Central Kalahari Game Reserve is the largest in the country. Others include Chobe National Park, Makgadikgadi Pans Game Reserve and the Kgalagadi Transfrontier Park, jointly managed by Botswana and South Africa.¹⁴

Botswana has one natural UNESCO World Heritage site, the Okavango Delta, also a Ramsar site for wetlands of international importance. Forty percent of the Delta's area is protected within the Moremi Game Reserve, and the rest is protected through a combination of 18 WMAs and Controlled Hunting Areas managed by community trusts or private tourism concession-holders.¹⁵ It is understood that the perpetual change of the Delta's composition is necessary for the maintenance of the biodiversity of the wetland, yet the critical function of the flora and fauna in this process is only beginning to be studied. Current uses of the Delta waters for agricultural, mining, and domestic demands are not necessarily ecologically unsustainable, but water development plans must be carefully appraised and considered. Its protection and conservation is of paramount importance both nationally and internationally, but is strongly dependent on upstream conditions especially in Angola to maintain the desired flows for wetland ecosystem integrity.¹⁶

Climate Change. The International Food Policy Research Institute (IFPRI) predicts that annual precipitation across Botswana will decrease by between 50 and 200 mm by 2050. An average increase in annual maximum temperature is expected to range from 1.5° C to 2.5° C. Climate change will have mixed results in agriculture, where maize yield is expected to increase while rain fed sorghum yields are expected to decrease. Population growth and reduced area for cultivation also need to be taken into account.¹⁷ In the north, climate change will most significantly affect groundwater recharge, which may decrease by 50 percent. Climate change is also likely to affect public health in Botswana. Currently, the majority of diarrheal cases occur in the dry season. Forecasted increases in temperature and decreases in precipitation mean that hot, dry conditions may start earlier and last longer, increasing dry season diarrheal disease incidence.¹⁸

¹⁴ Botswana; Plant and animal life; Encyclopedia Britannica; accessed via the internet on 13 April 2015 at <http://www.britannica.com/EBchecked/topic/75170/Botswana/43880/Plant-and-animal-life>

¹⁵ Botswana; UNESCO World Heritage Sites; accessed via the internet on 13 April 2015 at: <http://whc.unesco.org/en/list/1432>

¹⁶ Excerpt from USAID/South Africa SAREP IEE, 2011

¹⁷ Southern African Agriculture and Climate Change: A Comprehensive Analysis-Botswana; International Food Policy Research Institute; accessed via the internet on 14 April 2015 at: http://www.ifpri.org/sites/default/files/publications/aaccs_botswana_note.pdf

¹⁸ Climate Change is Likely to Worsen the Public Health Threat of Diarrheal Disease in Botswana; International Journal of Environmental Research and Public Health; accessed via the internet on 14 April 2015 at: <http://www.mdpi.com/1660-4601/10/4/1202>

2.2 HIV/AIDS in Botswana Overview¹⁹

Botswana is facing one of the most serious HIV/AIDS epidemics in the world. Recent estimates show that the HIV prevalence rate is 18.5 percent, with higher rates among some sub-populations. About 320,000 people are living with HIV and based on an annual growth rate of 1.35 percent, there are about 9,170 new infections every year. Botswana has the highest percentage of people living with HIV on antiretroviral therapy (ART) in the world, with a total of 235,688 people. This has significant negative effects on social and public health, and puts a serious strain on health systems.

Certain sub-populations that are particularly affected by HIV/AIDS include women, girls, orphans, vulnerable children, and youth. Prevalence among women from ages 35-39 was 50.6 percent in 2012, and 52.3 percent among pregnant women of the same age. Gender-based violence exacerbates the problem. Sixty-seven percent of women reported experiencing some form of gender-based violence while 53 percent were more vulnerable to HIV because their partners refused to use condoms.

For youth, only 24.4 percent of children aged 10-19 reported having been tested for HIV in 2012, meaning a high percentage are unaware of their HIV status. However, adolescent girls are twice as likely to be affected as adolescent boys. Prevalence among orphans between ages 0-18 is between 14.4 and 16.7 percent. Unemployment intensifies the issue, as the 41.4 percent of unemployed youth aged 15-19 are more likely to engage in risky behaviors.

This USAID/Botswana project is centered on sustainable health solutions to health system strengthening. Currently, the number of people on ART is 87 percent of eligible clients and 67 percent of the total HIV infected population. The project aims to bring more infected clients into the national healthcare system and provide continuous care. The project targets activities at the government, community, and NGO levels. This includes supporting the implementation of the GoB's HIV/AIDS related policies and response strategies; enhancing organizational and technical capacity among local NGOs and strengthening and motivation community structures and leaders.

2.3 Environmental Institutions, Policy and Regulation

¹⁹ USAID/Botswana Project Appraisal Document (PAD); USAID/Botswana Health Project; 7 November 2014

The Ministry of Environment, Wildlife and Tourism is responsible for the overall environment in Botswana (see figure 3 below). Within this Ministry, the Department of Environmental Affairs (DEA) is the authority responsible for EIA activities, per the Environmental Assessment Act of 2010. The Environmental Assessment Act will repeal the 2005 EIA Act and address gaps identified in the EIA Act, including preparation of the EIA document, a review process for Environmental Impact Statements (EISs), authorization of EISs, post facto EIAs for ongoing projects, and the establishment of a certification board for EIA practitioners. This act is not yet approved by Parliament. The EIA process under the 2005 Act required a preliminary EIA, followed by scoping and an EIA if required. Botswana also has environmental standards for air and water, although some are non-numerical, and rely on World Health Organization standards as a reference.²⁰

The Botswana Government is a signatory of the Framework Convention on Climate Change, and has



Figure 3: Organization of the Ministry of Environment, Wildlife and Tourism

ratified several international and regional agreements, among them:

- Convention to Combat Desertification;
- Convention on Biological Diversity;
- Ramsar Convention on Wetlands;
- Convention on International Trade in Endangered Species (CITES);
- Southern African Centre for Ivory Marketing (SACCIM) agreement;
- Southern African Development Community (SADC) Protocol on Transport, Communication and Meteorology; and
- The Okavango River Basin Water Commission (OKACOM)

The Government of Botswana endeavors to maintain biodiversity by conserving natural habitats and wildlife in protected areas with minimal interference and adaptive management. Outside of the protected areas, the Government encourages the sustainable utilization of wildlife resources to boost the national economy for the benefit of its citizens. For example, the Wildlife Conservation Policy (1986)

²⁰ SADC Environmental Legislation Handbook 2012, Accessed via the internet on 14 April 2015 at: http://www.saiea.com/dbsa_handbook_update2012/dbsaFrameSet.html

prescribes the utilization of Botswana's wildlife resources on a sustainable basis; and the Ostrich Management Policy (1994) provides for joint ventures between communities and the private sector for optimal economic benefits. The National Policy on Agricultural Development (1991) aims at replacing the food self-sufficiency goal with the concept of food security, promoting diversification of agricultural production, and incorporating the element of sustainable food production primarily through improved management of production resources; while the draft Community Based Natural Resource Management Policy (CBNRM) seeks to foster the creation of incentives for the sustainable use and conservation of natural resources. This approach recognizes that efforts to conserve natural resources can only flourish if poverty is eradicated or kept at a minimum. The Government of Botswana has developed a land use plan to demarcate administrative blocks, and an agricultural improvement policy for the expansion of commercial practices and exploitation of niche markets such as horticulture and dairy farming.

Since its signing of the Convention on Biological Diversity, the Government of Botswana has merged or upgraded several protected areas to national park status. These include the merging of the Nxai Pan and Makgadikgadi Pan National Park, the Moremi Game Reserve with the Chobe National Park, and the Mabuasehube Game Reserve with the Gemsbok National Park. Khutse and the Central Kalahari are the only game reserves left. Area management plans exist at least in draft form for all parks except for the Khutse and Central Kalahari Game Reserves. Nine of the thirteen proposed wildlife management areas have been gazetted. Of these, management plans exist in draft form for seven of nine districts. Communal areas are also included in the district management plans.

The Government of Botswana is committed to ensuring the environmentally sustainable development of the Okavango river basin by, inter alia, its legislation, regulations and policies designed to promote the conservation and sustainable use of its natural resources, and through its National Conservation Strategy. It has developed the National Water Master Plan (NWMP) to guide the environmentally sound development of that sector through 2020, which includes the provision of adequate and secure livelihoods for those involved in agriculture. It is compulsory for all water development projects to be supported by independent Environmental Impact Assessment (EIA) Studies.²¹

2.4 Regulations Relevant to the Healthcare Sector²²

Water Resources. Enacted by the Ministry of Minerals, Energy and Water Resources, the Botswana National Water Master Plan (2006) provides a baseline for water resources planning and management. There are also several older acts enacted by the Botswana Energy and Water Regulatory Authority that will be repealed once a new Water Act is put in place. These acts define water rights and ownership, prohibit pollution of public waterways, control aquatic weeds, and enforce penalties on those who misuse and pollute water.

Air Pollution. The Ministry of Minerals, Energy and Water Resources is responsible for the Atmospheric Pollution (Prevention) Act of 1971 which controls air pollution from primary sources.

Waste Management.

Government of Botswana Waste Management Strategy (1998)

²¹ Excerpt from USAID/South Africa SAREP IEE, 2011

²² SADC Environmental Legislation Handbook 2012, Accessed via the internet on 14 April 2015 at: http://www.saiea.com/dbsa_handbook_update2012/dbsaFrameSet.html

Botswana's waste management strategy was developed to address the increasing magnitude of waste resulting from industrialization, changing lifestyles and the "throw away" mentality of consumers. The strategy highlights the fact that the actual regulations and guidelines for the control of wastes will be introduced under the Waste Management Act (see below). The Strategy, along with the Act, are coordinated by the Department of Sanitation and Waste Management (DSWM), which was created by the Act. The Strategy aims to ensure the sustainable and environmentally sound management of waste to guarantee:

- "Preservation, protection and improvement of the quality of the environment
- Contribution towards the protection of human health
- Ensuring prudent and rational utilization of the natural resources"

The Strategy uses the principles of prevention, polluter pays, and cooperation as well as the waste management hierarchy based on waste reduction, reuse and recycling. Various types of waste and waste disposal options are identified as well as strategic measures to be taken to manage waste, including: training waste managers; controlling landfills to acceptable standards; controlling litter; controlling waste storage, collection and transportation; controlling industrial wastes and their disposal; controlling private sector waste management; recycling selected waste streams; and enforcing the Basel Convention. Lower priority measures are waste minimization; control of packaging; return of goods to manufacturers; and energy recovery. The strategy also addresses clinical waste specifically, and requires that the "Code of Practice" (see below) for the management of healthcare waste be followed.²³

Waste Management Act (1998)

The Ministry of Local Government enacts the Waste Management Act of 1998 which provides, "For the establishment of the Department of Sanitation and Waste Management (DSWM); to make provision for the planning, facilitation and implementation of advanced systems for regulating the management of controlled waste in order to prevent harm to human, animal and plant life; to minimize pollution of the environment, to conserve natural resources; to cause the provisions of the Basel Convention to apply in regulating the transboundary movement of hazardous wastes and their disposal; and for matters incidental to and connected to the foregoing." The Ministry of Local Government is responsible for implementing the Waste Management Strategy of 1998 as well as the Basel Convention.

The act outlines the main functions of the newly established Department of Sanitation and Waste Management. This includes leadership and policy support in matters related to sanitation and waste management; provision of information to support urban and rural sanitation and waste management improvement; establishing sanitary measures to promote public health; registering and licensing waste carriers, waste disposal sites and waste management facilities; prohibiting waste management operations near water bodies; and conducting occasional land inspections to detect pollution.

The act also requires local authorities to submit local waste management plans (including recycling and litter) for the areas under their control. Local authorities are responsible for organizing the collection and disposal of household waste in coordination with this plan, and also must ensure that the

²³ Government of Botswana Strategy for Waste Management, 1998

environment and human health are not impacted from the disposal of waste. The local authority can also make arrangements to recycle waste or use waste to produce heat or electricity.

Under general provisions, the act specifies that hazardous and clinical waste must be first packed and clearly marked/labelled; collected, disposed of or treated as prescribed by the Minister; and transported in vehicles/vessels with the proper design/construction standards.²⁴

Clinical Waste Management Code of Practice

Botswana's Clinical Waste Management Code of Practice establishes the procedures and best practices for managing clinical waste in the country. It begins by listing the types of facilities that could generally produce clinical waste, and explains the human health and environmental risks associated with clinical waste. It also defines clinical waste and classifies it into six categories: biological, infectious, sharps, chemical, body fluids/excreta and radioactive wastes. Next, the actual standards are explained, from segregation, storage and handling through disposal. Different disposal methods are identified based on the categories of waste mentioned above. Particular attention is paid to incineration, and instructions are listed for design standards, handling and loading waste intended for incineration, and removal/disposal of residuals and ash. Finally, procedures for transporting clinical waste are identified and general considerations for waste from different facilities (hospitals, clinics, health posts, etc.) are outlined.²⁵

Health. The Ministry of Health is responsible for the Public Health Act of 1981 which provides for mandatory notification of certain diseases, preventing diseases from entering the country, advertising and publicizing venereal diseases, regulating sanitation and housing, protecting food and water supplies, regulating the use of cemeteries and the general provision of public health.

²⁴ Government of Botswana Waste Management Act; 1998

²⁵ Botswana Clinical Waste Management Code of Practice

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/Botswana Health project portfolio are grouped into the following intervention categories. This IEE includes several illustrative activities for each intervention category.

Specific intervention categories are:

1. Direct Healthcare Delivery and Healthcare worker/delivery agent training; healthcare workforce training, strengthening, and development
2. Direct and Capacity Building Support for health system strengthening, delivery and access to health services, excluding commodity procurement/supply chain strengthening
3. Procurement and supply chain strengthening activities
4. Behavior change communication, community mobilization, and education/outreach for health services
5. Policy & strategy development and assistance; health system information and knowledge management
6. Studies, Surveys/Public Health Surveillance and other Data-gathering Assessments, Models, & Capacity-Building in support of all areas above. Dissemination of resulting information/lessons learned/best practices

Each category contains a number of entailed activities. In sections 3.2-3.7, 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.*

Section 3.1 is a forward addressing the general impacts of health care programs related to waste generated in conjunction with health care systems. Although waste may not be directly generated by USAID support, by supporting health systems in general, it is a reasonable and an ethical responsibility, for all support to consider how to address health care waste in an appropriate manner and to contribute to the improvement for overall waste treatment and disposal. In addition to the impacts discussed below, IPs should incorporate GOB guidance discussed in Section 2, including the *Government of Botswana Waste Management Strategy, the Waste Management Act, and the Clinical Waste Management Code of Practice*.

3.1 Adverse Impacts of Health Care Service Delivery Due to Failure to Properly Manage Resulting Wastes

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—3.7. It supports this subsequent analysis; no recommended determinations are attached specifically to this section.

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

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

Pharmaceutical Wastes and Medical Supplies, including condoms: Pharmaceutical drugs including vaccines have specific storage time and temperature requirements, and may expire or lose efficacy before they are used, particularly in remote areas where demand is low and/or infrequent. Pharmaceutical waste may also accumulate due to inadequacies in stock management and distribution and/or lack of a routine system of disposal.

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

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

substance abusers and others who handle sharps have become infected with HIV and/or hepatitis B and C viruses through pricks or reuse of syringes/needles.

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

Healthcare activities can have direct or indirect impacts on waste management:

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

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

3.2 Direct Healthcare Delivery and Healthcare worker/delivery agent training; healthcare workforce training, strengthening, and development

This section initiates the analyses of the specific intervention categories and recommended determinations that follow through 3.7.

Training/supportive supervision of health care providers on clinical interventions and norms for service delivery is intended to improve the 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. USAID Botswana will train health care providers to improve the quality of care provided to patients within the national system and support the implementation of quality assurance and quality improvement (QA/QI) methodologies. USAID is also supporting the Government of Botswana's Ministry of Health (MOH) in the development of Positive Health, Dignity and Prevention (PHDP) curricula, which service providers will be trained on when completed.

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 areas may include, but are not limited to:
 - a. Nutritional assessment, counseling and support;
 - b. Extension of knowledge, skills, and services to special needs populations;
 - c. Provision of basic primary health services;
 - d. Treatment and referral services for Orphans and Vulnerable Children (OVC)

- e. Early childhood care and development (ECCD) and psycho-social support.
- f. Gender analysis training, in partnership with the GOB, for all IPs to ensure programming activities are gender-sensitive.
- g. Developing district plans, and deploying health workers to hospitals and health facilities.

2. HIV/AIDS Support:

- a. Counseling and rapid HIV/AIDS testing, including technical assistance and service delivery.
- b. Training for support and psycho-social support for HIV/AIDS patients and PLHIVs;
- c. Training to increase capacity retention in care for HIV/AIDS prevention, adherence and retention in care;
- d. Biomedical prevention activities, such as voluntary medical male circumcision (VMCC);
- e. Screening, counseling, testing, and treatment for HIV, sexually transmitted infections (STIs), and malaria;
- f. Working with IPs on the PEPFAR monitoring evaluation report indicators and reporting requirements
- g. Technical assistance on Prevention of Mother-to-Child Transmission (PMTCT)

3. TB Support: Technical assistance in provision of clinical care in TB service settings, including screening, counseling, testing and treatment for TB.

4. Palliative care support and delivery training in and service delivery support for, especially in community home-based care programs and public facilities, such as counseling in nutrition, legal aid, and housing. Implementation of the Botswana National Palliative Care Strategy: 2013-2018.

5. Training curricula. TA and financial support to develop new or strengthen existing health care curricula/training materials (e.g., Positive Health, Dignity and Prevention [PHDP] Strategy) for healthcare providers, covering any of the above topics listed under activity 1, and/or to develop or strengthen general course-of-study curricula for health care professionals in educational institutions.

6. Leadership development programs for health managers at the District and Regional level

7. Healthcare workforce strengthening:

- a. Streamline recruitment of workers to increase number of health care workers;
- b. Track health workers who have the required training to provide specific services, particularly related to HIV/AIDS;
- c. Support the development of a Human Resources for Health (HRH) system to improve the management of the GOB's workforce;
- d. Long-term workforce-related planning, including fiscal projections, career growth, and mentoring of senior management with the Government of Botswana's MOH.

Note: Procurement of equipment associated with training is covered under the procurement section and subject to the relevant conditions described therein (Section 3.4).

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., is there consistent separation of sharps and “red bag” waste?). Training therefore must, as appropriate in the context of the scope of the training, address proper handling, use and disposal of health care waste, including proper disposal of blood, sputum, and sharps. For example, training administrative staff on case management may not be appropriate for waste disposal training, but training nurses on delivery of vaccinations would be appropriate to discuss how to dispose of used needles and vaccine packaging.

The activities related to health service delivery (i.e., HIV/AIDS support, TB support, and palliative care support) in this intervention category are intended to improve and expand the delivery of and/or access to health care services. As detailed in Section 3.1, the delivery of these services presents a set of potentially significant adverse environmental and health impacts, particularly related to medical waste. Expansion of these services while strengthening delivery and/or access to health care services may result in adverse environmental impacts. Therefore, these remaining activities DO present potential adverse environmental impacts. These impacts may be direct or indirect:

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

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

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

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 2. HIV/AIDS Support, including service delivery 3. TB Training Support and Testing/Diagnosis, including service delivery 4. Palliative care training and service delivery 5. Training curricula 6. Leadership development 7. Healthcare workforce strengthening	Negative determination with the following conditions: - When techniques or care situations being addressed would generate and require disposal of hazardous or highly hazardous waste, training/curricula/supervision must address appropriate management practices concerning the proper handling, use, and disposal of medical waste, including blood, sputum, and sharps (e.g. sharps, afterbirth from delivery, waste from screening for HIV or STDs, sputum samples for diagnosis of TB). <u>Note that this condition applies to BOTH activities targeting home care AND community health workers:</u> IPs must, as appropriate, include healthcare waste (HCW) management messages and develop appropriate disposal mechanisms in home-based and community-based situations that are cost effective and safe. Positive messages about personal and household hygiene, sanitation, and proper disposal of condoms and other potentially harmful materials should be delivered, as appropriate, along with standard health care messages, and these messages should be included in training, protocols, and guidelines. - 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) - Where USAID directly supports health service delivery, the Health Team and IPs must ensure, to the greatest extent feasible, that the medical facilities and operations benefitting from USAID support have adequate procedures and capacities in place to properly handle, label, treat, store, transport and properly dispose of blood, sharps and other medical waste and that norms and training include

Activity	Recommended Determination
	environmental health considerations. The ability of IPs and the Health Team to assure such procedures and capacity is limited by its level of control over the management of the beneficiary facilities and operations. Where the IPs identify deficiencies in the procedures and capabilities it shall notify USAID and provide recommended action steps for Agency consideration. <i>Mandatory references.</i> 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, the USAID Sector Environmental Guidelines for Healthcare Waste (http://www.usaidgems.org/Sectors/healthcareWaste.htm) contains guidance, which must inform compliance with these conditions, particularly in the section titled, “Minimum elements of a complete waste management program.” See also WHO’s “Safe Management of Wastes from Healthcare Activities.”

3.3 Direct and Capacity Building Support for Health System Strengthening, Delivery and Access to Health Services, Excluding Commodity Procurement/Supply Chain Strengthening

1. **Support for strengthened referral network to health facilities for continuum of care:**
 - a. 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.
 - b. Strengthen bi-directional referral linkages between community and health facilities, including referral networks to increase ART retention, number of people accessing HTC and treatment and nutritional services.
 - c. Strengthen access to HIV services for adolescents and youth via policy and program decision-making forums at regional and national levels.
 - d. Strengthen and expand HIV/AIDS services in Botswana’s districts

- e. Strengthen referral networks to facilitate and increase the uptake of HIV Testing and Counseling (HTC), community TB care (CTBC), ART, GBV services and other related health services, including detection and treatment of STIs, to general and targeted populations.
2. **Support health systems via strengthening national policies and systems** that are essential to service expansion, such as
 - a. Strengthening capacity of implementing partners, particularly the District Health Management Teams (DHMTs), MOH, civil society organizations, and other community organizations for improved adherence to ART medication & retention and best practices and working models on HIV prevention;
 - b. Strengthening healthcare workforce via improved recruitment systems for healthcare workers, developing human capacity (such as career growth opportunities) in the workforce;
 - c. Strengthening long-term workforce-related planning, including fiscal projections, career growth, and mentoring of senior management with MOH and the Ministry of Social Welfare.
 - d. Improving capacity for developing district plans, deploying health workers to hospitals and health facilities, managing financing, commodities and supply chain requirements.
 - e. Implementing gender activities (e.g., support the provision of services to survivors of gender-based violence), community TB care services, early childhood development activities and HTC
 3. **Strengthen the capacity of NGOs and community-based and private organizations providing care, including:**
 - a. Technical assistance, training/mentoring for NGOs and community-based and private organizations providing care to improve strategic information and organizational management and sustainability.
 - b. Work with local NGOs to utilize the Organizational Capacity Assessment (OCA) tool
 - c. Promote advocacy skills for policy reforms and/or services for marginal and underserved populations
 4. **Strengthening governmental management capacity, including leadership development for regional and district entities:**
 - a. Technical assistance and training to strengthen the capacity of GOB governmental entities to manage national health programs, particularly HIV/AIDS, by assisting the government in strengthening its policies and programming, especially for women, children, adolescent girls and key populations who are most vulnerable and at highest risk for HIV transmission, including female sex workers (FSWs) and men who have sex with men (MSM).
 - b. Improved use of data for decision-making (including procurement of IT equipment); stronger human, financial, material, and facilities management systems.
 - c. Improve MOH management of human resources for health (HRH).
 - d. In partnership with the GOB, facilitate gender analysis training for all implementing partners in order to ensure that programming is gender-sensitive when designing,

implementing and evaluating activities

- e. Improved deployment of health care workers through utilization of iHRIS (integrated human resource information system – see Section 3.7)
- 5. **Direct support for on-the-ground service delivery and care**, including TB diagnostics, effective treatment among migrant populations, PLHIV care; use of preventative drugs for PMTCT.
- 6. **Health Systems Strengthening:**
 - a. Develop studies, surveys/public health surveillance and other data-gathering assessments, models, and capacity-building in support of all areas above. Disseminate resulting lessons learned/best practices.

NOTE: the activity classes above do NOT include support for on-the-ground care delivery (which is addressed in Section 3.2) or WASH interventions or construction and rehabilitation, which are not anticipated activities associated with this IEE.

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, or foreseeable effects on service delivery or infrastructure at referral facilities. As such, it does not have foreseeable adverse environmental impacts.

The remaining activities in this intervention category (“Support health systems via strengthening national policies and systems and direct support for on-the-ground service delivery and care”) are intended to improve institutional capacity and expand the delivery of and/or access to health care services. As detailed in Section 3.1, the delivery of these services presents a set of potentially significant adverse environmental and health impacts, particularly related to medical waste. Expansion of these services while strengthening delivery and/or access to health care services may result in adverse environmental impacts.

Recommended Determination

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. Support health systems via strengthening national policies and systems	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 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. <i>Mandatory reference:</i> 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.”
3. Strengthen the capacity of NGOs and community-based and private organizations providing care	
4. Strengthen governmental management capacity, including leadership development for regional and district entities	
5. Direct support for on-the-ground service delivery and care	
6. Health Systems Strengthening	

3.4 Procurement and Supply Chain Strengthening Activities

Supply Chain Management System

As noted in the PAD, the Botswana National Supply Chain Assessment of Capability and Performance noted the weaknesses of the national system in several functional areas. The lowest ranking area was transportation, followed by inventory management and warehousing practices at the lower level facilities. Expanding care and treatment activities have been hampered by an underperforming supply

chain management system that was not reaching the districts and remote health facilities. In addition, three areas of vulnerability were highlighted as needing urgent improvement. The first was the organization and staffing of the procurement process where the functions of forecasting and supply planning have not been separated from core procurement functions. The second weakness is the lack of proper data and data management at all levels of the supply chain. The third weakness identified relates to inefficiencies in warehousing and distribution to lower levels. This weakness is being addressed through a contract to a third party provider that has recently taken over these responsibilities. Close monitoring of the contractor's performance and feedback from MOH staff at both the central and facility level are required to determine if the problem has indeed been resolved.

This intervention category consists of the following activities:

1. Procurement of pharmaceuticals and supplies to support the following:
 - a. Procurement and provision of pharmaceuticals and other supplies to support and manage HIV/AIDS and associated complications, TB, and STIs. These may include ARVs, prophylaxis, and drugs for opportunistic infections.
 - b. Appropriate management of stocks of nutritional supplements and therapeutic foods; (the expectation is that host country Governments will undertake the procurement)
 - c. Purchase and promotion of condoms to high-risk groups, through social marketing and through free distribution;
 - d. Procurement of rapid test kits for HIV/AIDS;
 - e. Family planning products, including contraceptives to those that seek them;
 - f. Facilitation of forecasting, procurement and distribution of VMMC kits through SCMS
 - g. Procurement of clinical equipment and supplies to strengthen HIV/AIDS surveillance, health management information systems, family planning and maternal health, and monitoring and evaluation
 - h. Facilitation of forecasting, procurement and distribution of VMMC kits through SCMS
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 the respective host countries' Ministries of Health (MOH) and other key organizations** to manage the supply chain to ensure reliable ARV supplies for treatment scale-up.
4. **Provide technical assistance to the GOB and DHMTs on strengthening supply chain management**
 - a. Improve reporting, data collection, and data management at all levels of the supply chain;
 - b. Reduce inefficiencies in warehousing and distribution of commodities;
 - c. Improve organization and staffing for the procurement process;
 - d. Provide technical assistance to the MOH to re-engineer the Central Medical Stores (CMS), and support the CMS to strengthen the national supply chain at the district level
 - e. Build staff capacity in the Logistics Management Unit;
 - f. Coordinate with DHMT to ensure medicines and supplies are stocked at proper levels and are readily available.

- g. Support newly-organized District Health Management Teams to implement new management systems for human resources for health (iHRIS) and supply chain management through the provision of training, mentoring and technical assistance
- h. Ensure that the DHMTs' staff has the tools, training and motivation to report regularly and accurately so that medicines and supplies are stocked at proper levels and are readily available.

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.

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 in-country supply chain and use of these commodities 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. Where the IPs identify deficiencies in the procedures and capabilities it shall notify USAID and provide recommended action steps for Agency consideration.

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 LLITNs may have some risks that need to be monitored over time. In addition to concerns regarding distribution and use of LLINs, disposal of bednets, 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).²⁶ Note that agency guidance on preferred final disposal of used and contaminated bed nets is still evolving.

²⁶ 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 determinations** are recommended for activities in this intervention category:

Activity	Recommended Determination
1. Procurement of pharmaceuticals and supplies, including LLINs	<u>Negative Determination</u> subject to the following conditions: • 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 the medical facilities and operations involved have adequate procedures and capacities in place to properly manage and dispose of such commodities. • Consignees for any pharmaceutical drugs procured under this funding will be advised to store the product according to the information provided on the manufacturer's Materials Safety Data Sheet (MSDS). • If disposal of any of these pharmaceutical drugs is required, due to expiration date or any other reason, the consignee will be advised that the preferred method of disposal is to return to the manufacturer. If this is not possible, then follow WHO guidelines for Safe Disposal of Unwanted Pharmaceuticals (www.who.int/water_sanitation_health/medicalwaste/unwantpharm.pdf). • Disposal of packaging and other public health commodities will be treated using the guidelines provided in USAID Solid Waste Sector Environmental Guideline (http://www.usaidgems.org/Sectors/solidWaste.htm) • 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 MVC PEA 2012 update, found at this link: http://www.pmi.gov/docs/default-source/default-document-library/implementing-partner-reports/integrated-vector-management-programs-for-malaria-vector-control-programmatic-environmental-assessment---volume-1-of-2-main-document.pdf?sfvrsn=4.
2. Distribution of pharmaceutical and other supplies for treatment and prevention of TB 3. Supply chain strengthening activities in the respective MOHs	Negative determination with the following conditions: • <u>Procurement and distribution of TB-related pharmaceutical supplies</u> must conform to the WHO-approved list of drugs and treatment regimens (WHO Standard for Treatment: World Health Organization's International Standards for Tuberculosis Care (http://www.who.int/tb/publications/ISTC_3rdEd.pdf?ua=1)). • Disposal of pharmaceuticals and other supplies for treatment and prevention of TB are subject to the conditions for procurement and waste management conditions outlined in #1 above.

4. Provide technical assistance to the GOB and DHMTs on strengthening supply chain management	<u>Negative Determination</u> subject to the following conditions: Activities at all levels must address and take all practicable efforts to assure that adequate facilities, procedures and capacities are in place to properly manage expired, obsolete or surplus commodities. Consignees for any pharmaceutical drugs procured under this funding will be advised to store the product according to the information provided on the manufacturer's Materials Safety Data Sheet (MSDS). These are supplied by the manufacturer, and can also be found on the internet by using the active ingredient and MSDS as search terms. Disposal of packaging and other public health commodities, including those that become hazardous or highly hazardous, will be treated using the guidelines provided in USAID Solid Waste Sector Environmental Guideline (http://www.usaidgems.org/Sectors/solidWaste.htm) and WHO <i>Guidelines for Safe Disposal of Unwanted Pharmaceuticals During and After Emergencies</i>, (www.who.int/water_sanitation_health/medicalwaste/unwantpharm.pdf)
--	--

3.5 Behavior Change Communication, Community Mobilization, and Education/Outreach for Health Services

This intervention category consists of the following activities:

1. **HIV/AIDS education & treatment-related activities:**
 - a. Mobilizing peer 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 to mitigate TB and TB/HIV infection in high risk populations, such as mine workers, mobile populations, long-distance truck drivers, commercial sex workers, and men who have sex with men via targeted social marketing and BCC;
 - c. Community mobilization and outreach to promote uptake of the services, to reduce stigma and discrimination associated with HIV/AIDS, and increase awareness of gender issues associated with HIV/AIDS
 - d. Mobilizing and strengthening local community-based organizations to provide psychosocial and peer support and follow-up that can increase uptake and adherence of the antiretroviral therapy (ART) services and help ensure successful outcomes for the patient.
 - e. Reduce healthcare provider stigma and discrimination associated with HIV/AIDS
 - f. Contribute to the reduction of new HIV infections amongst adolescents through continuous education, behavioral change communication and linking adolescents to available prevention services

2. **Expand 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 regarding relevant comprehensive HIV/AIDS services available to affected persons;
 - b. Promotion of HIV prevention and healthy lifestyle among youth
 - c. Dissemination of successful social marketing/BCC programs to IPs and grantees.
 - d. Follow-up based on results of MOH's Behavioral and Biological Surveillance Survey

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.

In many cases, these initiatives promote use of 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. However, the use and subsequent disposal stimulated by these programs is geographically dispersed, reducing the intensity of the impact, and USAID/IPs have very limited control over end-user actions. Additionally, it is expected that the Health Team will include messages that emphasize the proper storage, use, and disposal of these products. Taken together, these factors suggest that the categorical exclusion to which communication/education/outreach activities normally qualify is also applicable in this case.

Note, however, that this categorical exclusion does NOT necessarily apply to the distribution of these commodities; see section 3.4.

Recommended Determination

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

Activity	Recommended Determination
HIV/AIDS education & treatment-related activities: including community mobilization and support activities.	Categorical Exclusion per 22 CFR 216.2 (c)(viii): Programs involving nutrition, health care, or population and family planning services
Expand access to essential services via social marketing/BCC focused on healthy behaviors, such as good personal and community hygiene behaviors, abstinence/fidelity/consistent condom use.	Categorical Exclusion per 22 CFR 216.2 (c)(viii): Programs involving nutrition, health care, or population and family planning services <u>Note: This excludes procurement of condoms or other pharmaceuticals, the conditions for this type of activity are set out in Section 3. 4.</u>

3.6 Policy & Strategy Development and Assistance; Health System Information and Knowledge Management

This intervention category consists of the following activities:

1. **Institutional capacity-building**, working with the Government of Botswana, to respond to the HIV/AIDS pandemic, in the following areas:
 - a. Implement the National Positive Health, Dignity and Prevention (PHDP) Strategy - emphasizes that serodiscordance between sexually active couples is a high risk for ongoing transmission, particularly in HIV-infected persons who are not yet eligible for ART
 - b. Support the implementation of the MOH Palliative Care Strategy to optimize the quality of life for AIDS patients.
 - c. Promote gender-related policies and laws that increase legal protection;
 - d. Increase gender equitable access to income and productive resources, including education.
 - e. Strengthen advocacy for policy and laws to support the rights and needs of affected populations, including PLHIV, OVC, youth, key populations and women.
 - f. Support gender mainstreaming, capacity building, advocacy and policy support to the Gender Affairs Department
 - g. Support the implementation of the Children's Act
 - h. Assist GOB in the development of national guidelines on service delivery for FSWs and MSM
2. **Health system performance evaluation and strengthening:**
 - a. Development of operational guidelines, scopes of work, manuals, and curricula, reports, operational plans, review of PEPFAR implementation science protocols and M&E plans;
 - b. TA for health systems leadership, including salary & costs of a Regional TB coordinator; TA to Ministries of Health for development of palliative care strategies;
 - c. Assessment of health management information systems, data quality assessments, knowledge capture, and sharing on selected indicators;
 - d. Introduction of the potential for palliative care to strengthen health systems

Potential Adverse Impacts & Considerations Regarding Recommended Determinations

Activities to build capacity of institutions. The intended effect of these technical assistance activities is that strengthened policies and systems will enable the government to more effectively respond to the HIV/AIDS pandemic via strengthening of information sharing, enhancing management and organizational capacity via trainings, information transfers, and capacity building of staff and institutions. As such these activities do not present foreseeable adverse impacts.

Health system performance evaluation and strengthening through policy, strategy development and knowledge management activities are intended to provide government with a more accurate representation of health care delivery effectiveness which would inform policies and support strategy development and knowledge management in the targeted countries.

Generally, strategic information and policy 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). Furthermore, these activities may result in expansion of care delivery, which necessarily increases generation of healthcare waste. As noted above, HCW poses a significant threat as potential vectors of disease as well as being a source of potential contaminants if not disposed of properly.

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.*

Recommended Determinations

The following are the recommended determinations for the activities anticipated in this category:

Activity	Recommended Determination
1. Institutional capacity-building to respond to the HIV/AIDS pandemic	Categorical Exclusion per 22CFR 216.2(c)(i) Education, technical assistance, or training programs. 22CFR 216.2(c)(v) Document and information transfers. 22CFR 216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent designed to result in activities directly affecting the environment (such as construction of facilities, etc.)
2. Health system performance evaluation and strengthening through policy, strategy development and knowledge management: a. where policies are not directed at waste management or hospital operations which may	Categorical Exclusion per 22CFR 216.2(c)(i) Education, technical assistance, or training programs. 22CFR 216.2(c)(v) Document and information transfers. 22CFR 216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent designed to result in activities directly affecting the environment (such as construction

Activity	Recommended Determination
include waste management	of facilities, etc.)
b. Operational guideline development, scopes of work, or manuals that deal with handling of anatomical, pharmaceutical, or consumable medical items	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. <i>Mandatory reference:</i> 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.”

3.7 Studies, Surveys/Public Health Surveillance and other Data-gathering Assessments, Models, & Capacity-Building in Support of all Areas Above. Dissemination of Resulting Information/Lessons Learned/Best Practices

The primary goals of this intervention category are to improve sharing of HIV prevention knowledge, and improve capacity of stakeholders to strengthen systems for knowledge sharing and communication.

1. Data collection related to workforce recruitment and retention and of health workers to understand barriers to reporting data;
2. Sharing of updated research material and regional best practices among government entities and grantee organizations via information portals, websites, information kiosks, etc.;
3. Epidemiological surveillance and reporting for multiple diseases and conditions including but not limited to TB, HIV/AIDS, malnutrition, reproductive health, mother-to-child transmission (PMTCT) data, especially for HIV sentinel surveillance; serious childhood diseases;
4. Collection of performance data, review performance information, data quality assessments, and report performance results on an annual basis;
5. Evaluate the livelihood methodologies that Project Concern International (PCI) uses to improve the livelihoods of families caring for OVC;
6. Support the MOH and other GOB agencies to improve management systems, collect and analyze reliable data that arise whenever new World Health Organization (WHO) guidelines are published.
7. Support initiatives to improve the quality, collection and analysis of data, as well as information communication technology (ICT) used to support monitoring and evaluation
8. Support the development of data quality assessment (DQA) tools that integrate the agencies' PEPFAR requirements
9. Perform DQAs in order to ensure that data reported is timely, accurate, reliable and complete.
10. Disseminate and train MOH in the use of iHRIS and develop local capacity and sustainability for the management and use of health worker data
11. Evaluate the psychosocial support (PSS) component of the GOB OVC program and evaluate costing data on OVC

Potential Adverse Impacts & Considerations Regarding Recommended Determinations

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

Health research, data collection, both via research management systems and direct support to research activities – 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, research will likely involve the handling and analysis of infectious samples and the treatment of individuals with infectious diseases.

In addition, human subjects research can presents specific risks to study subjects that require careful and ethical management. If undertaking human subjects research, USAID/Southern Africa should comply with the applicable host country Government and/or international standards for ethical review and approval requirements for human studies research that address these risks. If anticipated activities do include human subjects research, this IEE must be amended to reflect those activities and associated conditions

Recommended Determinations

Activity	Recommended Determination
Studies, surveys/public health surveillance and other data-gathering assessments, models, and capacity-building in support of health programs and activities. Dissemination of resulting information/lessons learned/best practices Strategic information activities are aimed at strengthening HIV/AIDS surveillance, health management information systems, and monitoring and evaluation	A Categorical Exclusion for the entailed activities EXCEPT those involving the collection and/or analysis of blood or body fluid samples (per 22 CFR 216.2 (c)(viii) programs involving nutrition, health care, or population and family planning services) or involve health care assessments. A Negative Determination with conditions for activities in this category that a) DO involve the collection and/or analysis of blood or body fluid samples. b) Involve assessments of health care systems, information, and/or monitoring. The conditions are as follows: i) Epidemiological surveillance and/or data collection supported with USAID funds and involving the collection and/or analysis of blood or body fluid samples must have adequate procedures and capacities in place to properly handle, label, treat, store, transport and properly dispose of blood, body fluids, sharps and other medical waste generated by these activities. 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. ii) Any assessments and data collection activities must, wherever relevant, characterize management and disposition of HC wastes and promote effective, appropriate management and disposition. The Health Team and IPs must ensure, to the greatest extent feasible, that the medical facilities and operations benefitting from USAID support have adequate procedures and capacities in place to properly handle, label, treat, store, transport and properly dispose of blood, sharps and other medical

	waste and that norms and training include environmental health considerations. The ability of IPs and the Health Team to assure such procedures and capacity is limited by its level of control over the management of the beneficiary facilities and operations. Human subject research is not included in this IEE and USAID must assure that human subject research fully conforms to host country requirements for approval of research plans and any research involving human subjects. “Proper Management” of health care wastes is defined as being in substantial conformity with the USAID’s Sector Environmental Guidelines (SEG) “Health Care Waste” (http://www.usaidgems.org/Sectors/healthcareWaste.htm), particularly the section titled, “Minimum elements of a complete waste management program.” Other important references to consult for sound waste management practices are “WHO’s Safe Management of Wastes from Healthcare Activities” and WHO’s Tuberculosis Laboratory Biosafety Manual (2012 ed or later). (http://apps.who.int/iris/bitstream/10665/77949/1/9789241504638_eng.pdf)
--	---

4. GENERAL PROJECT IMPLEMENTATION AND MONITORING REQUIREMENTS

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

- 1. IP Briefings on Environmental Compliance Responsibilities.** The Health Office Teams 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 C/AOR. During this briefing, the IEE conditions applicable to the IP’s activities will be identified.
- 2. Development of EMMP.** Each IP whose activities are subject to one or more conditions set out in Section 3 of this IEE shall develop and provide for C/AOR review and approval of an EMMP documenting how their project will implement and verify all IEE conditions that apply to their activities.

These EMMPs shall identify how the IP shall assure that IEE conditions that apply to activities supported under subcontracts and 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 Office Teams shall assure that any future contracts or agreements for implementation of DO2 portfolio activities, and/or significant modification to current contracts/agreements shall reference and require compliance with the conditions set out in this IEE.
- 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 Office Team monitoring responsibility. As required by ADS 204.3.4.b.(1), the Health Office 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 DO2 activities outside the scope of this IEE are planned, the Health Office 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. Compliance with Host Country Requirements. Nothing in this IEE substitutes for or supersedes IP, subgrantee and subcontractor responsibility for compliance with all applicable host country laws and regulations. The IP, subgrantees and subcontractor must comply with host country environmental regulations unless otherwise directed in writing by USAID. However, in case of conflict between host country and USAID regulations, the latter shall govern.