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INITIAL ENVIRONMENTAL EXAMINATION

PURPOSE STATEMENT:

This IEE evaluates the Uganda Office of Health and HIV activity portfolio. This is a sector-level analysis covering multiple activities and intervention types. Any activities that are not within the scope of this document will require a standalone activity-level IEE or an amendment to this document. This analysis will expire March 31, 2027.

PROJECT/ACTIVITY DATA:

Project/Activity Name:	Office of Health and HIV (OHH) IEE
Geographic Location(s) (Country/Region):	Uganda/East Africa
Amendment (Yes/No), if Yes indicate # (1, 2...):	No
Implementation Start/End Date (FY or M/D/Y):	November 01, 2022 – March 31, 2027
If Amended, specify New End Date:	
Solicitation/Contract/Award Number(s):	
Implementing Partner(s):	Multiple
Bureau Tracking ID:	Uganda Office of Health and HIV (OHH) IEE https://ecd.usaid.gov/document.php?doc_id=57133
Tracking ID of Related RCE/IEE (if any):	Integrated Vector Management Programs for Malaria Vector Control: https://ecd.usaid.gov/document.php?doc_id=50060
Tracking ID of Other, Related Analyses:	

ORGANIZATIONAL/ADMINISTRATIVE DATA

Implementing Operating Unit(s): (e.g. Mission or Bureau or Office)	Uganda Mission, Office of Health and HIV/AIDS
Other Affected Operating Unit(s):	None

Lead BEO Bureau:	AFR
Funding Account(s) (if available):	Multiple
Prepared by:	USAID/Uganda Mission Environmental Officer; USAID Uganda OHH; ECOS;
Date Prepared:	10 August 2022

ENVIRONMENTAL COMPLIANCE REVIEW DATA

Analysis Type:	☒ Environmental Examination	☐ Deferral
Environmental Determination(s):	☒ Categorical Exclusion(s) ☒ Negative ☒ Positive ☐ Deferred (per 22 CFR 216.3(a)(7)(iv))	
<u>IEE Expiration Date</u> (if applicable):	March 31, 2027	
<u>Additional Analyses/Reporting Required:</u>	<u>EMMP</u> , <u>EMMR</u> , <u>EA</u> , <u>IWMP</u> , <u>PERSUAP</u>	
<u>Climate Risks Identified</u> (#):	Low __12__ Moderate __8__ High __1__	
<u>Climate Risks Addressed</u> (#):	Low __12__ Moderate __8__ High __1__	

THRESHOLD DETERMINATION AND SUMMARY OF FINDINGS

PROJECT/ACTIVITY SUMMARY

The purpose of this document, in accordance with Title 22, Code of Federal Regulations, Part 216 (22 CFR 216), is to provide a preliminary review of the reasonably foreseeable effects on the environment of the USAID interventions described herein and recommend determinations and, as appropriate, conditions, for the entire portfolio of activities expected to be implemented by USAID/Uganda Office of Health and HIV/AIDS (OHH). Upon approval, these determinations become affirmed, per 22 CFR 216, and specified conditions become mandatory obligations of implementation. This analysis also documents the results of the project-level Climate Risk Management process in accordance with USAID policy.

This IEE replaces and supersedes previous IEEs; however, ongoing activities with an approved environmental monitoring and mitigation plan (EMMP) may continue operating under that EMMP. New activities or ongoing activities without an existing, approved EMMP must meet the conditions of this IEE, regardless of the award date. Any future amendments will be made to this new IEE.

ENVIRONMENTAL DETERMINATIONS

Upon approval of this document, the determinations become affirmed, per Agency regulations (22 CFR 216).

TABLE 1: ENVIRONMENTAL DETERMINATIONS

Intervention Category	Categorical Exclusion Citation (if applicable)	Negative Determination	Positive Determination ¹	Deferral ²
Intervention Category 1: Direct and Capacity Building Support for Health Service Delivery, Excluding Commodity Procurement/ Supply Chain Strengthening				
Sub-activity 1.1: Provide information-sharing opportunities with other activities, host country authorities, healthcare staff, and individuals	§216.2(c)(2)(viii) Programs involving nutrition, health care, or family planning services, except to the extent designed to include activities directly	☐	☐	☐

¹ Positive Determinations require preparation of a Scoping Statement and Environmental Assessment.

² Deferrals must be cleared through an Amendment to this IEE prior to implementation of any deferred activities.

	affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
Sub-activity 1.2: Strengthen governance and strategic planning	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as the construction of facilities, etc.)	☐	☐	☐
Sub-activity 1.3: Provide awareness activities, capacity building, training, workshops, and education	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)	☐	☐	☐
Sub-activity 1.4: Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)	☐	☐	☐

Sub-activity 1.5: Provide health service delivery activities (i.e., medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.) with capacity building and training opportunities.		☒	☐	☐
Intervention Category 2: Direct Procurement of Commodities & Strengthening of Commodities, Logistics & Diagnostic Systems				
Sub-activity 2.1: Develop pre-qualification standards for product procurement	§216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 2.2: Review and selection of products available from manufacturers	§216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 2.3: Establish monitoring inventories indicators and document shelf-life	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops, and meetings	☐	☐	☐
Sub-activity 2.4: Support forecasting and supply planning of pharmaceutical and other health-related products		☒	☐	☐
Sub-activity 2.5: Support and strengthen warehouse inventory and management systems set up to strengthen warehouse systems both physical (seconding TA) and with technology		☒	☐	☐
Sub-activity 2.6: Assess the distribution networks, in-country logistic service providers, and warehousing capacity building actions	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v) Document and	☐	☐	☐

	information transfers;			
Sub-activity 2.7: Implement and develop clinical laboratory services and result return systems		☒	☐	☐
Sub-activity 2.8: Support the government in the setup of a private laboratory network		☒	☐	☐
Sub-activity 2.9: Provide capacity building, education, and training support on waste management		☒	☐	☐
Intervention Category 3: Waste, collection, storage, recycling, treatment, and disposal of health commodities, general medical supplies, and equipment				
Sub-activity 3.1: Provide capacity building, education, and training support on waste management and health service delivery activities (i.e., providing medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, HCWM, etc.).		☒	☐	☐
Sub-activity 3.2: Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control)		☒	☐	☐
Sub-activity 3.3: Procurement, installation, commissioning, management, and maintenance of hazardous waste treatment equipment (EXCEPT construction related to the installation of hazardous waste treatment equipment)		☐	☒	☐
Intervention Category 4: Implementation of indoor residual spraying (IRS)				

Sub-activity 4.1: Provide procurement, distribution/delivery, storage, application, and disposal of waste associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-Malaria control approved insecticides services.		☐	☒	☐
Sub-activity 4.2: Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.		☒	☐	☐
Intervention Category 5: Distribution of insecticide-treated mosquito nets (ITNs)				
Sub-activity 5.1: Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) ITNs services		☐	☒	☐
Sub-activity 5.2: Provide provision of operational support (e.g., training, supervision, community mobilization) for ITNs programs		☒	☐	☐
Intervention Category 6: Conduct entomological surveillance and vector control monitoring and research				
Sub-activity 6.1: Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the Anopheles. gambiae, An. coluzzii, An. funestus, An. Arabiensis, An. Stephensi, and other Anopheles in malaria vector country.	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops, and meetings §216.2(c)(2)(v) Document and	☐	☐	☐

	information transfers			
Sub-activity 6.2: Determine the bio-efficacy, as well as the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on Anopheles populations under field conditions to generate data for the strategic vector control in areas at risk of malaria transmission worldwide	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and Meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 6.3: Provide provision of monitoring and evaluation support for insecticides, ITNs, IRS programs	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and Meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Intervention Category 7: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.				
Sub-activity 7.1: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.		☒	☐	☐
Intervention Category 8: Conduct small-scale construction activities				
Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, laboratories, healthcare facilities, hospitals HCWM facilities, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m ² .		☒	☐	☐

Intervention Category 9: Resource/ Financial Mobilization

Sub-activity 9.1: Transfer of resources to promote health strengthening efforts	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐
Sub-activity 9.2: Improve budgeting and financial management systems	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐
Sub-activity 9.3: Health support activities; evaluations, studies, surveys, etc.	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐

CLIMATE RISK MANAGEMENT

The climate risk analysis established that climate risks were low for some project elements, and moderate to high for several interventions. This requires that risk management options be identified and implemented.

Increases in flooding and landslides could block access routes, damage healthcare facilities, and disrupt supply chains, affecting ability to carry out capacity-building activities and service delivery. Addressing this climate risk shall require working with community members to identify alternate locations/travel routes or methods to deliver health services and capacity-building activities, and to engage health care managers to incorporate climate change projections into strategic planning for health services.

Increased frequency and magnitude of flooding may disrupt or damage roads, bridges, communication networks, and storage, which can have a significant impact on procurement and logistics in the health products value chain and result in delays. Climate change needs to be integrated into contingency planning. There will be a need to increase access to and use of quality meteorological information and early warning services to reduce the risk of climate change impacts to supply chains.

Increased frequency and magnitude of flooding may disrupt or damage roads, bridges, communication networks, and storage, which can have a significant impact on implementation of IRS. Implementers should consider and may need to carry out flood risk management measures, such as improved drainage or nature-based solutions that reduce flooding. Integrate climate change into IRS planning and increase access to and use of quality meteorological information and early warning services to reduce the risk of flooding and extreme precipitation to IRS.

Increased frequency and magnitude of heat and flooding could increase mosquito populations. Higher temperatures could expand habitat suitability for mosquitos into higher elevations, while increased precipitation may result in more standing pools of water that serve as mosquito breeding sites. If climate change is not incorporated into entomological surveillance and vector control monitoring and research, this could result in maladaptation or underperforming activities. There will be a need to increase surveillance of disease outbreaks, respond rapidly to epidemics, and increase health workforce awareness of the relationship between climate change and malaria. Implementing partners shall use results from malaria indicator surveys to establish climate impacts on malaria, establish if malaria is spreading to new districts or altitudes, and inform malaria policies and tools, and shall incorporate climate-related indicators in monitoring of malaria vector populations and distribution.

Increased frequency and magnitude of flooding will increase damage to infrastructure and disrupt construction. This can include damage to the buildings, blocked entrances or exits, damage to utility functions like water and energy, and potential inundation that could require relocation of vulnerable patients and critical equipment. There will be a need to promote climate-smart infrastructure for health care facility construction investments, and invest in resilient energy alternatives, such as solar energy, to develop localized sources of power and provide backup power in extreme weather events. Climate change shall be mainstreamed into design standards for infrastructure.

Engineering analysis preceding design activities must include consideration of climate change and its potential impacts on the location (siting), functionality and sustainability of resulting infrastructure and infrastructure services. Such analysis must include identification of relevant data sets and gaps, review of local building standards and codes for adequacy, and

determination of safety factors or other measures of uncertainty that will be carried through design. The results of this analysis, including risks identified and how they are addressed, shall be documented.

BEO SPECIFIED CONDITIONS OF APPROVAL

The adverse environmental impact determinations recommended in this IEE are contingent on the full implementation of specified conditions and a set of general monitoring and implementation requirements specified in Section 5 of the IEE.

Reporting Conditions: The AFR BEO requests that the activity managers/AORs/CORs upload this document to the appropriate sub-folder(s) of the [Environmental Compliance Library \(EC Library\)](#) Google Drive folder. In addition, implementation documents such as Environmental Mitigation and Monitoring Plans (EMMPs), sub-project screening documents, etc., should be maintained in this EC Library folder. Using this common folder will facilitate access by all parties who need these documents, including the Mission Environmental Officer and the AOR/COR, as well as the REA and the BEO Team.

Procurement and distribution of Insecticide Treated Bednets (ITNs):

The improper use of long-lasting Insecticide-Treated Bednets (ITNs) as fishing nets may have adverse impacts on aquatic ecosystems. The 2017 IVM PEA states in Annex L (Recommended LLIN Mitigation Measures): “where there is evidence of misuse for fishing, assess extent of misuse and collaborate across sectors to develop a sustainable, locally relevant solution”. The 2018 PMI guidance document, “Identifying and Mitigating Misuse of Insecticide-Treated Nets for Fishing Toolkit”, specifies an approach that programs distributing ITNs can utilize to evaluate the extent of the misuse of ITNs for fishing in their country.

The AFR and GH BEOs agree that in order to properly evaluate bednet distribution activities, the Mission should conduct an “Initial Site Assessment” to assess whether ITNs are being misused for fishing to an extent that warrants further investigation. The Initial Site Assessment must be completed within 3-6 months of issuance of this IEE, and should be undertaken by Mission staff (and/or their designees) in consultation with relevant stakeholders and government entities. A list of recommended stakeholders and guiding questions is outlined on pages 5 and 6 of the 2018 PMI Toolkit.

If the results of the “Initial Site Assessment” indicate evidence of misuse of ITNs, additional investigations of the extent of misuse will be required. If additional investigations are needed, an existing tool which can be utilized is the “Rapid Assessment” (see 2018 PMI Toolkit), or an alternate, equivalent analysis. If results of either the “Initial Site Assessment” or the “Rapid Assessment” trigger mitigation measures, they should be incorporated into the Environmental Mitigation and Monitoring Plan (EMMP), and depending on the extent of misuse may require a full Environmental Assessment, as described in 22CFR216.

IMPLEMENTATION

In accordance with 22 CFR 216 and Agency policy, the conditions and requirements of this document become mandatory upon approval. This includes the relevant limitations, conditions

and requirements in this document as stated in Sections 3, 4, and 5 of the IEE and any BEO Specified Conditions of Approval.

USAID APPROVAL OF INITIAL ENVIRONMENTAL EXAMINATION

PROJECT/ACTIVITY NAME: Office of Health and HIV (OHH) IEE

Bureau Tracking ID: https://ecd.usaid.gov/document.php?doc_id=57133

Approval:	Cleared	10/26/2022
	Daniele Nyirandutiye, Acting Mission Director	Date
 Clearance:	Cleared	10/21/2022
	Julie Grier-Villatte, Acting Deputy Mission Director	Date
 Clearance:	Cleared	10/07/2022
	Jonathan Cone, Resident Legal Officer	Date
 Clearance:	Cleared	09/28/2022
	Sarah Atwood Barma, Director Program Office	Date
 Clearance:	Cleared	09/22/2022
	Heather Smith-Taylor, Director Office of Health and HIV/AIDS	Date
 Clearance:	Cleared	08/30/2022
	Jessica Okui, Mission Environmental Officer	
 Clearance:	Cleared	09/01/2022
	Robert Bagyenda, Mission Climate Integration Lead	
 Clearance:	Cleared	08/30/2022
	David Kinyua, Regional Environmental Advisor	Date

Clearance: Cleared 11/10/2022
Colin Quinn, Africa Climate Change Integration Lead Date

Concurrence:  11/16/2022
Brian Hirsch, Africa Bureau Environmental Officer Date

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INITIAL ENVIRONMENTAL EXAMINATION

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1.0 PROJECT/ACTIVITY DESCRIPTION

1.1 PURPOSE OF THE IEE

The purpose of this document, per Title 22, Code of Federal Regulations, Part 216 ([22 CFR 216](#)), is to provide a preliminary review of the reasonably foreseeable effects on the environment of the USAID intervention described herein and recommend determinations and, as appropriate, conditions, for these activities. Upon approval, these determinations become affirmed, and specified conditions become mandatory implementation obligations. This IEE also documents the Climate Risk Management process results, per USAID policy (specifically, [ADS 201mal](#)).

This IEE is a critical element of USAID's mandatory environmental review and compliance process to achieve an environmentally sound design and implementation. If needed, potential environmental impacts should be addressed through formal environmental mitigation and monitoring plans (EMMPs) and/or Environmental Assessments (EAs).

1.2 PROJECT/ACTIVITY OVERVIEW

The Country Development Cooperation Strategy (CDCS) states, "through strong partnerships with the people of Uganda and increased local ownership, the United States Agency for International Development (USAID) will work hand-in-hand with Ugandans to achieve their "Vision 2040" development goals." In the CDCS, Ugandans are at the center of USAID's narrative. Citizens and refugees are not simply recipients of assistance, but instead have the authority and agency to define their own development agenda and actively participate in its implementation. Local ownership is the driving force behind USAID's envisioned programming for the next five years.

Uganda's development context is dynamic and both national and global events shape its current operating environment. Uganda has made significant progress across many sectors in the past several decades. In health, the average life expectancy has increased about 20 years over the last two decades alone, and improvements in access to care and treatment for the human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS), malaria, tuberculosis (TB), and a whole host of other communicable and non-communicable diseases have saved countless lives. The gross domestic product (GDP) has also enjoyed high levels of growth over the last 30 years, increasing tenfold and pulling millions of Ugandans out of poverty. School enrollment rates for primary education reached gender parity in 2008 and enrollment rates for girls at the primary level have remained high. Uganda also maintains one of the most progressive and welcoming refugee policies in the world, offering shelter, resources, and opportunity to communities displaced by conflict and disaster. And lastly, Uganda receives higher than average marks on its environmental policies, which conserve and protect valuable natural resources for its growing population.

But these successes do not capture the entire picture. Uganda's operating context is fraught with challenges, including the secondary impacts of COVID-19, closing civic and political space, and deeply ingrained patronage systems. Uganda recorded moderately low numbers of COVID-19 cases and deaths, but the strict lockdown measures it employed, including closure of schools, to combat the virus also resulted in serious social and economic consequences that will have ripple effects for years to come. An estimated 1.8 million more people were pushed into poverty in 2021 alone. Additionally, reports of human rights abuses are increasing, alongside increasing restrictions on civil society. As President Museveni ages and approaches four decades in power, a political transition is increasingly imminent, bringing with it the real possibility of igniting latent tensions, civic unrest, and violent conflict. Uganda's policy environment is also unable to appropriately respond to the rise in human

trafficking, and struggles to meet minimum thresholds for enforcing trafficking crimes. Consequently, trafficking persists, often under the false pretense of foreign employment opportunities targeted toward poor and vulnerable households and communities. Government complicity and corruption, which often support these trafficking operations, have been exacerbated by the pandemic-induced economic contraction. Uganda now hosts nearly 1.6 million refugees, the largest refugee population in Africa, and the third largest globally; this number is likely to increase due to ongoing conflict in neighboring countries. With global funding decreasing, humanitarian assistance will no longer be provided to a large segment of this population, meaning long-term livelihood support is fundamental to their food security and resilience.

1.3 PROJECT/ACTIVITY DESCRIPTION

The OHH projects will directly contribute to Uganda's development needs, through the following three development objectives (DOs) :

- DO 1: Health Security Increased
- DO 2: Resilient Growth Enhanced
- DO 3: Accountability Strengthened

The OHH projects are covered under this IEE:

Regional Health Integration to Enhance Services in Southwest Uganda (RHITES-SW)

Regional Health Integration to Enhance Services in Eastern Uganda (RHITES-E)

Strategic Information Technical Support (SITES)

Regional Health Integration to Enhance Services in East Central Uganda (RHITES-EC)

Defeat TB

Pharmaceutical and Medical Supplies BPA

Regional Health Integration to Enhance Services – North, Acholi (RHITES-N, Acholi)

Regional Health Integration to Enhance Services – Lango (RHITES-N Lango)

Enterprise Resource Planning Software (ERP Software)

Uganda Health Systems Strengthening Activity (UHSS)

Health Care Waste Management Activity (HCWMA)

USAID Program for Accelerated Control of TB in Karamoja

Maternal Child Health and Nutrition (MCHN)

Family Planning Activity (FPA)

USAID/Uganda Social and Behavior Change Activity (SBCA)

USAID/Uganda Strengthening Supply Chain Systems Activity (SSCS)

President's Malaria Initiative (PMI) Uganda Malaria Reduction Activity

USAID/Local Service Delivery for HIV/AIDS Activity

USAID/Local Partner Health Services - Ankole & Acholi (TASO)

USAID/Local Partner Health Services-Kigezi & Lango (JCRC)

PMI/Uganda Housing Modification Study and Enhanced Entomological Surveillance Activity. (HMS-EES)

USAID/Uganda Fleet Management Activity

Procurement and Delivery of HIV Antiretroviral (ARV) Medicines for Adults and Children

Procurement of HIV Commodities for the Private Not-For-Profit (PNFP) Sector

Procurement and Delivery of Medicines to Treat or Prevent Sexually Transmitted Infections (STI)

Procurement and Delivery of VL/EID reagents and Sample Collection Items

USAID Local Partner Warehousing and Distribution Activity

USAID Local Partner Health Services – Karamoja (ANNECA)

USAID Local Partner Health Services – Eastern (Baylor)

USAID Local Partner Health Services-TB Activity (IDI)

USAID Local Partner Health Services -East Central (MJAP)

Future Designs /TBDs

Procurement and Delivery of HIV Antiretroviral (ARV) Medicines for Adults and Children

Procurement of HIV Commodities for the Private Not-For-Profit (PNFP) Sector follow-on?

Procurement and Delivery of Medicines to Treat or Prevent Sexually Transmitted Infections (STI)

Procurement and Delivery of VL/EID reagents and Sample Collection Items

UHSS follow-on

Warehousing and Distribution

Uganda Health Activity (UHA)

Fleet management follow-on TBD

Uganda Health Care Waste Management Activity

NMS G2G - TBD

G2G Consolidated Implementation Letter - Regional Referral Hospitals (RRHs):

Jinja RRH

Mbarara RRH

Lira RRH

Moroto RRH

Mbale RRH

Gulu RRH

Kabale RRH

ANY ADDED OR FUTURE MECHANISMS/INTERVENTIONS

For any mechanism/intervention not yet planned or included in this IEE, USAID/ Uganda will assess whether these mechanisms can be covered under the existing Intervention Categories (i.e., do not substantially differ from other activities) or if they require an Amendment to the IEE. The Mission should determine the review and approach to added mechanisms in consultation with the AFR BEO.

This IEE will come into effect from the date of its signature by the Uganda/USAID Mission Director and Africa Bureau BEO for 5 years unless amended or substituted by a BEO-approved environmental document that claims precedence.

TABLE 2: DEFINED INTERVENTION CATEGORIES, SUB-INTERVENTIONS AND ASSOCIATED MECHANISMS

Intervention Category	Associated Mechanisms
Intervention Category 1: Direct and Capacity Building Support for Health Service Delivery, Excluding Commodity Procurement/Supply Chain Strengthening • Provide information sharing opportunities with other activities to host country authorities, healthcare staff, and individuals • Strengthen governance and strategic planning • Provide awareness activities, capacity building, training, workshops, and education • Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management • Providing health service delivery (i.e., providing medical treatment, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.).	• RHITES-E, RHITES-SW, RHITES-EC, , RHITES-North Acholi, RHITES-North Lango, PACT Karamoja, Defeat TB FPA, SBCA, JCRC, KCHS, LPWD, ESC, FMC, SCBA, Local Partner Health Services (LPHS)-Kigezi, Lango; LPHS-Ankole and Acholi; LPHS-Karamoja; LPHS Eastern; and RRHs
Intervention Category 2: Direct Procurement of Commodities & Strengthening of Commodities, Logistics & Diagnostic Systems • Improve pre-qualification standards for product procurement • Review and selection of products available from manufacturers • Establish monitoring inventories indicators and document shelf-life • Support forecasting and supply planning of pharmaceutical and other health-related products • Support and strengthen warehouse inventory and management systems set up to strengthen warehouse systems both physical (seconding TA) and with technology • Asses the distribution networks, in-country logistic service providers, and warehousing capacity • Implement and develop clinical laboratory services and result return systems • Support the government in the setup of a private laboratory network • Provide capacity building, education, and training support on waste management	• LPWD, JCRC, CWM, HCWMA, SBCA, PNFP, and LPWD
Intervention Category 3: Waste recycling, treatment, and disposal of health commodities, general medical supplies, and equipment • Support design and implementation of WMPs, strategies, policies, procedures, and systems to improve the management of healthcare waste at all health system levels (direct control, indirect control, no control) (includes the incorporation of health and environmental safety measures)	• HCWMA and CWM

Intervention Category	Associated Mechanisms
• Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control) • Provide capacity building, education, and training support on waste management	
Intervention Category 4: Implementation of indoor residual spraying (IRS) • Provide procurement, distribution/delivery, storage, application, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved PMI/Malaria control insecticides services. • Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.	• PMI VECTOR LINK Project and PMI's Malaria Reduction Activity
Intervention Category 5: Distribution of insecticide-treated mosquito nets (ITNs) • Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) ITNs services. • Provide operational support (e.g., training, supervision, community mobilization) for ITNs programs.	• PMI VECTOR LINK Project and PMI's Malaria Reduction Activity
Intervention Category 6: Conduct entomological surveillance and vector control monitoring and research • Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the Anopheles. gambiae, An. coluzzii, An. funestus, An. Arabiensis, An. Stephensi, and other Anopheles in malaria vector country. • Determine the bio-efficacy and the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on Anopheles populations under field conditions generate data for the strategic vector control in areas at risk of malaria transmission worldwide. • Provide monitoring and evaluation support for insecticides, ITNs, and IRS programs.	• PMI VECTOR LINK Project and PMI's Malaria Reduction Activity
Intervention Category 7: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns. • Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.	• PMI's Malaria Reduction Activity

Intervention Category	Associated Mechanisms
Intervention Category 8: Conduct small-scale construction activities Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, laboratory, healthcare facility, hospital, HCWM, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m².	PMI VECTOR LINK Project and PMI's Malaria Reduction Activity; RHITES Activities; LPHS Activities; LPHS Activities, RRHs, HCWMA, and CWM
Intervention Category 9: Resource/ Financial Mobilization - Transfer of resources to promote health strengthening efforts - Improve budgeting and financial management systems	- RHITES-E, RHITES-SW, RHITES-EC, RHITES - RRHs

Will this project/activity involve construction³ as defined by ADS 201 and 303? Yes ☒ No ☐

This project may undertake small-scale construction, renovation and/or cosmetic improvements to insectaries and other building and facilities (storerooms, offices, etc.) used in vector control and/or health related activities project activities. Small scale activities are defined as those involving a total disturbed area equal to or less than 1,000m² Negative determination, per 22 CFR 216.3(a)(2)(iii), subject to conditions, is recommended.

³ **Construction, as defined by ADS 201 and 303**, includes: construction, alteration, or repair (including dredging and excavation) of buildings, structures, or other real property and includes, without limitation, improvements, renovation, alteration and refurbishment. The term includes, without limitation, roads, power plants, buildings, bridges, water treatment facilities, and vertical structures. In the box below, describe any construction planned for this project/activity. Refer to [ADS 201maw](#) for required Construction Risk Management procedures.

2.0 BASELINE ENVIRONMENTAL INFORMATION

2.1 LOCATIONS AFFECTED AND ENVIRONMENTAL CONTEXT (ENVIRONMENT, PHYSICAL, CLIMATE, SOCIAL, THREATENED AND ENDANGERED SPECIES)

SUMMARY OF GENERAL CONDITIONS IN UGANDA

USAID/Uganda's Environmental Threats and Opportunities Analysis (ETOA), completed in 2015, summarizes key features of the natural environment. Uganda is a landlocked country on the equator, covering 241,551 sq. km. Approximately 20% of the surface area of Uganda is covered by aquatic systems comprising five major lakes (Victoria, Kyoga, Albert, George, and Edward), the Kazinga Chanel, about 160 little lakes, and an extensive river system dams and ponds. These aquatic systems are usually fringed with extensive wetlands. Uganda is among the wealthiest countries concerning its natural environment. The country has various physical environmental features, ranging from tropical forests to grasslands, extensive surface drainage patterns (e.g., lakes, rivers, streams, etc.), arid and semi-arid areas, and the snow-capped Rwenzori Mountains range. The country has seven of Africa's 18 bio-geographic regions, the highest concentration on the continent, and some 90 different vegetation communities.

Given Uganda's location in a zone between the ecological communities characteristic of the drier East African savannas and the moist West African rainforests, combined with high altitude ranges, the country has a high level of biological diversity. Most of Uganda's biodiversity is found in its natural forests, but a considerable number is also found in other natural ecosystems such as mountains, savannahs, wetlands, lakes, and rivers. Uganda is a critical area for biodiversity conservation. The natural resource base, especially its vast diversity of wildlife, is the country's greatest biological and economic asset for sustainable tourism industry development. More than 18,783 species of fauna and flora are recorded, including approximately 5,000 species of higher plants; lower plants, including *algae* (115 species), *Pteridophytes/ferns* (386 species), *bryophytes/mosses* (500 species), and liverworts (250 species); and birds (1,063 species), representing 50% of Africa's bird species. Uganda is second in Africa in the number of mammal species (345 species); 15 mammal species and sub-species are endemic to Uganda, and nine primates are known, including the mountain gorilla, the red Colobus monkey, and the chimpanzee. Over half (53.9% - 400 individuals) of the world's remaining population of mountain gorillas are found in Uganda; along with butterflies (1,249 species), fish (600 species); amphibians (98 species); reptiles (150 species), and insects (8,999 species). The cichlid family consisting of 324 species, of which 292 are endemic to Lake Victoria (NEMA 2012), dominates the fish diversity in Uganda. Lakes Victoria, Kyoga, and George are of international importance in conserving endemic wetland species.

Conservation of crucial biodiversity resource areas is a well-demonstrated priority of the Government of Uganda (GOU). About 13% of the country's land area is protected under a comprehensive National Parks, Wildlife Reserves, and Forest Reserves system. The Uganda Wildlife Authority and the Forest Sector Support Department manage these areas.

Uganda's biodiversity faces many threats and is at significant risk. The USAID/Uganda ETOA, completed in 2015, identified the following threats to biodiversity and forest in order of importance:

- **Agricultural expansion into natural ecosystems:** Agriculture potentially threatens the vitality and health of wetlands through draining of water and clearing of wetland vegetation, especially seasonal woodlands, bush, and thickets, negatively affecting their capability to provide ecosystem services (Turyahabwe et al., 2013). Furthermore, the

promotion of commercial crops reduces available arable land for the rural poor, which may force them to encroach on forests and other natural ecosystems.

- **Charcoal/firewood collection:** Biomass is the dominant energy resource for households and small and medium-scale industries – 92% of Uganda’s energy needs are met from woody biomass (NEMA, 2014a). Fuelwood currently contributes more than 96% of energy for cooking in Uganda (NEMA 2014b). Charcoal production increased from 7,975,000 tons in 2009 to 10,449,000 tons in 2013. Fuelwood for household use increased from 21,905,000 to 25,196,000 tons (UBOS 2014). This has contributed to the loss of forest cover in the country.
- **Infrastructure development:** Urban expansion, energy development, mining. Urbanization and industrialization have exerted pressures mainly on peri-urban forest reserves and wetlands to expand urban and industrial centers, and 30% of Uganda’s wetland ecosystem, or 4.7% of Uganda’s total land area, has been lost in just 15 years (NEMA 2014a).
- **Illegal activities:** Poaching (wildlife, fisheries, timber) and wildlife trafficking. Illegal activities affecting biodiversity inside and outside protected areas and in wetlands and water bodies include hunting for subsistence, commercial trading of wildlife and wildlife products (meat, skins, and other trophies), pit sawing, and fishing. Animals most affected are elephants for ivory, hippopotamus for meat and ivory, sitatunga and other antelopes for subsistence consumption, and pangolins for their scales.
- **Human-wildlife conflict:** These conflicts occur due to wildlife movement from inside to outside protected areas. In addition, these conflicts are occurring due to increased interaction between people and wildlife and the destruction of crops by elephants, chimpanzees, etc.
- **Pollution:** This results from agricultural, industrial, and municipal waste discharge and dumping. This poses a potential threat to biodiversity through habitat modification or loss (NEMA 2014).
- **Climate change:** An overview of climate change and biodiversity conducted by USAID in 2014 found that, “Biodiversity and ecosystem-specific goods and services in Uganda are likely to be adversely affected by climate change. According to projections, Uganda will continue to experience rising temperatures, which will increase by more than 2°C by 2030 (Tetra Tech ARD, 2013). Additionally, the growing variability of inter-annual rainfall is projected to continue, including increased rainfall during the dry season. These new climate scenarios are expected to increase the frequency of floods, droughts, and fires.”
- **Zoonotic diseases:** Zoonotic diseases and vector-borne diseases form more than 70% of the global emerging and reemerging disease burden. Zoonotic diseases are very aggressive and contagious and passed from animals to humans and vice versa. Uganda has experienced eight such outbreaks in the past years (Nabukanya et al., 2014) and is experiencing an outbreak of Ebola Virus Disease (Sudan variant) as this IEE is being approved.

- **Invasive species:** This is a priority concern for protected-area management. Invasives affect nearly half of Uganda's National Parks, including Queen Elizabeth Conservation area, Lake Mburo National Park, Kidepo Valley Conservation Area, Murchison Falls Conservation Area, etc.
- **Over-exploitation of natural ecosystems, especially forests, wetlands, rangelands, and fisheries:** Forest cover change in Uganda has decreased from 24% in 1990 to 9% in 2015. In addition, most logging for timber and fuelwood takes place on private land (MWE 2011), making it difficult for the responsible agencies to enforce the principle of maximum sustainable yield provided for in the legal framework governing the exploitation of natural ecosystems.

NATURAL FOREST (Ha)	1990	2000	2005	2010	2015
On private land	3,319,090	2,546,778	2,117,331	1,046,306	660,986
In protected Areas	1,531,394	1,449,688	1,364,260	1,189,532	1,067,793
Total	4,880,484	4,018,466	3,573,591	2,292,838	1,829,779

Source: Ministry of Water and Environment.

- **Transboundary threats:** Transboundary threats to biodiversity conservation and forest management are mainly poaching across borders, trafficking of wildlife and forest products, seasonal incursion of pastoralists for water and grazing resources, fishing, charcoal burning and timber harvesting. The majority of Uganda's protected areas high in biodiversity are located along international borders, which are largely porous.
- **Human-induced wildfires:** Human-induced wildfires threaten biodiversity resources. Fires are set to prepare land for agricultural production and rangeland regeneration, flush out animals, and ease visibility during hunting. As a result, fires can affect plant species composition, richness, diversity, and cover (Govender et al., 2006).
- **Underlying causes:** The following are the underlying causes of the threats to biodiversity described above:
 - Population growth;
 - Weak governance, including weak implementation and conflicting and overlapping mandates;
 - Limited opportunities for off-farm employment;
 - Poverty;
 - Insecurity of land tenure;
 - Government policies that fail to promote conservation; and
 - Climate change.

Three regions of Uganda have Critical Biodiversity Areas. These are:

- **Western Uganda** forms part of the Albertine Rift Region, one of Africa's most important regions for biodiversity. For example, about half of the mountain gorilla (*Gorilla gorilla berengei*) population lives in the extreme southwestern part of this region. Lakes George and Edward have 79 species of fish; three of these species are endemic to Uganda (*Varicorhinus Ruwenzori*, *Microcteriopoma damasi*, and *Hypsopanchax modestus*) (NEMA, 2009). In addition, an endemic species of papyrus (*Chloropeta gracilirrostris*) grows in the shallower parts of Lakes Edward, George, and Bunyonyi.
- The **Southern Central Region**, which includes Lake Victoria, the lakes of the Kyoga basin, and Sango Bay, initially had more than 600 endemic haplochromine cichlids. They also have essential biodiversity that is highly fragile due to the island's nature. This gives the southern portion of Central Uganda its particular importance for biodiversity (NEMA, 2009).
- **Northeastern Uganda** is important for biodiversity because several species are endemic to this area and areas of Kenya and Southern Sudan. The species include 30 species of birds, among which are the Karamoja Apalis (*Apalis karamojae*), a threatened species, and several species of butterflies, including *Papilio nobilis* and *Charaxes smaragdilis elgonae*, the cheetah (*Acinonyx jubatus*), lesser kudu (*Tragelaphus imberbis*), greater kudu (*Tragelaphus strepsiceros*), roan antelope (*Hippotragus equinus*), a secretary bird (*Sagittarius serpentarius*) and ostrich (*Struthio camelus*).

Baseline Environmental Conditions

- **Climate:** Uganda has a tropical climate, with temperatures ranging from 21-25°C, apart from in the mountainous areas, which are much more remarkable – the top of Mount Rwenzori is often covered with snow.

The hottest months are July to September and December to February. However, evenings can feel chilly after the day's heat, with temperatures around 12-16°C. Apart from the dry area in the north, most regions of Uganda have an annual rainfall of between 1,000 mm and 2,000 mm. There is heavy rain between March and May and October and November (NEMA 2014).

However, within the next 50 years, scientists expect average temperatures in Uganda to rise by around 2°C. Climate change is likely to cause an increase in extreme weather events such as floods, heat, and droughts. While rainfall is expected to decrease slightly across the country, most significantly over Lake Victoria, the west and northwest – mainly highlands – are likely to become slightly wetter. In addition, rainfall is expected to be more erratic, unpredictable, and intense, with shorter rainy seasons (CDKN, 2015).

Uganda is already experiencing the impacts of climate variability and associated economic losses. For example, a drought in 2008 caused losses of approximately 3% of the value of all food and cash crops that year (NEMA, 2008). Two years later, the country suffered economic losses of US\$470 m in food crops, cash crops, and livestock as a result of the 2010/11 drought (OPM, 2012). This equates to about 16% of the total annual value of these crops in 2011.

In 2012, USAID/Uganda commissioned a climate change vulnerability assessment. Results of the assessment indicated that temperatures have and will continue to increase in Uganda, and although average total precipitation is projected to stay the same, the country may experience an increase in rainfall during the dry season and an increase in extreme events such as droughts and floods. The assessment's livelihood analysis indicated that 73% of households surveyed were highly vulnerable to climate change impacts because they relied on sensitive crops and their lack of assets, financial capital, and non-agricultural sources of income that can be used at times of stress. Additionally, due to global climate change, Uganda is experiencing melting glaciers in the Rwenzori Mountains and increasing the intensity and frequency of dry spells and floods. This has led to an increasing prevalence of agricultural pests and human diseases (e.g., malaria). Furthermore, biodiversity and ecosystem-specific goods and services in Uganda are likely to be adversely affected by climate change.

A key message from the CDKN 2015 study is that the cost of inaction is 20 times greater than the cost of adaptation. Therefore, development prospects will only be reached if the impacts of climate change on Uganda are mitigated. In response, Uganda's First National Development Plan (2010–2015) recognizes that climate change will affect most of its key economic sectors and that action on climate change is crucial if the country is to meet its goal of becoming a competitive, upper-middle-income country by 2040 (Vision 2040). The Plan also recognizes that, for development to be economically and socially sustainable, climate resilience must be at the heart of policies for growth and development, energy access and security, increased agricultural production, education and health. Accordingly, the National Climate Change Policy (NCCP) was completed at the end of 2013 (approved by the Cabinet in April 2015). Priorities in the policy have been mainstreamed into the Second National Development Plan (2015–2020).

- **Topography:** Uganda is divided into four relief regions:
 - Above 2,000 m – 2% of the land area;
 - 1,500–2,000 m – 5% of the land area;
 - 900–1,500 m – 84% of the land area; and
 - Below 900 m – 9% of the land area.

A large part of Uganda forms part of the interior plateau of the African continent. The Rwenzori Mountains and the Mufumbiro volcanoes in the West, along with Mt. Elgon, Mt. Moroto, Mt. Morungole, Mt. Timu, and Mt. Kadam in the East (NEMA 2002) delineate the plateau in the eastern and western parts of the country.

- **Soils:** The most dominant soil type is ferralitic soil which accounts for about two-thirds of the soils found in the country. According to Parsons (1970), the soils of Uganda have been classified as:
 - Soils of high productivity, constituting 8% of the land area;
 - Soils of medium productivity, constituting 14% of the land area;
 - Soils of fair productivity, constituting 43% of the land area;
 - Soils of low productivity, constituting 30% of the land area; and
 - Soils of negligible productivity, constituting 5% of the land area (FAO 2006).

- **Water resources:** Uganda is endowed with significant surface and groundwater resources which consist of open water bodies (lakes and rivers), wetlands, groundwater, and rainwater. Of the 241,500 km² total area of the country, freshwater lakes occupy 36,280 km² (15%).

- **Wetlands:** Uganda presently has 12 sites designated as Wetlands of International Importance, with a surface area of 454,303 hectares. Wetlands occupy an estimated 13% of Uganda's national territory and serve a number of functions. For example, they serve as storehouses for fresh water and nurseries for fish, sustain high levels of biodiversity, and represent important bird areas, while some act as basins for tertiary treatment of urban wastewater. Many people depend on wetland resources for their livelihoods. However, the wide distribution of wetlands and the lack of protective mechanisms mean that a large proportion of the population has access to wetlands, resulting in extensive degradation and biodiversity loss. According to a 2012 NEMA report, wetlands in 2008 covered approximately 10.9% of the land area, down from 15.6% in 1994 (MWE, 2012). The ongoing, overall decline in wetlands, particularly in the Lake Victoria and Lake Kyoga drainage basins, is largely attributed to encroachment for expansion of urban centers, housing settlements and industrial developments and extension of agricultural land driven by declining soil productivity in the uplands, pushing people to farm in lowlands, which is further exacerbated by complex land ownership issues.

- **Forest resources:** Forests and woodlands cover approximately 4.9 million hectares in Uganda, about 24% of the total land area in 2012 (UIA, 2012). The vast majority of this is woodland (19%), while the rest is tropical moist forest (5%) and forest plantations (0.2%). According to the National State of Environment Report (NEMA 2012), Uganda's forests and woodland resources contribute 2% of the national GDP; however, the deforestation rate is estimated at 1.8% per year. Between 1995 and 2005, Uganda's forest area declined from 24% to 18% of the land area. Uganda has lost more than three million hectares of forest cover since 1990 (NFA, 2015). This is almost 30% of the 1990 forest acreage. The main factors at play are the rapid expansion of farmlands, the rapidly growing human population, and increased urbanization (NEMA, 2012). In the recent past, the tendency for people to migrate out of the increasingly crowded city into the suburbs of Kampala has seen the forest coverage in the districts of Wakiso, Mukono, and Mpigi reduce to 22% of what they were during the 1990s (NFA, 2011).

- **Population:** Population is an essential factor that affects environmental management in

Uganda. It affects the availability and renewability of natural resources. The use of natural resources is directly proportional to population increase. The vast majority of Uganda's population is very dependent on natural resources. For example, the decline in forest cover at 1.8% per annum is attributed to the increasing demand for land for agriculture and fuelwood by the rapidly increasing population.

The average household size is 4.7 persons, with a sex ratio of 94.5 males per 100 females. An estimated 72% of the population lives in rural areas compared to 28% in urban centers. Moreover, 49% of Uganda's population is under the age of 15, and 18.9% is under five.

Population	Number	Percent
Total	37.7 million	100%
Children aged 0-59 months (under five years)	6.6 million	18.9%
Women of reproductive age (15-49 years)	7.3 million	20.9%
Population that is under 15 years of age	17.0 million	48.7%
Population of adolescents (10-19 years of age)	8.6 million	24.5%

Source: National Population and Housing Census 2014

Despite Uganda's success in reducing poverty, more than 7.5 million Ugandans still live on an income below the minimum required to meet their basic needs, partly due to high population growth (MFPED 2012). The incidence of poverty remains higher in rural areas than in urban areas. With 85% of the population, the rural areas constitute 94.4% of national poverty. The incidence of poverty remains highest in the Northern Region and lowest in the Central Region. On average, poverty in the Northern region (46.2%) remains higher than the national average (24.5%) (UBOS 2010).

2.2 APPLICABLE AND APPROPRIATE PARTNER COUNTRY AND OTHER INTERNATIONAL STANDARDS (E.G. WHO), ENVIRONMENTAL AND SOCIAL LAWS, POLICIES, AND REGULATIONS

The **National Environment Action Plan** (NEAP, 1995) presents strategies for the kinds of development Uganda needs to guide it on the path of improving the quality of human life, while at the same time conserving the environment. The NEAP is a response to the challenge of environmental degradation and is an action agenda to achieve the balance between development and environmental management. It analyses and brings together, coherently, different sector-based activities into one integrated effort. It focuses on critical environmental problems: soil degradation, deforestation, biodiversity loss, wetlands degradation, pollution, management issues, etc. The NEAP aligns with Agenda 21, which Uganda endorsed at the Earth Summit in Rio de Janeiro in 1992. The

NEAP involves all interested organizations, both local and international, in the quest for sustainable development.

Uganda's **Environmental Impact Assessment Regulations (1998)** apply to: 1) all projects included in the Third Schedule to the NEA; and 2) any significant repairs, extensions, or routine maintenance of any existing project that is included in the Third Schedule to the NEA. In addition, the third schedule lists a wide range of project types (agriculture, mining, infrastructure, waste disposal, etc.). No developer shall implement a project for which an environmental impact assessment is required under the NEA and under these regulations unless the environmental impact assessment has been concluded in accordance with these regulations. [It should be noted that in addition to complying with USAID Environmental regulations, all USAID-funded activities must comply with host country environmental regulations unless otherwise directed in writing by USAID. In case of conflict between the host country and USAID regulations, the latter shall govern.]

OHH projects may be responsible for waste management and, accordingly, will manage such waste in accordance with the appropriate national standards. However, where national requirements on waste management associated with solid and equipment do not exist, the awardee will select vendors who comply with International Organization for Standardization (ISO) and WHO standards and best practices (e.g., WHO "Safe Management of Wastes from Healthcare Activities"), and the USAID Sector Environmental Guidelines.

A summary of potentially applicable standards, guidelines, and useful references are provided below for developing the EMMP and updating the OHH project integrated WMP. In addition, other references for waste management are identified in Section 4 as specific conditions of the activities."

[Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal](#)

- [Organization for Economic Cooperation and Development \(OECD\) Council on the Decision on the control of Transboundary Movements of Wastes](#)

USAID Resources and References

- USAID. [Sector Environmental Guidelines](#)
 - [Solid Waste](#)
 - [Healthcare Waste](#)
 - [Healthcare Facilities](#)
 - [Construction](#)
- USAID. [Integrated Waste Management Plan](#)
- USAID. Green Meeting Checklist

Other International References and Standards

- Safe Management of wastes from health-care activities (Note: Where national requirements on proper waste management do not exist, WHO's "Safe Management of Wastes from Healthcare Activities" handbook is the internationally-recognized standard used by the Bureau for Global Health)

2.3 COUNTRY/MINISTRY/MUNICIPALITY ENVIRONMENTAL CAPACITY ANALYSIS (AS APPROPRIATE)

Relevant Ugandan laws and regulations related to environmental protection and natural resources management include:

The Constitution of Uganda (1995) includes provisions related to environmental protection and land tenure, including:

- Section 39- Right to a clean and healthy environment: Every Ugandan has a right to a clean and healthy environment.
- Section 245 -Protection and preservation of the environment: Parliament shall by law provide for measures intended to:
 - Protect and preserve the environment from abuse, pollution, and degradation;
 - Manage the environment for sustainable development; and
 - Promote environmental awareness.
- Section 237-Land Ownership:
 - Land in Uganda belongs to the citizens of Uganda and shall vest in them in accordance with the land tenure systems provided in the Constitution of Uganda.
- Notwithstanding clause (1);
 - The Government or Local Government may subject to article 26 of the Uganda Constitution, acquire land in the public interest; and the conditions governing such acquisition shall be prescribed by Parliament.
 - As determined by Parliament by law, the Government or Local Government shall hold in trust for the people and protect natural lakes, rivers, wetlands, forest reserves, game reserves, national parks, and any land reserved for ecological and touristic purposes for the common good of all citizens.
- Land in Uganda shall be owned in accordance with the following land tenure systems:
 - A. Customary;
 - B. Freehold;
 - C. Mailo; and
 - D. Leasehold.

The National Environment Act (NEA, 1995) establishes the National Environment Management Authority (NEMA) and the governing principles for environmental planning, regulation, and management, including environmental quality standards, requirements for environmental impact assessment (EIA), and penalties for environmental offenses. NEMA is the principal agency in Uganda charged with the responsibility of coordinating, monitoring, regulating, and supervising environmental management in the country. NEMA spearheads the development of environmental policies, laws, regulations, standards, and guidelines and guides the GOU in sound environmental management in

Uganda. In addition, NEMA is expected to encourage, supervise, monitor, and coordinate environmental actions among and between sectors and provide technical and training input and policy-level assistance to other agencies.

The National Environment Management Policy (NEMP, 1995) is the cornerstone of the country's commitment to social and economic development that is environmentally sustainable and which will bring the benefits of a better life to all Ugandans. The overall policy goal is "sustainable social and economic development which maintains or enhances environmental quality and resource productivity on a long term basis that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." The NEMP aims to guide sustainable economic development through sound environmental and natural resources management using a participatory approach. The NEMP promotes environmentally responsible social and economic growth and recognizes biodiversity conservation as a form of natural resources management that is critical to meeting the needs of Ugandans.

Since the mid-1980s, Uganda's development policy has increasingly recognized the critical importance of natural resources to the country's economic base. The current Third National Development Plan (NDP III) 2020/21–2024/25 is the third in a planned series of six five-year plans to achieve Uganda's Vision 2040: *"a transformed Ugandan society from a peasant to a modern and prosperous country within 30 years."* For successful implementation of the NDP III, the following key development strategies will be pursued:

01. Agro-Industrialization;
02. Fast-track oil, gas and mineral-based industrialization;
03. Import replacement/Promotion of local manufacturing;
04. Export Promotion;
05. Harness the tourism potential;
06. Provide a suitable fiscal, monetary and regulatory environment for the private sector to invest;
07. Increase local content participation;
08. Institutionalize infrastructure maintenance;
09. Develop intermodal transport infrastructure to enhance interoperability;
10. Increase access to stable, reliable, and affordable energy;
11. Leverage urbanization as a driver for socio-economic transformation;
12. Improve access to and quality of social services;
13. Institutionalize human resource planning for the economy;
14. Enhance skills and vocational development;
15. Promote science, technology, engineering, and innovation, as well as ICT;

16. Increase access to social protection;
17. Promote development-oriented mind-set;
18. Increase government participation in strategic sectors;
19. Increase resource mobilization for implementation of National Development Programs;
20. Re-engineer the public service to promote investment; and
21. Enhance partnerships with non-state actors for effective service delivery.

Relevant Ugandan laws and regulations related to health and safety include:

The **Constitution of Uganda** requires the GOU to provide essential health services to its people and promote proper nutrition and healthy lifestyles (Objective XIV). The Constitution further provides all people in Uganda to enjoy equal rights and opportunities, access to health services, clean and safe water, and education, among other things. Investing in promoting people's health and nutrition ensures that they remain productive and contribute to national development.

The Second National Health Policy (2010) theme is *"promoting people's health to enhance social-economic development."* The MOH is responsible for coordinating the drafting of bills to promote and regulate health services. However, the process of reviewing legislation and policies has been slow due to the inadequate allocation of financial and human resources for these processes. Various bills such as the Pharmacy Profession and Practice Bill, Uganda Medicines Control Authority Bill, Food and Nutrition Bill, Food and Drug Act, National Health Insurance Bill, and the Traditional and Complementary Medicines Bill are currently at different stages of development. Gaps also exist in the legal framework for the adaptation of new health technologies, and enforcement of legislation and policies remains a significant challenge in Uganda's health sector.

The MOH has developed a **National Policy on Injection Safety and Health Care Waste Management (2004)**. The Policy "sets out strategies for ensuring that patients, health workers, communities and the environment are protected from risks associated with unnecessary and unsafe injections" and "addresses improper disposal and destruction of injection materials and other health care waste." The Policy ensures that each health facility will make guidelines for the proper handling and disposal of health care waste known to the staff, designate a staff member in charge of health care waste and ensure that workers follow procedures.

The **Uganda Clinical Guidelines (2016) National Guidelines for Management of Common Conditions** was produced by the MOH with financial assistance from the USAID-funded Uganda Health Supply Chain and the Clinton Health Access Initiative. The Uganda Clinical Guidelines help achieve high standards of quality and efficiency in health service delivery by presenting updated, practical, and useful information on the diagnosis and management of common conditions in Uganda. The guidelines also establish a strong foundation for the appropriate and cost-effective use of essential medicines.

Section 13 of the **Occupational Safety and Health Act (2006)** states that it is obligatory for an employer to ensure persons' health, safety, and welfare at their workplace. Employers must take measures to keep the workplace pollution-free by employing technical measures, applied to new plants or processes in design or installation or added to existing plants or processes, or by employing supplementary organizational measures. Additionally, the employer should provide and maintain safe and risk-free means of access to and exit from the workplace. Workers must be well informed of the real and potential dangers associated with the use of the substance or machinery, and they must be well equipped with personal protective equipment (PPE) to prevent the risks of accidents or adverse effects on health. The Act further provides that it is the responsibility of the employer to provide free PPE, including clothing, to the workers involved in hazardous work. The type of PPE needed varies depending on the nature of the work being performed. The proper use of PPE reduces the risk of accidents and adverse effects on health.

3.0 ANALYSIS OF POTENTIAL ENVIRONMENTAL RISK

INTERVENTION CATEGORY 1: DIRECT AND CAPACITY BUILDING SUPPORT FOR HEALTH CARE SERVICE DELIVERY, EXCLUDING COMMODITY PROCUREMENT/ SUPPLY CHAIN STRENGTHENING

TABLE 3A. POTENTIAL IMPACTS – INTERVENTION CATEGORY 1

Project/Activity	Potential environmental and social impacts
Sub-activity 1.1: Provide information sharing opportunities with other activities host country authorities, healthcare staff, and individuals	Negligible adverse environmental or social impacts are associated with this sub-intervention.
Sub-activity 1.2: Strengthen governance and strategic planning	Categorical Exclusion under 22 CFR 216.2(c)(2), the following activities are <i>categorically excluded</i> from further environmental analysis: • (i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.); • (iii) Analyses, studies, academic or research workshops and meetings • (v) Document and information transfers • (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.)
Sub-activity 1.3: Provide awareness activities, capacity building, training, workshops, and education	
Sub-activity 1.4: Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	
Sub-activity 1.5: Provide health service delivery activities (i.e., medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.) with capacity building and training opportunities.	
	• While improved healthcare services are expected to support significant public health benefits, they will also result in increased healthcare waste generation (e.g., blood samples, sharps, and medicines). While increased uptake of detection, testing, and treatment interventions for medical products is expected to support the achievement of significant public health benefits, they also result in increased generation of healthcare waste. • In addition, improving the access to and quality of health care services may lead to increased occupational hazards for healthcare workers involved in handling hazardous wastes.

INTERVENTION CATEGORY 2: TITLE: DIRECT PROCUREMENT OF COMMODITIES & STRENGTHENING OF COMMODITIES, LOGISTICS & DIAGNOSTIC SYSTEMS

TABLE 3B. POTENTIAL IMPACTS – INTERVENTION CATEGORY 2

Project/Activity	Potential environmental and social impacts
Sub-activity 2.1: Develop pre-qualification standards for product procurement	Negligible adverse environmental or social impacts are associated with this sub-intervention. Categorical Exclusion under 22 CFR 216.2(c)(2), the following activities are categorically excluded from further environmental analysis: • (v) Document and information transfers
Sub-activity 2.2: Review and selection of products available from manufacturers	
Sub-activity 2.3: Establish monitoring inventories indicators and document shelf-life	
Sub-activity 2.4: Support forecasting and supply planning of pharmaceutical and other health-related products	• Procuring an oversupply of health care products increases the probability of products expiring on the shelf and the need for waste treatment and/or disposal. The larger the quantity of damaged and/or expired pharmaceuticals or chemicals, the greater the waste stream of potentially hazardous waste and associated environmental impacts. This can also lead to more entry points of pharmaceuticals diverting from the waste stream into the community for improper and possibly hazardous consumption.
Sub-activity 2.5: Support and strengthen warehouse operations, information and inventory management technology systems.”	• Improper storage of PHC can result in pharmaceuticals being damaged due to failure to meet storage condition requirements, theft through inadequate security, damage from pests, and hazards such as fire. Environmental and social impacts may result from damaged products getting into the environment or local community due to improper storage. In addition, equipment used to operate the storage facility (e.g., mobile equipment, chillers, HVAC systems, fuel storage tanks) should be properly maintained to prevent accidents or spills from occurring that may lead to health or environmental impacts.
Sub-activity 2.6: Assess the distribution networks, in-country logistic service providers, and warehousing capacity building actions	Negligible adverse environmental or social impacts are associated with this sub-intervention. Categorical Exclusion: under 22 CFR 216.2(c)(2), the following activities are <i>categorically excluded</i> from further environmental analysis: • (i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities,
Sub-activity 2.7: Implement and develop clinical laboratory services and result return systems	

	etc.) • (iii) Analyses, studies, academic or research workshops and meetings • (v) Document and information transfers
Sub-activity 2.8: Support the government in the setup of a private laboratory network	• Improved laboratory services and systems are expected to support significant public health benefits, they will also result in increased healthcare waste generation (e.g., blood samples, and sharps). While increased uptake of detection, testing, and treatment interventions for medical products is expected to support the achievement of significant public health benefits, they also result in increased generation of healthcare waste.
Sub-activity 2.9: Provide capacity building, education, and training support on waste management during warehousing, transport, and laboratory use.	• While improved healthcare service delivery and systems strengthening are expected to support significant public health benefits, they will also result in increased healthcare waste generation (e.g., blood samples, sharps, and medicines). While increased uptake of detection, testing, and treatment interventions for medical products is expected to support the achievement of significant public health benefits, they also result in increased generation of healthcare waste. • In addition, improving the access to and quality of health care services may lead to increased occupational hazards for healthcare workers involved in handling hazardous wastes.

INTERVENTION CATEGORY 3: TITLE: WASTE RECYCLING, TREATMENT, AND DISPOSAL OF HEALTH COMMODITIES, GENERAL MEDICAL SUPPLIES, AND EQUIPMENT

TABLE 3C. POTENTIAL IMPACTS – INTERVENTION CATEGORY 3

Project/Activity	Potential environmental and social impacts
Sub-activity 3.1: Provide capacity building, education, and training support on waste management and health service delivery activities (i.e., providing medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.).	• While improved healthcare service delivery and systems strengthening are expected to support significant public health benefits, they will also result in increased healthcare waste generation (e.g., blood samples, sharps, and medicines). While increased uptake of detection, testing, and treatment interventions for medical products are expected to support the achievement of significant public health benefits, they also result in an increased generation of healthcare waste. • In addition, improving the access to and quality of health care services may lead to increased occupational hazards for healthcare workers involved in handling hazardous wastes.
Sub-activity 3.2: Treatment and/or disposal of expired, off-	• Testing often requires the sample's treatment and/or disposal, reagents, and other supplies. In addition, recalls

specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control)	requiring the disposal of affected commodities also pose a risk. Due to poor disposal practices, environmental threats include public health impacts (e.g., direct exposure through needle-stick injuries, pathogen release) and soil and water contamination at the disposal site.
Sub-activity 3.3: Procurement, installation, commissioning, management, and maintenance of hazardous waste treatment equipment (EXCEPT construction related to the installation of hazardous waste treatment equipment)	- Worker exposure to pathogens in waste handling and landfills, sewage treatment, composting, and other operations. - Community exposure to pathogens when infectious waste treatment is not practical. - Toxic air emissions and toxic ash from incineration - Odors, litter, noise, and heavy traffic are associated with central waste facilities.

INTERVENTION CATEGORY 4: TITLE: IMPLEMENTATION OF INDOOR RESIDUAL SPRAYING (IRS)

TABLE 3D. POTENTIAL IMPACTS – INTERVENTION CATEGORY 4

Project/Activity	Potential environmental and social impacts
Sub-activity 4.1: Provide procurement, distribution/delivery, storage, application, and disposal of waste associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved insecticides services.	- Health and environmental impacts may result from inadequate quality control of insecticides (i.e., procuring non-approved insecticides, improper storage, or poor inventory management). - Occupational risks for workers involved in IRS campaigns. - Health and safety risks for residents of treated houses (e.g., risks from skin contact and/or ingestion of insecticides). - Nearby residents may be exposed to insecticides if insecticides are not securely stored to prevent theft and misuse incidents, including the illegal resale of insecticides. - Ecological risk to non-target species and water bodies from the use of insecticides.
Sub-activity 4.2: Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.	- The environmental risk from the disposal of liquid and solid wastes. - Improper incineration of wastes and disposal of residual ash can threaten air quality, soil, and the water supply and result in environmental and public health hazards.

INTERVENTION CATEGORY 5: TITLE: DISTRIBUTION OF INSECTICIDE-TREATED MOSQUITO NETS (ITNS)

TABLE 3E. POTENTIAL IMPACTS – INTERVENTION CATEGORY 5

Project/Activity	Potential environmental and social impacts
Sub-activity 5.1: Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health	- Misuse of ITNs (i.e., nets used for nonpublic health purposes such as fishing). - Reduced efficacy of ITNs due to improper storage.

Organization Pre-Qualified (WHO/PQ) ITNs services	• Pilferage of ITNs (during storage and/or transport) and consequential human and environmental exposure. • Worker safety (during handling and distribution of ITNs) • Contamination of edible or potable materials due to contact with ITNs. • Human and environmental impacts of washing ITNs. • Human and environmental impacts of bags and baling materials used to package ITNs. • Adverse impacts to land, water, and/or sensitive ecosystems may occur if pesticide-treated nets are improperly handled during storage, distribution, and use can be released into the environment. Pesticide-treated nets also need to be properly used to prevent theft and misuse incidents (i.e., nets used for non-public health purposes such as fishing), leading to impacts on human health and environmental impacts to water and/or sensitive ecosystems.
Sub-activity 5.2: Provide provision of operational support (e.g., training, supervision, community mobilization) for ITNs programs	

INTERVENTION CATEGORY 6: TITLE: CONDUCT ENTOMOLOGICAL SURVEILLANCE AND VECTOR CONTROL MONITORING AND RESEARCH

TABLE 3F. POTENTIAL IMPACTS – INTERVENTION CATEGORY 6

Project/Activity	Potential environmental and social impacts
Sub-activity 6.1: Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the <i>Anopheles gambiae</i> , <i>An. coluzzii</i> , <i>An. funestus</i> , <i>An. Arabiensis</i> , <i>An. Stephensi</i> , and other <i>Anopheles</i> in malaria vector country.	Negligible adverse environmental or social impacts are associated with this sub-intervention. Categorical Exclusion: under 22 CFR 216.2(c)(2), the following activities are <i>categorically excluded</i> from further environmental analysis: • (iii) Analyses, studies, academic or research workshops and meetings • (v) Document and information transfers
Sub-activity 6.2: Determine the bio-efficacy, as well as the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on <i>Anopheles</i> populations under field conditions to generate data for the strategic vector control in areas at risk of malaria transmission worldwide	
Sub-activity 6.3: Provide monitoring and evaluation support for insecticides, ITNs, IRS programs	

INTERVENTION CATEGORY 7: TITLE: BUILD CAPACITY AND NMCP, DHMTS, AND OTHER GOU AGENCIES TO IMPLEMENT IRS AND ITN CAMPAIGNS.

TABLE 3G. POTENTIAL IMPACTS – INTERVENTION CATEGORY 7

Project/Activity	Potential environmental and social impacts
Sub-activity 7.1: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.	● Misuse of ITN, and IRS materials (i.e., nets used for nonpublic health purposes such as fishing). ● Reduced efficacy of IRS and ITN due to improper storage. ● Pilferage of products (during storage and/or transport) and consequential human and environmental exposure. ● Worker safety (during handling and distribution) ● Contamination of edible or potable materials due to contact with ITNs and IRSs. ● Human and environmental impacts of washing ITNs and IRS spray. ● Human and environmental impacts of bags and baling materials used to package ITNs.

INTERVENTION CATEGORY 8: TITLE: CONDUCT SMALL-SCALE CONSTRUCTION ACTIVITIES**TABLE 3H. POTENTIAL IMPACTS – INTERVENTION CATEGORY 8**

Project/Activity	Potential environmental and social impacts
Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, laboratories, healthcare facilities, hospitals, HCWM facilities, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m ² .	As this activity will involve small scale construction limited to a total disturbed area of less than 1,000m², impacts would generally be controllable with basic good design and operating practices. However, the precise nature of the potential impacts—and the appropriate design and operating practices to mitigate them—are highly dependent both on location and the specific characteristics of the infrastructure. This requires a site-specific, design-specific assessment of potential adverse impacts and the efficacy of available mitigation measures. Construction itself has a well-known set of potential adverse impacts, which spans across nearly all types of construction and rehabilitation. Experience shows that these impacts are controllable below the level of significance with basic good construction management practices, including occupational safety and health practices. ● <u>Disturbance to existing landscape/habitat.</u> Construction typically necessitates clearing, grading, trenching and other activities that can result in near-complete disturbance to the pre-existing landscape/habitat within the plot or right-of-way. If the plot or right-of-way contains or is adjacent to a permanent or seasonal stream/water body, grading and leveling can disrupt local drainage. ● <u>Sedimentation/fouling of surface waters.</u> During construction, runoff from the cleared ground or material stockpiles can result in sedimentation/fouling of surface waters, particularly if the site is close to a stream or water body. ● <u>Standing water.</u> Construction may result in standing

	water on-site, which readily becomes a breeding habitat for mosquitoes and other disease vectors; this is of concern as malaria is endemic in much of Uganda. • <u>Occupational and community health and safety hazards.</u> The construction process and construction sites present a number of hazards: fall and crush injuries, hazards from hand or power tools and equipment used in construction, and exposure to hazardous substances, such as solvents in paint, cement dust, etc. • <u>Increased Air and Noise Pollution</u> can result during construction or rehabilitation from the actions of construction equipment and workers. • <u>Adverse impacts of materials sourcing.</u> Construction requires a set of materials often procured locally: timber, fill, sand, gravel, and bricks. Unmanaged extraction of these materials can have adverse effects on the environment. For example, stream bed mining of sand or gravel can increase sedimentation and disturb sensitive ecosystems; the purchase of timber from unmanaged or illegal concessions helps drive deforestation. • <u>Energy use</u> for construction, maintenance, and operations of water extraction, supply, distribution, and/or wastewater treatment infrastructure can increase greenhouse gas emissions, exacerbating the impacts of climate change. Environmental Impacts • Removal of vegetation and trees and disturbance and fragmentation of existing landscape/habitat. • Destabilization of existing topographic and geographic features such as contribution to land/mudslides. • Deterioration of local habitats, particularly those of endangered species. • Increased erosion and sedimentation and pollution (e.g., oil, fuel, cement, and other substances) of surface waters. • Generation of solid waste. • Use of water and energy and other natural resources. • Accidental leaks/spills of oil/fuel from vehicles, machinery, and storage tanks can pollute groundwater and surface waters. • Groundwater hydrology and quality if the site may need to be drained to provide suitable conditions for the engineering works to occur. • Soil contamination from previous land use may be disturbed during construction works, causing pollutants such as heavy metals to enter ground and surface waters. Social Impacts • Increase in vectors of disease. • Occupational and public health and safety hazards. • Land tenure, eminent domain, and resettlement.
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	• Increased light and noise pollution. • Noise and vibration emissions resulting from the use of machinery and equipment and vehicle circulation. • Release of air pollutants including NO₂, SO₂, Particulate Matter (PM)₁₀ and PM_{2.5} from vehicle circulation. • Changes in local landscape and changes to the scenic attributes of the landscape, during construction phases can impact quality of life for nearby communities, as well as land/property prices.
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INTERVENTION CATEGORY 9: TITLE: RESOURCE/ FINANCIAL MOBILIZATION

TABLE 3I. POTENTIAL IMPACTS – INTERVENTION CATEGORY 9

Project/Activity	Potential environmental and social impacts
Sub-activity 9.1: Transfer of resources to promote health strengthening efforts	Negligible adverse environmental or social impacts are associated with this sub-intervention. Categorical Exclusion: under 22 CFR 216.2(c)(2), the following activities are <i>categorically excluded</i> from further environmental analysis: • §216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves • §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; • §216.2(c)(2)(v),(v) Document and information transfers
Sub-activity 9.2: Improve budgeting and financial management systems	
Sub-activity 9.3: Health support activities, evaluations, studies, surveys, etc.	

3.1 THREATENED AND ENDANGERED SPECIES

The activities proposed include work in already developed areas, clinical settings, and existing infrastructure. Therefore, the activities are not likely to adversely impact threatened and endangered species, or their critical habitat. Activity-level actions that include construction or infrastructure improvements should be assessed for the presence of threatened or endangered species, or their critical habitat. Any activity that may adversely impact threatened or endangered species or their critical habitat may not proceed without an Environmental Assessment.

4.0 ENVIRONMENTAL DETERMINATIONS

4.1 RECOMMENDED ENVIRONMENTAL DETERMINATIONS

The following table summarizes the recommended determinations based on the environmental analysis conducted. Upon approval, these determinations become affirmed, per 22 CFR 216. Specified conditions, detailed in Section 5, become mandatory obligations of implementation, per ADS 204.

TABLE 4: ENVIRONMENTAL DETERMINATIONS

Intervention Category	Categorical Exclusion Citation (if applicable)	Negative Determination	Positive Determination ⁴	Deferral ⁵
Intervention Category 1: Direct and Capacity Building Support for Health Service Delivery, Excluding Commodity Procurement/ Supply Chain Strengthening				
Sub-activity 1.1: Provide information sharing opportunities with other activities host country authorities, healthcare staff, and individuals	§216.2(c)(2)(viii) Programs involving nutrition, health care or family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)	☐	☐	☐
Sub-activity 1.2: Strengthen governance and strategic planning	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs	☐	☐	☐

⁴ Positive Determinations require preparation of a Scoping Statement and Environmental Assessment.

⁵ Deferrals must be cleared through an Amendment to this IEE prior to implementation of any deferred activities.

	include activities directly affecting the environment (such as the construction of facilities, etc.)			
Sub-activity 1.3: Provide awareness activities, capacity building, training, workshops, and education	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)	☐	☐	☐
Sub-activity 1.4: Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)	☐	☐	☐
Sub-activity 1.5: Provide health service delivery activities (i.e., medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.) with capacity building and training opportunities.	☐	☒	☐	☐
Intervention Category 2: Direct Procurement of Commodities & Strengthening of Commodities, Logistics & Diagnostic Systems				
Sub-activity 2.1: Develop pre-qualification standards for product procurement	§216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 2.2: Review and selection of products available from manufacturers	§216.2(c)(2)(v) Document and information transfers	☐	☐	☐

Sub-activity 2.3: Establish monitoring inventories indicators and document shelf-life	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops, and meetings	☐	☐	☐
Sub-activity 2.4: Support forecasting and supply planning of pharmaceutical and other health-related products		☒	☐	☐
Sub-activity 2.5: Support and strengthen warehouse information and inventory management technology systems.		☒	☐	☐
Sub-activity 2.6: Assess the distribution networks, in-country logistic service providers, and warehousing capacity building actions	(iii) Analyses, studies, academic or research workshops and meetings; (v) Document and information transfers;	☐	☐	☐
Sub-activity 2.7: Implement and develop clinical laboratory services and result return systems		☒	☐	☐
Sub-activity 2.8: Support the government in the setup of a private laboratory network		☒	☐	☐
Sub-activity 2.9: Provide capacity building, education, and training support on waste management		☒	☐	☐
Intervention Category 3: Waste, collection, storage, recycling, treatment, and disposal of health commodities, general medical supplies, and equipment				
Sub-activity 3.1: Provide capacity building, education, and training support on waste management and health service delivery activities (i.e., providing		☒	☐	☐

medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.).				
Sub-activity 3.2: Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control)		☒	☐	☐
Sub-activity 3.3: Procurement, installation, commissioning, management, and maintenance of hazardous waste treatment equipment (EXCEPT construction related to the installation of hazardous waste treatment equipment)		☐	☒	☐
Intervention Category 4: Implementation of indoor residual spraying (IRS)				
Sub-activity 4.1: Provide procurement, distribution/delivery, storage, application, and disposal of waste associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved insecticides services.		☐	☒	☐
Sub-activity 4.2: Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.		☒	☐	☐
Intervention Category 5: Distribution of insecticide-treated mosquito nets (ITNs)				
Sub-activity 5.1: Provide procurement, distribution/delivery, storage, and waste disposal associated with World		☐	☒	☐

Health Organization Pre-Qualified (WHO/PQ) ITNs services				
Sub-activity 5.2: Provide provision of operational support (e.g., training, supervision, community mobilization) for ITNs programs		☒	☐	☐
Intervention Category 6: Conduct entomological surveillance and vector control monitoring and research				
Sub-activity 6.1: Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the Anopheles. gambiae, An. coluzzii, An. funestus, An. Arabiensis, An. Stephensi, and other Anopheles in malaria vector country.	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops, and meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 6.2: Determine the bio-efficacy, as well as the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on Anopheles populations under field conditions to generate data for the strategic vector control in areas at risk of malaria transmission worldwide	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and Meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 6.3: Provide provision of monitoring and evaluation support for insecticides, ITNs, IRS programs	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and Meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐

Intervention Category 7: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.

Sub-activity 7.1: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.		☒	☐	☐
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Intervention Category 8: Conduct small-scale construction activities

Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, laboratories, healthcare facilities, hospitals HCWM facilities, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m ² .		☒	☐	☐
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Intervention Category 9: Resource/ Financial Mobilization

Sub-activity 9.1: Transfer of resources to promote health strengthening efforts	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐
Sub-activity 9.2: Improve budgeting and financial management systems	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings;	☐	☐	☐

	§216.2(c)(2)(v),(v) Document and information transfers			
Sub-activity 9.3: Health support activities; evaluations, studies, surveys, etc.	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐

4.2 CLIMATE RISK MANAGEMENT

The Climate Risk Management (CRM) screening identifies climate-related risks to activities that should be addressed to enhance resilience and safeguard activity development objectives. This screening is part of implementing the Reference for ADS Chapter 201 “Climate Risks Management for USAID Projects and Activities.”⁶

This section summarizes the methodology used and findings of the screening, in accordance with [ADS 201mal](#). The project design team, in consultation with the CIL, considered the potential impact of climate risks/stressors (changing precipitation patterns, rising temperature, floods, droughts, fires, landslides, etc.) on the sustainability and performance of the activities through the CRM screening. The Mission will share CRM results with partners and include climate risk considerations in solicitations and work plan development when appropriate (see Annex 1 for the complete CRM table).

As described in USAID 2020⁷, the East Africa region, where Uganda is located, is projected to experience the following changes in climate by 2050:

- Increased average annual temperature by 1–3°C
- Increased frequency and duration of heat waves (+4 to 36 days)
- Shift in rainfall seasonality, including increased October–December precipitation and decreased March–May precipitation, and an increase in inter-seasonal and interannual rainfall variability
- Increased frequency and intensity of heavy precipitation events
- Intensified drought occurrence

⁶ Reference to ADS Chapter 201: <https://www.usaid.gov/ads/policy/200/201mal>

⁷ USAID, 2020, “Climate Risk Profile: East Africa,”
https://www.climate-links.org/sites/default/files/asset/document/2020_USAID_ATLAS_CRP-East-Africa-Regional.pdf

Uganda's health services are highly vulnerable to climate change impacts, including:

- Increased frequency and magnitude of flooding can increase damage to infrastructure and disrupt construction
- Increased flooding and landslides could block roads, disrupt communication networks, and damage buildings and facilities, affecting ability to carry out capacity-building activities, health service delivery, and health supply chains
- Climate change shocks and stressors could negatively impact people's livelihoods, decreasing incomes and reducing ability to access medications or health services
- Increased temperatures and precipitation could increase mosquito populations, increasing the spread of malaria and affecting activities related to malaria prevention

METHODOLOGY

The CRM screening was conducted through a desk review, followed by a screening assessment by USAID staff. The desk review included reviewing:

- Project specific information, including available descriptions of project activities;
- Climate and governance information, including information specific to Uganda, such as:
 - USAID Uganda Country Development Cooperation Strategy (CDCS) 2016-2021 Climate Change Annex⁸
 - USAID Climate Risk Profile: East Africa⁹
 - USAID Uganda Climate Vulnerability Profile¹⁰
 - World Bank Climate Risk Country Profile: Uganda¹¹
 - Uganda Health Supply Chain Program: Final Report¹²
 - Health supply chain system in Uganda: current issues, structure, performance, and implications for systems strengthening¹³

Following this desk review, the project design team engaged in a facilitated process to confirm risks for each intervention category; to rate risks as high, moderate, or low; and to define appropriate actions to respond to risks rated high and moderate.

RISK RATINGS AND DEFINED ACTIONS

The following summarizes the risk screening findings and actions. The complete results of the CRM screening are provided in Annex 1.

⁸ USAID, 2016, "USAID Uganda Country Development Cooperation Strategy 2016-2021," https://www.usaid.gov/sites/default/files/documents/1860/CDCS_FINAL_26092017.tags_.pdf

⁹ USAID, 2020, "Climate Risk Profile: East Africa," https://www.climatelinks.org/sites/default/files/asset/document/2020_USAID_ATLAS_CRP-East-Africa-Regional.pdf

¹⁰ USAID, 2012, "Uganda Climate Vulnerability Profile," https://www.climatelinks.org/sites/default/files/asset/document/uganda_climate_vulnerability_profile_jan2013.pdf

¹¹ World Bank, 2020, "Climate Risk Country Profile: Uganda," https://climateknowledgeportal.worldbank.org/sites/default/files/2020-06/15464-WB_Uganda%20Country%20Profile-WEB_v1.pdf

¹² USAID, 2020, "Uganda Health Supply Chain Program: Final Report," https://pdf.usaid.gov/pdf_docs/PA00WZZ3.pdf

¹³ Lugada, E., Komakech, H., Ochola, I., Mwebaze, S., Oteba, M.O., and Ladwar, D.O., 2022, "Health supply chain system in Uganda: current issues, structure, performance, and implications for systems strengthening," <https://joppp.biomedcentral.com/articles/10.1186/s40545-022-00412-4>

Health Service and Value Chain Risks: Climate change could affect health through increased heat-related illnesses, malaria, waterborne illnesses, and malnutrition due to decreased agricultural production; this may require an increase in capacity-building for healthcare services. Increased flooding and landslides could block roads and damage buildings, disrupting health service delivery, supply chains, and capacity-building activities. Climate shocks that affect livelihoods may decrease ability of people to access medications or health services.

- Risks that may require an increase in capacity-building for healthcare are rated low. Risks that may disrupt health service delivery and supply chains are rated moderate. Risks that decrease accessibility of medication and health services are moderate.

Malaria Activity and Treatment Risks: Climate change could increase mosquito populations, requiring activities to consider this in planning. Increased flooding and landslides could block roads and damage buildings, disrupting activities such as indoor residual spraying (IRS) and distribution of insecticide-treated nets (ITNs).

- Risks of climate change to increases in mosquito populations are moderate. Risks that disrupt implementation of IRS are moderate, while risks that affect distribution of ITNs are rated moderate.

Construction Risks: Increased flooding could increase damage to infrastructure and disrupt construction; this may vary depending on region.

- Risks to construction and infrastructure are moderate to high depending on region.
- Engineering analysis preceding design activities must include consideration of climate change and its potential impacts on the location (siting), functionality and sustainability of resulting infrastructure and infrastructure services. Such analysis must include identification of relevant data sets and gaps, review of local building standards and codes for adequacy; and determination of safety factors or other measures of uncertainty that will be carried through design. The results of this analysis, including risks identified and how they are addressed, shall be documented.

The project team has identified activity actions and analyses to respond to these risks, as documented in Annex 1. These action and activities will be integrated into solicitation language, workplans and EMMPs, and monitored by the AOR/COR. These recommendations include:

- Develop and deliver training programs for healthcare service providers and stakeholders to raise awareness and knowledge of impacts of climate change on health.
- Consider climate change's disproportionate impacts on vulnerable communities when planning health services delivery and incorporate in capacity building activities.
- Integrate climate change into contingency planning and increase access to and use of quality meteorological information and early warning services to reduce the risk of climate change impacts to supply chains.
- Carry out flood risk management measures, such as improved drainage or nature-based solutions that reduce flooding.
- Incorporate climate-related indicators in monitoring of malaria vector populations and distribution.

- Incorporate climate change into design standards for infrastructure. Engineering analysis preceding design activities must, where appropriate, include consideration of climate change and its potential impacts on the location (siting), functionality and sustainability of resulting infrastructure and infrastructure services. Such analysis must include identification of relevant data sets and gaps, review of local building standards and codes for adequacy; and determination of safety factors or other measures of uncertainty that will be carried through design. The results of this analysis, including risks identified and how they are addressed, shall be documented.

5.0 CONDITIONS AND MITIGATION MEASURES

5.1 CONDITIONS

The environmental determinations in this IEE are contingent upon full implementation of the following general implementation and monitoring requirements, as well as ADS 204 and other relevant requirements.

5.1.1 During Pre-Award:

- 5.1.1.1 Pre-Award Briefings: As feasible, the design team and/or the cognizant environmental officer(s) (e.g., MEO, REA, BEO) will provide a pre-award briefing for potential offerors on environmental compliance expectations/responsibilities at bidders' conferences.
- 5.1.1.2 Solicitations: The design team, in coordination with the A/CO, will ensure solicitations include environmental compliance requirements and evaluation criteria. A/CO will ensure technical and cost proposal requirements include approach, staffing, and budget sufficient for complying with the terms of this IEE.
- 5.1.1.3 Awards: The A/COR, in coordination with the A/CO, will ensure all awards and sub-awards include environmental compliance requirements.

5.1.2 During Post-Award:

- 5.1.2.1 Post-Award Briefings: The A/COR and/or the cognizant environmental officer(s) (e.g., MEO, REA, BEO) will provide post-award briefings for the IP on environmental compliance responsibilities.
- 5.1.2.3 Workplans and Budgeting: The A/COR will ensure the IP integrates environmental compliance requirements in work plans and budgets to comply with requirements, including EMMP implementation and monitoring.
- 5.1.2.4 Staffing: The A/COR, in coordination with the IP, will ensure all awards have staffing capacity to implement environmental compliance requirements.
- 5.1.2.5 Records Management: The A/COR will maintain environmental compliance documents in the official project/activity file and upload records to the designated USAID environmental compliance database system.
- 5.1.2.6 Host Country Environmental Compliance: The A/COR will ensure the IP complies with applicable and appropriate host country environmental requirements unless otherwise directed in writing by USAID. However, in the case of a conflict between the host country and USAID requirements, the A/COR must contact the MEO for guidance.
- 5.1.2.7 Work Plan Review: The A/COR will ensure the IP verifies, at least annually or when activities are added or modified, that activities remain within the scope of the IEE. Activities outside of the scope of the IEE cannot be implemented until the IEE is amended.

- 5.1.2.8 IEE Amendment: If new activities are introduced or other changes to the scope of this IEE occur, an IEE Amendment will be required.
- 5.1.2.14 USAID Monitoring Oversight: The A/COR or designee, with the support of the cognizant environmental officer(s) (e.g., MEO, REA, BEO), will ensure monitoring of compliance with established requirements (e.g., by desktop reviews, site visits, etc.).
- 5.1.2.16 Environmental Compliance Mitigation and Monitoring Plan: The A/COR will ensure the IP develops, obtains approval for, and implements Environmental Mitigation and Monitoring Plans (EMMPs) that are responsive to the stipulated environmental compliance requirements.
- 5.1.2.17 Environmental Compliance Reporting: The A/COR will ensure the IP includes environmental compliance in regular project/activity reports, using indicators as appropriate; develops and submits the Environmental Mitigation and Monitoring Reports (EMMRs); and completes and submits a Record of Compliance (RoC) describing their implementation of EMMP requirements in conjunction with the final EMMR or at the close of sub activities (as applicable). And where required by Bureaus or Missions, ensure the IP prepares a closeout plan consistent with contract documentation for A/COR review and approval that outlines responsibilities for end-of-project operation, the transition of other operational responsibilities, and final EMMR with lessons learned.
- 5.1.2.18 Corrective Action: When noncompliance or unforeseen impacts are identified, IPs notify the A/COR, place a hold on activities, take corrective action, and report on the effectiveness of corrective actions. The A/COR initiates the corrective action process and ensures the IP completes and documents their activities. Where required by Bureaus or Missions, ensure Record of Compliance is completed.

5.2 AGENCY CONDITIONS

- 5.2.1 Sub-award Screening: The A/COR will ensure the IP uses an adequate environmental screening tool to screen any sub-award applications and to aid in the development of EMMPs.
- 5.2.2 Programmatic IEEs (PIEE): PIEEs stipulate requirements for additional environmental examination of new or country specific projects/activities. The A/COR of any project/activity being implemented under a PIEE will ensure appropriate reviews are conducted, typically through a Supplemental IEE, and approved by the cognizant BEO.
- 5.2.3 Supplemental IEEs (SIEEs): An SIEE will be prepared for any new project/activity being planned which fall under a PIEE. The SIEE will provide more thorough analysis of the planned activities, additional geographic context and baseline conditions as well as specific mitigation and monitoring requirements.
- 5.2.4 Other Supplemental Analyses: The A/COR will ensure supplemental environmental analyses that are called for in the IEE are completed and documented.

- 5.2.5 Resolution of Deferrals: If a deferral of the environmental threshold determination was issued, the A/COR will ensure that the appropriate 22CFR216 environmental analysis and documentation is completed and approved by the BEO before the subject activities are implemented.
- 5.2.6 Positive Determination: If a Positive Determination threshold determination was made, the A/COR will ensure a Scoping Statement, and if required an Environmental Assessment (EA), is completed and approved by the BEO before the subject activities are implemented.
- 5.2.7 Compliance with human subject research requirements: The AM, A/COR shall assure that the IP and sub-awardees, -grantees, and -contractors demonstrate completion of all requirements for ethics review and adequate medical monitoring of human subjects who participate in research trials carried out through this IEE and ensure appropriate records are maintained. All documentation demonstrating completion of required review and approval of human subject trials must be in place prior to initiating any trials and cover the period of performance of the trial as described in the research protocol.

5.3 MITIGATION MEASURES

The mitigation measures presented in this section constitute the minimum required based on available information at the time of this IEE and the environmental analysis in Section 4. These measures shall provide general direction for completing the project/activity Environmental Mitigation and Monitoring Plan (EMMP) and/or the EA and PERSUAP, if required.

5.3.1 Healthcare Waste Standard Conditions:

1. When USAID support increases the delivery of healthcare services, such as through the provision of supplies, equipment, and/or staffing, USAID will take responsibility for ensuring the proper management of medical waste generated by the supported services; including, but not limited to, proper handling, labeling, treatment, storage, transport and final disposal.
2. When USAID supports healthcare service delivery solely or in partnership with other actors, including the host country, NGOs, CSOs, etc., USAID will ensure appropriate, sufficient, and sustainable medical waste management for the supported interventions through collaboration. If significant deficiencies* in medical waste management persist in spite of collaborative efforts, USAID must consider whether it can responsibly reallocate its resources to either independently close those gaps or to work in facilities where medical waste is properly managed. *Significant deficiencies are defined as not meeting “minimum approaches” as established by WHO Guidance for each of the following aspects of medical waste management: health care waste management policy; planning; waste minimization; segregation, storage and transport; treatment and disposal; wastewater management; waste management costing; health and safety practices; hygiene and infection control; training, education and public awareness.
3. USAID must regularly monitor the state of healthcare waste management system in the facilities it supports, and USAID should request reports on that monitoring with the same regularity as it receives reports on other programmatic objectives of the activity.
4. When reports or other information indicate significant deficiencies in the management and disposal of medical waste in a given facility (at minimum for waste resulting from

USAID's interventions), USAID will commit its resources (independently or through collaborative efforts) to a speedy correction of significant deficiencies.

5. As applicable, all efforts to strengthen or improve health commodity supply chains (e.g., pharmaceuticals, equipment, diagnostic tests kits (including malaria test kits), including procurement, storage infrastructure, and distribution must address and take all practicable efforts to assure that adequate facilities, procedures and capacities are in place to properly manage expired, used, obsolete or surplus commodities and/or that plans and strategies incorporate and provide for such management. In any instance that a USAID project controls commodities at end-of-life, appropriate end-of-life management must be assured. Mandatory references for "appropriate end of life management": WHO Guidelines for Safe Disposal of Unwanted Pharmaceuticals.
https://apps.who.int/iris/bitstream/handle/10665/85349/9789241548564_eng.pdf;jsessionid=29E4FC7B647745587FF832EB6C1E8EED?sequence=1 "Healthcare Waste" chapter, USAID Sector Environmental Guidelines: <https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/seg-healthcare-waste/pdf>
6. Any healthcare waste generated by USAID-funded training, capacity building and/or technical assistance activities must be appropriately managed, including disposal, following WHO guidelines as well as the Government mandatory procedures and guidelines.
https://apps.who.int/iris/bitstream/handle/10665/85349/9789241548564_eng.pdf;jsessionid=29E4FC7B647745587FF832EB6C1E8EED?sequence=1
7. Training, supervision, curricula development and other health care workforce capacity building must address appropriate management practices concerning the proper handling, use, and disposal of medical waste, including blood, sputum, and sharps, when techniques or care situations being addressed would generate and require disposal of hazardous or highly hazardous waste (e.g. sharps, afterbirth from delivery, waste from screening for HIV or STDs, sputum samples for diagnosis of TB). Note that this condition applies to activities targeting home care AND community health workers, not just those in clinics and health facilities. Wherever relevant, appropriate disposal mechanisms in home-based and community-based situations that are cost effective and safe must be identified and appropriately incorporated in training, protocols, and guidelines. This includes training home care and community health workers to deliver positive messages about personal and household hygiene, sanitation, and proper disposal of condoms and other potentially harmful materials.

PROJECT/ACTIVITY 1: TITLE: DIRECT AND CAPACITY BUILDING SUPPORT FOR HEALTH SERVICE DELIVERY, EXCLUDING COMMODITY PROCUREMENT/ SUPPLY CHAIN STRENGTHENING

TABLE 5A. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 1

Project/Activity	Mitigation Measure(s)
Sub-activity 1.1: Provide information sharing opportunities with other activities host country authorities, healthcare staff, and individuals	Categorical Exclusion; no conditions or mitigation measures are required.
Sub-activity 1.2: Strengthen governance and strategic planning	

Sub-activity 1.3: Provide awareness activities, capacity building, training, workshops, and education	
Sub-activity 1.4: Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	
Sub-activity 1.5: Provide health service delivery activities (i.e., medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.) with capacity building and training opportunities.	

Negative Determination is subject to the following conditions:

- IP must have, implement, and embed a training program on standard operating procedures SOPs for the safe handling of healthcare waste (HCW). The SOP and/or waste management plan (WMP) should include segregation, containerization, handling, PPE, transportation (e.g., on-site and off-site), treatment and/or disposal, monitoring, and incident reporting.
- IP must develop, embed in training, and implement a waste management plan (WMP) or SOPs on managing treatment and/or disposal of health commodities and occupational health and safety.

Refer to the following documents for guidance when developing SOPs:

- USAID DELIVER Project. [The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities](#)
- Sector Environmental Guideline: USAID: [Healthcare Waste \(2019\)](#)
- WHO: [Safe management of waste from health-care activities](#)
- USAID: [Integrated Waste Management Plan \(IWMP\)](#)
- Sector Environmental Guideline: USAID: [Solid Waste](#)

PROJECT/ACTIVITY 2: TITLE DIRECT PROCUREMENT OF COMMODITIES & STRENGTHENING OF COMMODITIES, LOGISTICS & DIAGNOSTIC SYSTEMS

TABLE 5B. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 2

Project/Activity	Mitigation Measure(s)
Sub-activity 2.1: Develop pre-	Categorical Exclusion; no conditions or mitigation measures

qualification standards for product procurement	are required.
Sub-activity 2.2: Review and selection of products available from manufacturers	
Sub-activity 2.3: Establish monitoring inventories indicators and document shelf-life	
Sub-activity 2.4: Support forecasting and supply planning of pharmaceutical and other health-related products	Negative Determination subject to the following conditions: The IP must ensure that a supply plan is developed and reviewed to ensure it includes the following: • Conduct quantification analysis to determine supply needs and develop a supply plan. ○ Coordinate forecasting and supply planning activities with quantification team (e.g., host country officials, program staff) to meet current needs and minimize the risk of stockouts or surplus of public health commodities (PHC). ○ Procure PHCs that consider the ratio of PHCs to population, the existing supply of PHCs, and the supply of PHCs from other (non-USAID) sources. • Manage inventory of stock to minimize the potential for diversion. Refer to the following documents for guidance when developing a supply plan: • USAID DELIVER Project. Quantification of Health Commodities: A Guide to Forecasting and Supply Planning for Procurement (2014). Task Order 4. • USAID DELIVER Project. The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities (2011). • USAID. Sector Environmental Guideline: Healthcare Waste (2019). • WHO. Safe management of waste from health-care activities (2014).
Sub-activity 2.5: Support and strengthen warehouse inventory and management systems set up to strengthen warehouse systems both physical (seconding TA) and with technology	Negative Determination subject to the following conditions: Develop, implement, and train staff on standard operating procedures (SOPs) for the safe and effective storage of PHC to reduce damage or early expiration. Storage considerations include, but are not limited to: storage ambient conditions (e.g., temperature, humidity), security, stock inventory and records,

	fire control, and HCWM. Refer to the following documents for guidance when developing SOPs: • John Snow, Inc./USAID DELIVER Project in collaboration with WHO. Guidelines for the Storage of Essential Medicines and Other Health Commodities (2003). • USAID DELIVER Project. Guidelines for Warehousing Health Commodities (Second Edition 2014). Task Order 4. • USAID. Sector Environmental Guideline: Healthcare Waste (2019). • WHO. Safe management of waste from health-care activities (2014).
Sub-activity 2.6: Asses the distribution networks, in-country logistic service providers, and warehousing capacity building actions	Categorical Exclusion; no conditions or mitigation measures are required.
Sub-activity 2.7: Implement and develop clinical laboratory services and result return systems	Negative Determination subject to the following conditions: Develop, provide training for, and implement a laboratory environmental, health, and safety (EHS) Manual with standard operating procedures (SOPs) that address the management of waste streams associated with laboratory operations. Recommended components of the EHS Manual include: • Chemical hygiene plan • Safety Data Sheets (SDS) for chemicals used in the lab • Use of appropriate personal protective equipment (PPE) • Inspection and permit records • Integrated Waste Management Plan (IWMP) or SOPs providing procedures for properly handling, treating, and disposing of healthcare wastes • Spill prevention plan • Injury and illness prevention plan • Develop training requirements on SOPs and record-keeping system Refer to the following document for guidance when developing a laboratory: • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • EHS Manual: WHO. Laboratory Biosafety Manual- Third

	<u>Edition (2004)</u>
Sub-activity 2.8: Support the government in the setup of a private laboratory network	Negative Determination subject to the following conditions: Develop, provide training for, and implement a laboratory environmental, health, and safety (EHS) Manual with standard operating procedures (SOPs) that address the management of waste streams associated with laboratory operations. Recommended components of the EHS Manual include: • Chemical hygiene plan • Safety Data Sheets (SDS) for chemicals used in the lab • Use of appropriate personal protective equipment (PPE) • Inspection and permit records • <u>Integrated Waste Management Plan (IWMP)</u> or SOPs providing procedures for properly handling, treating, and disposing of healthcare wastes • Spill prevention plan • Injury and illness prevention plan • Develop training requirements on SOPs and record-keeping system Refer to the following document for guidance when developing a laboratory: • Sector Environmental Guideline: USAID: <u>Healthcare Waste (2019)</u>

	• WHO: Safe management of waste from health-care activities • EHS Manual: WHO. Laboratory Biosafety Manual- Third Edition (2004)
Sub-activity 2.9: Provide capacity building, education, and training support on waste management	Negative Determination subject to the following conditions: • IP must have, implement, and embed a training program on standard operating procedures SOPs for the safe distribution of health commodities transported in bulk in motorized vehicles. Distribution considerations include but are not limited to transport needs and availability, fleet management and monitoring, theft prevention procedures, accident and spill response, incident reporting, and vehicle maintenance. • IP must provide training to workers and drivers on the standard operating procedures SOPs developed for the safe distribution of health commodities. • IP must develop, embed in training, and implement a waste management plan (WMP) or SOPs on managing treatment and/or disposal of health commodities and occupational health and safety, including in the host country's health care supply chain systems. Refer to the following documents for guidance when developing SOPs: • USAID DELIVER Project. The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • Sector Environmental Guideline: USAID: Solid Waste

PROJECT/ACTIVITY 3: TITLE WASTE RECYCLING, TREATMENT, AND DISPOSAL OF HEALTH COMMODITIES, GENERAL MEDICAL SUPPLIES, AND EQUIPMENT

TABLE 5C. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 3

Project/Activity	Mitigation Measure(s)
Sub-activity 3.1: Provide capacity building, education, and training support on waste management	Negative Determination subject to the following conditions:

Sub-activity 3.2: Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control)	• IP must have, implement, and embed a training program on standard operating procedures SOPs for the safe distribution of health commodities transported in bulk in motorized vehicles. Distribution considerations include but are not limited to transport needs and availability, fleet management and monitoring, theft prevention procedures, accident and spill response, incident reporting, and vehicle maintenance. • IP must provide training to workers and drivers on the standard operating procedures SOPs developed for the safe distribution of health commodities. • IP must develop, embed in training, and implement a waste management plan (WMP) or SOPs on managing treatment and/or disposal of health commodities and occupational health and safety, including in the host country health care supply chain systems. Refer to the following documents for guidance when developing SOPs: • USAID DELIVER Project. The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • Sector Environmental Guideline: USAID: Solid Waste
Sub-activity 3.3: Procurement, installation, commissioning, management, and maintenance of hazardous waste treatment equipment (EXCEPT construction related to the installation of hazardous waste treatment equipment)	For incinerators with capacities ≤ 200 lbs/hour and ≤ 2000 lbs./week¹⁴ and in-ground disposal facilities $\leq 100\text{m}^3$ capacity Note that multiple installations serving a facility that in total exceed these thresholds receive a positive determination; see below: Negative Determination, per 22 CFR 216.3(a)(2)(iii), subject to the following conditions: • The USAID operating unit financing the activity must prepare a supplemental IEE (SIEE) pertaining to the <u>specific</u> site and circumstance in question as part of the decision to finance an incinerator. The COR must

¹⁴ Size definition for incinerators is based on US Clean Air Act Section 129(a)(2) implementing regulations (“Hospital Medical Infectious Waste Incineration (HMIWI) Regulation”), and conservatively combines the “very small” weekly limit and the “small” pounds/hr limit. See e.g. <http://www.combustionportal.org/hmiwi.html>. This is also in line with USAID’s PATH Incinerator Guidebook (https://www.path.org/publications/files/TS_mmis_incin_guide.pdf)

approve the SIEE approved with concurrence by the MEO, REA, and BEO prior to detailed design, procurement, or operation. The SIEE must be informed by relevant industry Environmental, Health and Safety Guidelines and require Best Management Practices.¹⁵

- If the SIEE results in a positive threshold determination, the operating unit must prepare a scoping statement and, as necessary, an EA. See below for scoping requirements pertaining to incinerators.

For incinerators > 200 lbs./hour or 2000 lbs./week and in-ground disposal facilities > 100m3 capacity*

Positive threshold determination, per 22 CFR 216.3(a)(2)(iii), with resulting scoping study and, as necessary, an EA approved by the MEO, REA, and BEO.

- Scoping studies for incinerators must analyze, at a minimum: the waste stream content and quantity, required pollution control technology, the capacity of the host country to manage and operate the incinerator to comply with environmental and health standards, estimated operating costs, and other factors that the COR and BEO may determine necessary to ensure successful operation of the incinerator.
- The scoping study will outline the pollution control technology that will be required with the procurement to ensure that the incinerator operates within and does not exceed the WHO or host country air quality standards. The result of the scoping study may result in the preparation of a full EA. The scoping statement must be informed by relevant industry Environmental, Health and Safety Guidelines and Best Management Practices. Incinerators must contain adequate air pollution control technology to ensure compliance with host country guidelines and applicable international air-quality emission requirements, including:
 - 74 FR 51367: US Environmental Protection Agency. Standards of Performance for New Stationary Sources and Emissions Guidelines for Existing Sources: Hospital/Medical/Infectious Waste Incinerators; Final Rule. October 6, 2009.
 - Directive 2000/76/EC: Of the European Parliament and of the Council of 4 December

¹⁵ <http://www.ifc.org/wps/wcm/connect/1cd72a00488557cfbdf4ff6a6515bb18/Final+-+Waste+Management+Facilities.pdf?MOD=AJPERES>

	2000 on the incineration of waste. • AP 42 and Emission Factors: US Environmental Protection Agency. • Ugandan National Regulations
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PROJECT/ACTIVITY 4: TITLE: IMPLEMENTATION OF INDOOR RESIDUAL SPRAYING (IRS)

TABLE 5D. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 4

Project/Activity	Mitigation Measure(s)
Sub-activity 4.1: Provide procurement, distribution/delivery, storage, application, and disposal of waste associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved Malaria Vector control insecticides services.	Positive Determination: USAID completed an Integrated Vector Control Programmatic Environmental Assessment in 2017 which addresses the Positive Determination for the Malaria Vector control: 2017 IVM PEA. The Mission shall carry out the Uganda Malaria Vector Control Supplemental Environmental Assessment. IRS activities must comply with the requirements of the 2017 Malaria Vector Control PEA and the Uganda SEA. Training of spray operators must conform to PMI Best Management Practices for IRS, available at: www.fightingmalaria.gov/technical/pest/bmp_manual_aug10.pdf Procurement and distribution of Insecticide Treated Bednets (ITNs): As referenced in the BEO Specified Conditions, the results of the Initial Site Assessment will inform mitigation measures that may be needed to prevent or reduce misuse and may indicate the need for further analysis. The Initial Site Assessment must be approved by the MEO, and completed within 6 months from the date of issue of this IEE. The results of the Initial Site Assessment must be shared with the BEO upon completion, along with recommended mitigation measures. Based upon the results of the Initial Site Assessment, the BEO will work with the Mission to evaluate whether the recommended mitigation measures are appropriate for continued implementation of the bednet activity, or whether further investigations are necessary. Additional investigations would likely take the form of the Rapid Assessment detailed in the Toolkit. At that time, this IEE will be amended accordingly. Refer to the 2018 PMI Toolkit for

	guidance on initiating this process. The Initial Site Assessment should include the following: • Survey the extent of misuse of bednets for fishing in the activity area using the list of recommended stakeholders and guiding questions outlined on page 5 of the 2018 PMI Toolkit. If no reports or evidence is found through consultations and observations, the activity should document the findings and continue to monitor for any changes in the zone of influence. If the survey indicates occurrences or prevalence of misuse for fishing, a full rapid assessment should be completed to thoroughly evaluate the magnitude, impact, and drivers of the issue. • Once the scope, scale, actors, and drivers of the issue is characterized, the Country Office must work with implementing partners and local stakeholders to identify interventions and mitigate the misuse. • Mitigation measures should be considered at the procurement, distribution, and disposal phases of ITNs, and may include enforcement of stiff penalties for ITN use in fishing, social behavior change communication campaigns, development of an accountability system for distribution, or other regionally appropriate measures. • Refer to Annex L of the 2017 IVM PEA for a list of potential mitigation measures which should be applied to the extent possible in order to reduce the potential for impact on aquatic ecosystems. Identifying and Mitigating Misuse of Insecticide-Treated Nets for Fishing Toolkit: https://drive.google.com/file/d/1tXue5o6PkU3B2DzewY7QctMKpSGG8ztk/view?usp=sharing Integrated Vector Management Programs for Malaria Vector Control, 2017 Programmatic Environmental Assessment: https://drive.google.com/file/d/1St5nlkxVs9R-w3U0opgnYO_O94dFu9n7/view?usp=sharing • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • USAID: Integrated Vector Management Programs for Malaria Vector Control Programmatic Environmental Assessment. • Sector Environmental Guideline: USAID: Safer Use Pesticides • Sector Environmental Guideline: USAID: Solid Waste
Sub-activity 4.2: Provide operational support (e.g., training, supervision,	Negative Determination subject to the following conditions:

community mobilization) for insecticide programs.

- Upon the appropriate the documentation completion, the following actions must occur:
 - Procurement and inventory logs must be maintained.
 - Ensure storage facility and personal protective equipment (PPE) are appropriate for the active ingredient used and in accordance with approved SOPs.
 - Distribute insecticides to facilities that can manage such commodities safely in storage, use, and disposal.
 - The health test of all spray team members for duty fitness.
 - Train all workers with potential insecticide contact on the use of PPE.
 - Train operators on mixing insecticides and the proper use and maintenance of application equipment.
 - Enforce application and cleanup procedures.
 - Implement Information, Education, and Communication (IEC) campaigns to inform homeowners of responsibilities and precautions.
 - Storage facilities and vehicles must be physically secured to prevent theft.
 - Maintain records of all insecticide receipts, issuance, and return of empty containers.
 - Conduct analysis comparing the number of houses treated vs. the number of containers used.
 - Examine houses treated to confirm the application.
 - Perform physical inventory counts during the application season.
 - Ensure application equipment and PPE are appropriate for the active ingredient used and in accordance with approved SOPs and maintain equipment to avoid leaks.
 - Handling, treatment, and disposal of nonhazardous (general waste) and hazardous wastes must be in accordance with the approved WMP/SOPs and the PMI BMPs.
 - Choose sites for disposal of liquid wastes, including fixed and mobile soak pit sites according to PMI BMPs
 - Maintain soak pits as necessary during the season.
 - Monitor waste storage and management during the campaign.
 - Monitor disposal procedures post-campaign.
 - Wastes will only be disposed of in incinerators that comply with PMI BMPs

Refer to the following documents for guidance when developing

	material(s): • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • USAID: Integrated Vector Management Programs for Malaria Vector Control Programmatic Environmental Assessment.
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PROJECT/ACTIVITY 5: TITLE DISTRIBUTION OF INSECTICIDE-TREATED MOSQUITO NETS (ITNS)

TABLE 5E. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 5

Project/Activity	Mitigation Measure(s)
Sub-activity 5.1: Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) ITNs services	Positive Determination: USAID has in place the 2017 IVM PEA which addresses the Positive Determination. The PEA states in Annex L (Recommended LLIN Mitigation Measures): “where there is evidence of misuse for fishing, assess extent of misuse and collaborate across sectors to develop a sustainable, locally relevant solution”. The 2018 PMI guidance document, “Identifying and Mitigating Misuse of Insecticide-Treated Nets for Fishing Toolkit”, specifies an approach that programs distributing ITNs can utilize to evaluate the extent of the misuse of ITNs for fishing in their country. As referenced in the BEO Specified Conditions, the results of the Initial Site Assessment will inform mitigation measures that may be needed to prevent or reduce misuse and may indicate the need for further analysis. The scope of work for the Initial Site Assessment must be approved by the MEO, and completed within 6 months from the date of issue of this IEE. The results of the Initial Site Assessment must be shared with the BEO upon completion, along with recommended mitigation measures. Based upon the results of the Initial Site Assessment, the BEO will work with the Mission to evaluate whether the recommended mitigation measures are appropriate for continued implementation of the bednet activity, and whether more investigations are necessary. Additional investigations would likely take the form of the Rapid Assessment detailed in the Toolkit. At that time, this IEE will be amended accordingly. Refer to the 2018 PMI Toolkit for guidance on initiating this process. The evaluation should include the following: • Survey the extent of misuse of bednets for fishing in

	the activity area using the list of recommended stakeholders and guiding questions outlined on page 5 of the 2018 PMI Toolkit. If no reports or evidence is found through consultations and observations, the activity should document the findings and continue to monitor for any changes in the zone of influence. If the survey indicates occurrences or prevalence of misuse for fishing, a full rapid assessment should be completed to thoroughly evaluate the magnitude, impact, and drivers of the issue. • Once the scope, scale, actors, and drivers of the issue is characterized, the Country Office must work with implementing partners and local stakeholders to identify interventions and mitigate the misuse. • Mitigation measures should be considered at the procurement, distribution, and disposal phases of ITNs, and may include enforcement of stiff penalties for ITN use in fishing, social behavior change communication campaigns, development of an accountability system for distribution, or other regionally appropriate measures. • Refer to Annex L of the 2017 IVM PEA for a list of potential mitigation measures which should be applied to the extent possible in order to reduce the potential for impact on aquatic ecosystems. Refer to the following documents for guidance when developing material(s): • Identifying and Mitigating Misuse of Insecticide-Treated Nets for Fishing Toolkit • Integrated Vector Management Programs for Malaria Vector Control, 2017 Programmatic Environmental Assessment • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • USAID. Integrated Vector Management Programs for Malaria Vector Control
Sub-activity 5.2: Provide provision of operational support (e.g., training, supervision, community mobilization) for ITNs programs	Negative Determination subject to the following conditions: • The USAID-supported malaria program is subject to the USAID Programmatic Environmental Assessment criteria, IEE and/or country SIEE and SEA, and host country requirements. Upon the proper documentation completion, the following actions must occur: ○ Storage facilities and vehicles must be physically secured to prevent theft.

	- Where there is evidence of misuse for fishing, assess the extent of misuse and collaborate across sectors (Ministries of Health, Environment, Fisheries, and Agriculture) to develop a sustainable, locally relevant solution (e.g., SBC, monitoring). - Store ITNs in dry, ventilated, secure facilities, and on pallets (off the ground). - Do not store ITNs with food, feed, or potable water supplies. - Provide worker training on the proper handling of ITNs. - Ensure that SBC activities are coordinated with ITN distribution activities during campaigns as well as normal distribution and include guidelines on how to wash properly and care for ITNs (e.g., discourage disposal of wash water in sensitive ecosystems, discourage washing of ITNs in water bodies). - Ensure that SBC messages inform campaign distributors and local communities about the potential harm to human health and the environment if bags and baling materials are reused; support the development of a communication plan that provides messages on best practices for handling and disposing bags and baling materials. Refer to the following documents for guidance when developing material(s): - Sector Environmental Guideline: USAID: Healthcare Waste (2019) - WHO: Safe management of waste from health-care activities - USAID: Integrated Waste Management Plan (IWMP) - USAID. Integrated Vector Management Programs for Malaria Vector Control Programmatic Environmental Assessment. - Sector Environmental Guideline: USAID: Safer Use Pesticides - Sector Environmental Guideline: USAID: Solid Waste
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PROJECT/ACTIVITY 6: TITLE CONDUCT ENTOMOLOGICAL SURVEILLANCE AND VECTOR CONTROL MONITORING AND RESEARCH

TABLE 5F. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 6

Project/Activity	Mitigation Measure(s)
Sub-activity 6.1: Perform	Categorical Exclusion: no conditions or mitigation measures

surveillance to gather information on the seasonality, density, behavior, and habitat indices of the <i>Anopheles gambiae</i> , <i>An. coluzzii</i> , <i>An. funestus</i> , <i>An. Arabiensis</i> , <i>An. Stephensi</i> , and other <i>Anopheles</i> in malaria vector country.	are required.
Sub-activity 6.2: Determine the bio-efficacy, as well as the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on <i>Anopheles</i> populations under field conditions to generate data for the strategic vector control in areas at risk of malaria transmission worldwide	
Sub-activity 6.3: Provide provision of monitoring and evaluation support for insecticides, ITNs, IRS programs	

PROJECT/ACTIVITY 7: TITLE: BUILD CAPACITY AND NMCP, DHMTs, AND OTHER GOU AGENCIES TO IMPLEMENT IRS AND ITN CAMPAIGNS

TABLE 5G. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 7

Project/Activity	Mitigation Measure(s)
Sub-activity 7.1: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.	Negative Determination subject to the following conditions: Develop an Integrated Waste Management Plan (IWMP) that includes procedures for treating and/or disposing of IRS and ITN wastes in conformance with international best management practices. The plan should include, but not be limited to: proper handling and storage of wastes (including PPE), containers and labeling, safe treatment and/or disposal practices and procedures, documentation requirements (e.g., waste treatment and/or disposal records). Refer to the following documents for guidance when developing an IWMP: - WHO. Pesticides and Their Application: For the Control of Vectors and Pests of Public Health Importance (2006). - FAO. International Code of Conduct on the Distribution

	<u>and Use of Pesticides: Guidelines on Management Options for Empty Pesticide Containers</u>. (May 2008). - Chandonait, Peter. <u>President's Malaria Initiative BMP Manual Best Management Practices (BMP) For Indoor Residual Spraying (IRS) In Vector Control Interventions</u>. (February 2015) PMI Africa IRS (AIRS) Project, Abt Associates Inc. - USAID. <u>Sector Environmental Guideline: Healthcare Waste Management</u> (2019).
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PROJECT/ACTIVITY 8: TITLE: CONDUCT SMALL-SCALE CONSTRUCTION ACTIVITIES

TABLE 5H. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 8

Project/Activity	Mitigation Measure(s)
Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, healthcare facilities, laboratories, hospitals, HCWM facilities, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m ² .	Negative Determination subject to the following conditions: The IP is required to perform the following: - Obtain all needed authorizations before construction: permits, environmental and social impact assessments, as required by host country procedures. - Retain competent, licensed professionals to design and supervise construction - Establish health, safety and environmental obligations in all contracts. - Complete a site emergency action plan - Provide safety training to all workers using construction equipment. - Identify closest health care facility to handle injuries. - Develop and follow a waste management plan (WMP). - Identify authorized recycling or disposal facilities before the generation of waste. - Ensure all workers are trained and dispose of wastes properly. - Contractors comply with the minimum recommended Occupational Safety and Health practices for construction (Construction Sector Environmental Guideline, Annex 3). See: https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/sector-environmental-guidelines-resources#co - Undertake individual site assessments and any construction activities that are likely to adversely affect threatened or endangered species would require an environmental assessment regardless of the scope or size of the construction activity. (The IP must specify an appropriate instrument for the site assessments for

	approval as part of the EMMP.) Refer to the following documents for guidance when developing material(s): • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • Sector Environmental Guideline: USAID: Construction • Sector Environmental Guideline: USAID: Solid Waste Sector Environmental Guideline: USAID: Healthcare Facilities
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PROJECT/ACTIVITY 9: TITLE: RESOURCE/ FINANCIAL MOBILIZATION

TABLE 5I. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 9

Project/Activity	Mitigation Measure(s)
Sub-activity 9.1: Transfer of resources to promote health strengthening efforts	Categorical Exclusion: no conditions or mitigation measures are required.
Sub-activity 9.2: Improve budgeting and financial management systems	
Sub-activity 9.3: Health support activities: evaluations, studies, etc.	

6.0 LIMITATIONS OF THIS INITIAL ENVIRONMENTAL EXAMINATION

The determinations recommended in this document apply only to projects/activities and sub-activities described herein. Other projects/activities that may arise must be documented in either a separate IEE, an IEE amendment if the activities are within the same project/activity, or other type of environmental compliance document and shall be subject to an environmental analysis within the appropriate documents listed above.

Other than projects/activities determined to have a Positive Threshold Determination, it is confirmed that the projects/activities described herein do not involve actions normally having a significant effect on the environment, including those described in 22 CFR 216.2(d).

In addition, other than projects/activities determined to have a Positive Threshold Determination and/or a pesticide management plan (PERSUAP), it is confirmed that the projects/activities described herein do not involve any actions listed below. Any of the following actions would require additional environmental analyses and environmental determinations:

- Support project preparation, project feasibility studies, or engineering design for activities listed in §216.2(d)(1);
- Affect endangered and threatened species or their critical habitats per §216.5, FAA 118, FAA 119;
- Provide support to extractive industries (e.g. mining and quarrying) per FAA 117;
- Promote timber harvesting per FAA 117 and 118;
- Lead to new construction, reconstruction, rehabilitation, or renovation work per §216.2(b)(1);
- Support agro-processing or industrial enterprises per §216.1(b)(4);
- Provide support for regulatory permitting per §216.1(b)(2);
- Lead to privatization of industrial facilities or infrastructure with heavily polluted property per §216.1(b)(4);
- Research, testing, or use of genetically engineered organisms per §216.1(b)(1), ADS 211
- Assist the procurement (including payment in kind, donations, guarantees of credit) or use (including handling, transport, fuel for transport, storage, mixing, loading, application, clean-up of spray equipment, and disposal) of pesticides or activities involving procurement, transport, use, storage, or disposal of toxic materials. Pesticides cover all insecticides, fungicides, rodenticides, etc. covered under the Federal Insecticide, Fungicide, and Rodenticide Act per §216.2(e) and §216.3(b).

7.0 REVISIONS

Per 22 CFR 216.3(a)(9), when ongoing programs are revised to incorporate a change in scope or nature, a determination will be made as to whether such change may have an environmental impact not previously assessed. If so, this IEE will be amended to cover the changes. Per ADS 204, it is the responsibility of the USAID A/COR to keep the MEO/REA and BEO informed of any new information or changes in the activity that might require revision of this environmental analysis and environmental determination.

ATTACHMENTS:

Annex 1: Climate Risk Management Summary Table

Annex 2: AFR Environmental Review Form/Environmental Review Report

ANNEX 1. CLIMATE RISK MANAGEMENT SUMMARY TABLE

Defined or Anticipated Project Elements ¹⁶	Climate Risks ¹⁷	Risk Rating ¹⁸	How Risks are Addressed at Project Level ¹⁹	Further Analysis and Actions for Activity Design/ Implementation ²⁰	Opportunities to Strengthen Climate Resilience ²¹
Intervention Category 1: Direct and Capacity Building Support for Health Service Delivery, Excluding Commodity Procurement/Supply Chain Strengthening ● Provide information sharing opportunities with other activities' host country authorities, healthcare staff, and individuals ● Strengthen governance and strategic planning ● Provide awareness activities, capacity building, training, workshops, and education ● Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	Climate change could impact health through heat-related illnesses, increased incidences of malaria and other endemic diseases in Uganda, flooding that increases outbreaks of waterborne disease like dengue and cholera, and impacts to agriculture that reduce food security and increase malnutrition. Climate change could also worsen health for patients with existing illnesses such as HIV/AIDS. These could increase the number of patients that need care throughout Uganda, requiring an increase in capacity-building for healthcare services to meet the need of patients.	Low	Climate risks are not addressed at the project level.	Develop and deliver training programs for healthcare service providers and stakeholders to raise awareness and knowledge of impacts of climate change on health. Work with community members to identify alternate locations/travel routes or methods to deliver health services and capacity-building activities.	Conduct further analysis on climate change effects to health service delivery.
	Increases in flooding and landslides could block access routes, damage healthcare facilities, and disrupt supply chains, affecting ability to carry out capacity-building activities and service delivery.	Moderate			
	Climate change shocks and stressors could negatively impact people's health	Low			

¹⁶ Purpose/Sub-purpose, Area of Focus, or Activity/ Mechanism, etc.

¹⁷ List key risks related to the project elements identified through either the strategy- or project-level climate risk assessment.

¹⁸ Low/Moderate/ High

¹⁹ Describe how risks have been addressed at the project level. If a decision has been made to accept the risk, briefly explain why.

²⁰ Describe CRM measures to be integrated into activity design or implementation, including additional analysis, if applicable.

²¹ Describe opportunities to achieve development objectives by integrating climate resilience or mitigation measures.

Defined or Anticipated Project Elements ¹⁶	Climate Risks ¹⁷	Risk Rating ¹⁸	How Risks are Addressed at Project Level ¹⁹	Further Analysis and Actions for Activity Design/ Implementation ²⁰	Opportunities to Strengthen Climate Resilience ²¹
	(both physical and mental), putting increased stress on health workers and potentially resulting in high workforce turnover.			Increase the health workforce's capacity to identify and manage climate-related diseases, as well as adaptation responses to severe weather events.	
	Climate change shocks and stressors could negatively impact people's livelihoods, decreasing individual and household incomes and reducing their ability to access medications or health services.	Moderate		Consider climate change's disproportionate impacts on vulnerable communities when planning health services delivery and incorporate in capacity building activities. Work with health care managers to incorporate climate change projections into strategic planning for health services.	
Intervention Category 2: Direct Procurement of Commodities & Strengthening of Commodities,	Increased frequency and magnitude of flooding may disrupt or damage roads, bridges, communication networks, and storage, which can have a significant impact on procurement and logistics in	Moderate	Install temperature regulators to monitor medication temperature in warehouses,	Explore backup power options for critical health care,	Integrate climate change into contingency planning and increase access to

Defined or Anticipated Project Elements ¹⁶	Climate Risks ¹⁷	Risk Rating ¹⁸	How Risks are Addressed at Project Level ¹⁹	Further Analysis and Actions for Activity Design/ Implementation ²⁰	Opportunities to Strengthen Climate Resilience ²¹
Logistics & Diagnostic Systems ● Improve pre-qualification standards for product procurement ● Review and selection of products available from manufacturers ● Establish monitoring inventories indicators and document shelf-life ● Support forecasting and supply planning of pharmaceutical and other health-related products ● Support and strengthen warehouse inventory and management systems set up to strengthen warehouse systems both physical (seconding TA) and with technology ● Asses the distribution networks, in-country logistic service providers, and warehousing capacity ● Implement and develop clinical laboratory services and result return systems ● Support the government in the setup of a private laboratory network ● Provide capacity building, education, and training	the health products value chain and result in delays.		storage, and transport.	laboratory, and supply chain facilities.	and use of quality meteorological information and early warning services to reduce the risk of climate change impacts to supply chains.
	Increased temperatures could negatively impact medicine in storage or transport by reducing their potency and increasing their expiry rates.	Moderate	Install solar panels for backup power and have standby generators in place.	Provide resources for workers that increase knowledge on climate change impacts to health.	
	Climate change could result in impacts to energy infrastructure. This may include falling lake levels that affect hydropower generation and increased heat that can impact generation and transmission. Extreme weather could also affect the reliability of electricity distribution as power outages tend to increase during the rainy season. These impacts to electricity may result in power failure for cold storage facilities, potentially destroying health commodities (such as vaccines or medicines) that require cold storage. Power failures could also impact laboratories and testing facilities, resulting in delays or destroyed samples.	Low			
	Climate change shocks and stressors could negatively impact people's health (both physical and mental), putting increased stress on health and supply chain workers and potentially resulting in high workforce turnover.	Low			

Defined or Anticipated Project Elements ¹⁶	Climate Risks ¹⁷	Risk Rating ¹⁸	How Risks are Addressed at Project Level ¹⁹	Further Analysis and Actions for Activity Design/ Implementation ²⁰	Opportunities to Strengthen Climate Resilience ²¹
support on waste management					
Intervention Category 3: Waste recycling, treatment, and disposal of health commodities, general medical supplies, and equipment - Support design and implementation of WMPs, strategies, policies, procedures, and systems to improve the management of healthcare waste at all health system levels (direct control, indirect control, no control) (includes the incorporation of health and environmental safety measures) - Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control) - Provide capacity building, education, and training support on waste management	Increased frequency and magnitude of flooding may disrupt or damage roads and waste sites, which can have a significant impact on waste recycling, treatment, and disposal of health commodities.	Low	Climate risks are not addressed at the project level.	Provide resources for workers that increase knowledge on climate change impacts.	
	Increased temperatures could negatively impact medicine in storage or transport by reducing their potency and increasing their expiry rates. This could increase the amount of medicine that must be disposed of or recycled.	Moderate		Integrate climate change into waste management planning and increase access to and use of quality meteorological information and early warning services to reduce the risk of flooding to health waste management processes.	
	Climate change shocks and stressors could negatively impact people's health (both physical and mental), putting increased stress on health workers and health waste management personnel and potentially resulting in high workforce turnover.	Low			
Intervention Category 4: Implementation of indoor residual spraying (IRS) Provide procurement, distribution/delivery, storage,	Increased frequency and magnitude of flooding may disrupt or damage roads, bridges, communication networks, and storage, which can have a significant impact on implementation of IRS.	Moderate	Climate risks are not addressed at the project level.	Carry out flood risk management measures, such as improved drainage or	Integrate climate change into IRS planning and increase access to and use of quality meteorological

Defined or Anticipated Project Elements ¹⁶	Climate Risks ¹⁷	Risk Rating ¹⁸	How Risks are Addressed at Project Level ¹⁹	Further Analysis and Actions for Activity Design/ Implementation ²⁰	Opportunities to Strengthen Climate Resilience ²¹
application, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved insecticides services. ● Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.				nature-based solutions that reduce flooding.	information and early warning services to reduce the risk of flooding and extreme precipitation to IRS.
Intervention Category 5: Distribution of insecticide-treated mosquito nets (ITNs) ● Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) ITNs services. ● Provide operational support (e.g., training, supervision, community mobilization) for ITNs programs.	Increased frequency and magnitude of flooding may disrupt or damage roads, health facilities, and community centers, which can have a significant impact on distribution of ITNs.	Low	Plan distribution during times when flooding is less probable.		Integrate climate change into planning ITN distribution and increase access to and use of quality meteorological information and early warning services to reduce the risk of flooding and extreme precipitation to ITN distribution.
Intervention Category 6: Conduct entomological surveillance and vector control monitoring and research ● Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the Anopheles.	Increased frequency and magnitude of heat and flooding could increase mosquito populations. Higher temperatures could expand habitat suitability for mosquitos into higher elevations, while increased precipitation may result in more standing pools of water that serve as mosquito breeding sites. If climate change is not incorporated	Moderate	The PMI Malaria Reduction Activity will increase surveillance of disease outbreaks, respond rapidly to epidemics, and increase the health workforce	Incorporate climate-related indicators in monitoring of malaria vector populations and distribution.	Incorporate climate change into research on malaria vectors and vector control.

Defined or Anticipated Project Elements ¹⁶	Climate Risks ¹⁷	Risk Rating ¹⁸	How Risks are Addressed at Project Level ¹⁹	Further Analysis and Actions for Activity Design/ Implementation ²⁰	Opportunities to Strengthen Climate Resilience ²¹
gambiae, An. coluzzii, An. funestus, An. Arabiensis, An. Stephensi, and other Anopheles in malaria vector country. - Determine the bio-efficacy and the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on Anopheles populations under field conditions generate data for the strategic vector control in areas at risk of malaria transmission worldwide. - Provide monitoring and evaluation support for insecticides, ITNs, and IRS programs.	into entomological surveillance and vector control monitoring and research, this could result in maladaptation or underperforming activities.		awareness of the relationship between climate change and malaria. The contractor will also use results from malaria indicator surveys to establish climate impacts on malaria, establish if malaria is spreading to new districts or altitudes, and inform malaria policies and tools.	Enhance reach of malaria services.	
Intervention Category 7: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns. Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.	Increased flooding and landslides could block access routes and damage buildings, disrupting ability for staff and participants to gather for capacity-building exercises.	Low	Climate risks are not addressed at the project level.	Increase access to and use of quality meteorological information and early warning services.	Incorporate climate change projections, such as likelihood of increased extreme precipitation and flooding, into IRS and ITN campaigns and services.
	Climate change shocks and stressors could negatively impact people's health (both physical and mental), affecting their ability to attend trainings and participate in capacity-building exercises.	Low		Work with community members to identify alternate locations/travel routes	

Defined or Anticipated Project Elements ¹⁶	Climate Risks ¹⁷	Risk Rating ¹⁸	How Risks are Addressed at Project Level ¹⁹	Further Analysis and Actions for Activity Design/ Implementation ²⁰	Opportunities to Strengthen Climate Resilience ²¹
				or methods to carry out trainings.	
Intervention Category 8: Conduct small-scale construction activities Renovation and/or cosmetic improvements to insectaries and other health care facilities related areas (i.e., storerooms, offices, etc.) used in vector control projects and/or healthcare activities. Small scale activities will only involve a total disturbed area equal to or less than 1,000m².	Increased frequency and magnitude of flooding will increase damage to infrastructure and disrupt construction. This can include damage to the building, blocked entrances or exits, damage to utility functions like water and energy, and potential inundation that could require relocation of vulnerable patients and critical equipment.	Moderate /High	Climate risks are not addressed at the project level.	Promote climate-smart infrastructure for health care facility construction investments.	Incorporate climate change into design standards for infrastructure.
	Climate change could result in impacts to energy infrastructure. This may include falling lake levels that affect hydropower generation and increased heat that can impact generation and transmission. Extreme weather could also affect electricity distribution as power outages tend to increase during the rainy season. These impacts to electricity may negatively impact construction of small-scale health care and related facilities.	Low		Invest in resilient energy alternatives, such as solar energy, to develop localized sources of power and provide backup power in extreme weather events.	
	Extreme heat can threaten the health and safety of construction workers, as well as affect efficiency or productivity of construction operations.	Low			
Intervention Category 9: Resource/ Financial Mobilization	Climate shocks and stressors may result in increased government costs related to addressing damage, decreased agricultural production, and water shortages. This could redirect government	Low	The government already plans for climate shocks in	Develop and track climate vulnerability indicators for funding as they relate to	Mainstream climate change considerations into government planning for

Defined or Anticipated Project Elements ¹⁶	Climate Risks ¹⁷	Risk Rating ¹⁸	How Risks are Addressed at Project Level ¹⁹	Further Analysis and Actions for Activity Design/ Implementation ²⁰	Opportunities to Strengthen Climate Resilience ²¹
• Transfer of resources to promote health strengthening efforts • Improve budgeting and financial management systems	resources and funds away from promoting health strengthening efforts.		the disaster department.	health-strengthening efforts.	health-related activities.

ANNEX 2: AFRICA BUREAU ENVIRONMENTAL REVIEW FORM & INSTRUCTIONS

Appropriate use

1. The Environmental Review Form (ERF) can only be used when and as specifically authorized by the IEE or EA governing the project or program in question. For IEEs, this authorization is made in the form of a negative determination with conditions. *Authorized use of the ERF is limited to the specific class of activities enumerated in the determination.*
2. The BEO will not clear an IEE or EA that authorizes use of the ERF unless ALL of the following are true:
 - a. **the general nature or potential scope of the activities for which the ERF will be used are known** at the time the IEE is written (e.g. small infrastructure rehabilitation, training and outreach for a specified purpose, etc.).
 - b. **these activities will be executed under a grant or subproject component of a parent project/program.** The ERF cannot be used in lieu of a request for categorical exclusion, IEE or IEE amendment when new activities/components are to be added to existing projects, programs or sector portfolios.
 - c. of their general nature, **foreseeable adverse environmental impacts are small or easily controllable with BASIC MITIGATION TECHNIQUES that can BE SUCCESSFULLY IMPLEMENTED BY FIELD STAFF.**
 - d. of their general nature, the **activities are NOT large-scale.**

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

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



Environmental Review Form for
XXX Activity subgrants

Follow, but do not submit, the attached instructions.

A. Applicant information

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

B. Activities, screening results, and findings

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

2.						
3.						
4.						
5.						
6.						

7.						
8.						

*These screening results require completion of an Environmental Review Report

C. Certification:

I, the undersigned, certify that:

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

(Signature) _____

(Date) _____

(Print name) _____

(Title) _____

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

BELOW THIS LINE FOR USAID USE ONLY

Notes:

1. For clearance to be granted, the activity **MUST** be within the scope of the activities for which use of the ERF is authorized in the governing IEE. **Review IEE before signature.** If activities are outside this scope, deny clearance and provide explanation in the comments section. The Partner, C/AOTR, MEO and REA must then confer regarding next steps: activity re-design, an IEE or EA.

2. Clearing an ERF containing one or more findings that **significant adverse impacts are possible** indicates agreement with the analysis and findings. It does NOT authorize activities for which “significant adverse impacts are possible” to go forward. It DOES authorize other activities to go forward. The Partner, C/AOTR, MEO and REA must then confer regarding next steps: activity re-design, an IEE or EA.

Clearance record

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

Bureau Env. Officer (BEO)*	(print name)	(signature)	(date)
☐ Clearance given ☐ Clearance denied			

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



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

INITIAL ENVIRONMENTAL EXAMINATION

PURPOSE STATEMENT:

This IEE evaluates the Uganda Office of Health and HIV activity portfolio. This is a sector-level analysis covering multiple activities and intervention types. Any activities that are not within the scope of this document will require a standalone activity-level IEE or an amendment to this document. This analysis will expire March 31, 2027.

PROJECT/ACTIVITY DATA:

Project/Activity Name:	Office of Health and HIV (OHH) IEE
Geographic Location(s) (Country/Region):	Uganda/East Africa
Amendment (Yes/No), if Yes indicate # (1, 2...):	No
Implementation Start/End Date (FY or M/D/Y):	November 01, 2022 – March 31, 2027
If Amended, specify New End Date:	
Solicitation/Contract/Award Number(s):	
Implementing Partner(s):	Multiple
Bureau Tracking ID:	Uganda Office of Health and HIV (OHH) IEE https://ecd.usaid.gov/document.php?doc_id=57133
Tracking ID of Related RCE/IEE (if any):	Integrated Vector Management Programs for Malaria Vector Control: https://ecd.usaid.gov/document.php?doc_id=50060
Tracking ID of Other, Related Analyses:	

ORGANIZATIONAL/ADMINISTRATIVE DATA

Implementing Operating Unit(s): (e.g. Mission or Bureau or Office)	Uganda Mission, Office of Health and HIV/AIDS
Other Affected Operating Unit(s):	None
Lead BEO Bureau:	AFR
Funding Account(s) (if available):	Multiple
Prepared by:	USAID/Uganda Mission Environmental Officer; USAID Uganda OHH; ECOS;
Date Prepared:	10 August 2022

ENVIRONMENTAL COMPLIANCE REVIEW DATA

Analysis Type:	☒ Environmental Examination	☐ Deferral
Environmental Determination(s):	☒ Categorical Exclusion(s) ☒ Negative ☒ Positive ☐ Deferred (per 22 CFR 216.3(a)(7)(iv))	
<u>IEE Expiration Date (if applicable):</u>	March 31, 2027	
<u>Additional Analyses/Reporting Required:</u>	<u>EMMP</u> , <u>EMMR</u> , <u>EA</u> , <u>IWMP</u> , <u>PERSUAP</u>	
<u>Climate Risks Identified (#):</u>	Low __ 12 __	Moderate __ 8 __ High __ 1 __
<u>Climate Risks Addressed (#):</u>	Low __ 12 __	Moderate __ 8 __ High __ 1 __

THRESHOLD DETERMINATION AND SUMMARY OF FINDINGS

PROJECT/ACTIVITY SUMMARY

The purpose of this document, in accordance with Title 22, Code of Federal Regulations, Part 216 (22 CFR 216), is to provide a preliminary review of the reasonably foreseeable effects on the environment of the USAID interventions described herein and recommend determinations and, as appropriate, conditions, for the entire portfolio of activities expected to be implemented by USAID/Uganda Office of Health and HIV/AIDS (OHH). Upon approval, these determinations become affirmed, per 22 CFR 216, and specified conditions become mandatory obligations of implementation. This analysis also documents the results of the project-level Climate Risk Management process in accordance with USAID policy.

This IEE replaces and supersedes previous IEEs; however, ongoing activities with an approved environmental monitoring and mitigation plan (EMMP) may continue operating under that EMMP. New activities or ongoing activities without an existing, approved EMMP must meet the conditions of this IEE, regardless of the award date. Any future amendments will be made to this new IEE.

ENVIRONMENTAL DETERMINATIONS

Upon approval of this document, the determinations become affirmed, per Agency regulations (22 CFR 216).

TABLE 1: ENVIRONMENTAL DETERMINATIONS

Intervention Category	Categorical Exclusion Citation (if applicable)	Negative Determination	Positive Determination ²²	Deferral ²³
Intervention Category 1: Direct and Capacity Building Support for Health Service Delivery, Excluding Commodity Procurement/ Supply Chain Strengthening				
Sub-activity 1.1: Provide information-sharing opportunities with other activities, host country authorities, healthcare staff, and individuals	§216.2(c)(2)(viii) Programs involving nutrition, health care, or family planning services, except to the extent designed to include activities directly	☐	☐	☐

²² Positive Determinations require preparation of a Scoping Statement and Environmental Assessment.

²³ Deferrals must be cleared through an Amendment to this IEE prior to implementation of any deferred activities.

	affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
Sub-activity 1.2: Strengthen governance and strategic planning	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as the construction of facilities, etc.)	☐	☐	☐
Sub-activity 1.3: Provide awareness activities, capacity building, training, workshops, and education	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)	☐	☐	☐
Sub-activity 1.4: Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)	☐	☐	☐

Sub-activity 1.5: Provide health service delivery activities (i.e., medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.) with capacity building and training opportunities.		☒	☐	☐
Intervention Category 2: Direct Procurement of Commodities & Strengthening of Commodities, Logistics & Diagnostic Systems				
Sub-activity 2.1: Develop pre-qualification standards for product procurement	§216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 2.2: Review and selection of products available from manufacturers	§216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 2.3: Establish monitoring inventories indicators and document shelf-life	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops, and meetings	☐	☐	☐
Sub-activity 2.4: Support forecasting and supply planning of pharmaceutical and other health-related products		☒	☐	☐
Sub-activity 2.5: Support and strengthen warehouse inventory and management systems set up to strengthen warehouse systems both physical (seconding TA) and with technology		☒	☐	☐
Sub-activity 2.6: Assess the distribution networks, in-country logistic service providers, and warehousing capacity building actions	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v) Document and	☐	☐	☐

	information transfers;			
Sub-activity 2.7: Implement and develop clinical laboratory services and result return systems		☒	☐	☐
Sub-activity 2.8: Support the government in the setup of a private laboratory network		☒	☐	☐
Sub-activity 2.9: Provide capacity building, education, and training support on waste management		☒	☐	☐
Intervention Category 3: Waste, collection, storage, recycling, treatment, and disposal of health commodities, general medical supplies, and equipment				
Sub-activity 3.1: Provide capacity building, education, and training support on waste management and health service delivery activities (i.e., providing medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, HCWM, etc.).		☒	☐	☐
Sub-activity 3.2: Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control)		☒	☐	☐
Sub-activity 3.3: Procurement, installation, commissioning, management, and maintenance of hazardous waste treatment equipment (EXCEPT construction related to the installation of hazardous waste treatment equipment)		☐	☒	☐
Intervention Category 4: Implementation of indoor residual spraying (IRS)				

Sub-activity 4.1: Provide procurement, distribution/delivery, storage, application, and disposal of waste associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-Malaria control approved insecticides services.		☐	☒	☐
Sub-activity 4.2: Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.		☒	☐	☐
Intervention Category 5: Distribution of insecticide-treated mosquito nets (ITNs)				
Sub-activity 5.1: Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) ITNs services		☐	☒	☐
Sub-activity 5.2: Provide provision of operational support (e.g., training, supervision, community mobilization) for ITNs programs		☒	☐	☐
Intervention Category 6: Conduct entomological surveillance and vector control monitoring and research				
Sub-activity 6.1: Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the Anopheles. gambiae, An. coluzzii, An. funestus, An. Arabiensis, An. Stephensi, and other Anopheles in malaria vector country.	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops, and meetings §216.2(c)(2)(v) Document and	☐	☐	☐

	information transfers			
Sub-activity 6.2: Determine the bio-efficacy, as well as the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on Anopheles populations under field conditions to generate data for the strategic vector control in areas at risk of malaria transmission worldwide	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and Meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 6.3: Provide provision of monitoring and evaluation support for insecticides, ITNs, IRS programs	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and Meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Intervention Category 7: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.				
Sub-activity 7.1: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.		☒	☐	☐
Intervention Category 8: Conduct small-scale construction activities				
Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, laboratories, healthcare facilities, hospitals HCWM facilities, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m ² .		☒	☐	☐

Intervention Category 9: Resource/ Financial Mobilization

Sub-activity 9.1: Transfer of resources to promote health strengthening efforts	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐
Sub-activity 9.2: Improve budgeting and financial management systems	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐
Sub-activity 9.3: Health support activities; evaluations, studies, surveys, etc.	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐

CLIMATE RISK MANAGEMENT

The climate risk analysis established that climate risks were low for some project elements, and moderate to high for several interventions. This requires that risk management options be identified and implemented.

Increases in flooding and landslides could block access routes, damage healthcare facilities, and disrupt supply chains, affecting ability to carry out capacity-building activities and service delivery. Addressing this climate risk shall require working with community members to identify alternate locations/travel routes or methods to deliver health services and capacity-building activities, and to engage health care managers to incorporate climate change projections into strategic planning for health services.

Increased frequency and magnitude of flooding may disrupt or damage roads, bridges, communication networks, and storage, which can have a significant impact on procurement and logistics in the health products value chain and result in delays. Climate change needs to be integrated into contingency planning. There will be a need to increase access to and use of quality meteorological information and early warning services to reduce the risk of climate change impacts to supply chains.

Increased frequency and magnitude of flooding may disrupt or damage roads, bridges, communication networks, and storage, which can have a significant impact on implementation of IRS. Implementers should consider and may need to carry out flood risk management measures, such as improved drainage or nature-based solutions that reduce flooding. Integrate climate change into IRS planning and increase access to and use of quality meteorological information and early warning services to reduce the risk of flooding and extreme precipitation to IRS.

Increased frequency and magnitude of heat and flooding could increase mosquito populations. Higher temperatures could expand habitat suitability for mosquitos into higher elevations, while increased precipitation may result in more standing pools of water that serve as mosquito breeding sites. If climate change is not incorporated into entomological surveillance and vector control monitoring and research, this could result in maladaptation or underperforming activities. There will be a need to increase surveillance of disease outbreaks, respond rapidly to epidemics, and increase health workforce awareness of the relationship between climate change and malaria. Implementing partners shall use results from malaria indicator surveys to establish climate impacts on malaria, establish if malaria is spreading to new districts or altitudes, and inform malaria policies and tools, and shall incorporate climate-related indicators in monitoring of malaria vector populations and distribution.

Increased frequency and magnitude of flooding will increase damage to infrastructure and disrupt construction. This can include damage to the buildings, blocked entrances or exits, damage to utility functions like water and energy, and potential inundation that could require relocation of vulnerable patients and critical equipment. There will be a need to promote climate-smart infrastructure for health care facility construction investments, and invest in resilient energy alternatives, such as solar energy, to develop localized sources of power and provide backup power in extreme weather events. Climate change shall be mainstreamed into design standards for infrastructure.

Engineering analysis preceding design activities must include consideration of climate change and its potential impacts on the location (siting), functionality and sustainability of resulting infrastructure and infrastructure services. Such analysis must include identification of relevant data sets and gaps, review of local building standards and codes for adequacy, and

determination of safety factors or other measures of uncertainty that will be carried through design. The results of this analysis, including risks identified and how they are addressed, shall be documented.

BEO SPECIFIED CONDITIONS OF APPROVAL

The adverse environmental impact determinations recommended in this IEE are contingent on the full implementation of specified conditions and a set of general monitoring and implementation requirements specified in Section 5 of the IEE.

Reporting Conditions: The AFR BEO requests that the activity managers/AORs/CORs upload this document to the appropriate sub-folder(s) of the [Environmental Compliance Library \(EC Library\)](#) Google Drive folder. In addition, implementation documents such as Environmental Mitigation and Monitoring Plans (EMMPs), sub-project screening documents, etc., should be maintained in this EC Library folder. Using this common folder will facilitate access by all parties who need these documents, including the Mission Environmental Officer and the AOR/COR, as well as the REA and the BEO Team.

Procurement and distribution of Insecticide Treated Bednets (ITNs):

The improper use of long-lasting Insecticide-Treated Bednets (ITNs) as fishing nets may have adverse impacts on aquatic ecosystems. The 2017 IVM PEA states in Annex L (Recommended LLIN Mitigation Measures): “where there is evidence of misuse for fishing, assess extent of misuse and collaborate across sectors to develop a sustainable, locally relevant solution”. The 2018 PMI guidance document, “Identifying and Mitigating Misuse of Insecticide-Treated Nets for Fishing Toolkit”, specifies an approach that programs distributing ITNs can utilize to evaluate the extent of the misuse of ITNs for fishing in their country.

The AFR and GH BEOs agree that in order to properly evaluate bednet distribution activities, the Mission should conduct an “Initial Site Assessment” to assess whether ITNs are being misused for fishing to an extent that warrants further investigation. The Initial Site Assessment must be completed within 3-6 months of issuance of this IEE, and should be undertaken by Mission staff (and/or their designees) in consultation with relevant stakeholders and government entities. A list of recommended stakeholders and guiding questions is outlined on pages 5 and 6 of the 2018 PMI Toolkit.

If the results of the “Initial Site Assessment” indicate evidence of misuse of ITNs, additional investigations of the extent of misuse will be required. If additional investigations are needed, an existing tool which can be utilized is the “Rapid Assessment” (see 2018 PMI Toolkit), or an alternate, equivalent analysis. If results of either the “Initial Site Assessment” or the “Rapid Assessment” trigger mitigation measures, they should be incorporated into the Environmental Mitigation and Monitoring Plan (EMMP), and depending on the extent of misuse may require a full Environmental Assessment, as described in 22CFR216.

IMPLEMENTATION

In accordance with 22 CFR 216 and Agency policy, the conditions and requirements of this document become mandatory upon approval. This includes the relevant limitations, conditions

and requirements in this document as stated in Sections 3, 4, and 5 of the IEE and any BEO Specified Conditions of Approval.

USAID APPROVAL OF INITIAL ENVIRONMENTAL EXAMINATION

PROJECT/ACTIVITY NAME: Office of Health and HIV (OHH) IEE

Bureau Tracking ID: https://ecd.usaid.gov/document.php?doc_id=57133

Approval:	Cleared	10/26/2022
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Clearance:	Cleared	10/21/2022
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Clearance:	Cleared	09/28/2022
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	Heather Smith-Taylor, Director Office of Health and HIV/AIDS	Date
Clearance:	Cleared	09/01/2022
	Jessica Okui, Mission Environmental Officer	Date

Clearance:	<u> Cleared </u>	<u> 09/01/2022 </u>
	Robert Bagyenda, Mission Climate Integration Lead	Date

Clearance:	<u> Cleared </u>	<u> 08/30/2022 </u>
	David Kinyua, Regional Environmental Advisor	Date

Clearance:	<u> Cleared </u>	<u> 11/10/2022 </u>
	Colin Quinn, Africa Climate Change Integration Lead	Date

Concurrence:	<u> Cleared </u>	<u> 11/16/2022 </u>
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INITIAL ENVIRONMENTAL EXAMINATION

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1.0 PROJECT/ACTIVITY DESCRIPTION

1.1 PURPOSE OF THE IEE

The purpose of this document, per Title 22, Code of Federal Regulations, Part 216 ([22 CFR 216](#)), is to provide a preliminary review of the reasonably foreseeable effects on the environment of the USAID intervention described herein and recommend determinations and, as appropriate, conditions, for these activities. Upon approval, these determinations become affirmed, and specified conditions become mandatory implementation obligations. This IEE also documents the Climate Risk Management process results, per USAID policy (specifically, [ADS 201mal](#)).

This IEE is a critical element of USAID's mandatory environmental review and compliance process to achieve an environmentally sound design and implementation. If needed, potential environmental impacts should be addressed through formal environmental mitigation and monitoring plans (EMMPs) and/or Environmental Assessments (EAs).

1.2 PROJECT/ACTIVITY OVERVIEW

The Country Development Cooperation Strategy (CDCS) states, "through strong partnerships with the people of Uganda and increased local ownership, the United States Agency for International Development (USAID) will work hand-in-hand with Ugandans to achieve their "Vision 2040" development goals." In the CDCS, Ugandans are at the center of USAID's narrative. Citizens and refugees are not simply recipients of assistance, but instead have the authority and agency to define their own development agenda and actively participate in its implementation. Local ownership is the driving force behind USAID's envisioned programming for the next five years.

Uganda's development context is dynamic and both national and global events shape its current operating environment. Uganda has made significant progress across many sectors in the past several decades. In health, the average life expectancy has increased about 20 years over the last two decades alone, and improvements in access to care and treatment for the human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS), malaria, tuberculosis (TB), and a whole host of other communicable and non-communicable diseases have saved countless lives. The gross domestic product (GDP) has also enjoyed high levels of growth over the last 30 years, increasing tenfold and pulling millions of Ugandans out of poverty. School enrollment rates for primary education reached gender parity in 2008 and enrollment rates for girls at the primary level have remained high. Uganda also maintains one of the most progressive and welcoming refugee policies in the world, offering shelter, resources, and opportunity to communities displaced by conflict and disaster. And lastly, Uganda receives higher than average marks on its environmental policies, which conserve and protect valuable natural resources for its growing population.

But these successes do not capture the entire picture. Uganda's operating context is fraught with challenges, including the secondary impacts of COVID-19, closing civic and political space, and deeply ingrained patronage systems. Uganda recorded moderately low numbers of COVID-19 cases and deaths, but the strict lockdown measures it employed, including closure of schools, to combat the virus also resulted in serious social and economic consequences that will have ripple effects for years to come. An estimated 1.8 million more people were pushed into poverty in 2021 alone. Additionally, reports of human rights abuses are increasing, alongside increasing restrictions on civil society. As President Museveni ages and approaches four decades in power, a political transition is increasingly imminent, bringing with it the real possibility of igniting latent tensions, civic unrest, and violent conflict. Uganda's policy environment is also unable to appropriately respond to the rise in human

trafficking, and struggles to meet minimum thresholds for enforcing trafficking crimes. Consequently, trafficking persists, often under the false pretense of foreign employment opportunities targeted toward poor and vulnerable households and communities. Government complicity and corruption, which often support these trafficking operations, have been exacerbated by the pandemic-induced economic contraction. Uganda now hosts nearly 1.6 million refugees, the largest refugee population in Africa, and the third largest globally; this number is likely to increase due to ongoing conflict in neighboring countries. With global funding decreasing, humanitarian assistance will no longer be provided to a large segment of this population, meaning long-term livelihood support is fundamental to their food security and resilience.

1.3 PROJECT/ACTIVITY DESCRIPTION

The OHH projects will directly contribute to Uganda's development needs, through the following three development objectives (DOs) :

- DO 1: Health Security Increased
- DO 2: Resilient Growth Enhanced
- DO 3: Accountability Strengthened

The OHH projects are covered under this IEE:

Regional Health Integration to Enhance Services in Southwest Uganda (RHITES-SW)

Regional Health Integration to Enhance Services in Eastern Uganda (RHITES-E)

Strategic Information Technical Support (SITES)

Regional Health Integration to Enhance Services in East Central Uganda (RHITES-EC)

Defeat TB

Pharmaceutical and Medical Supplies BPA

Regional Health Integration to Enhance Services – North, Acholi (RHITES-N, Acholi)

Regional Health Integration to Enhance Services – Lango (RHITES-N Lango)

Enterprise Resource Planning Software (ERP Software)

Uganda Health Systems Strengthening Activity (UHSS)

Health Care Waste Management Activity (HCWMA)

USAID Program for Accelerated Control of TB in Karamoja

Maternal Child Health and Nutrition (MCHN)

Family Planning Activity (FPA)

USAID/Uganda Social and Behavior Change Activity (SBCA)

USAID/Uganda Strengthening Supply Chain Systems Activity (SSCS)

President's Malaria Initiative (PMI) Uganda Malaria Reduction Activity

USAID/Local Service Delivery for HIV/AIDS Activity

USAID/Local Partner Health Services - Ankole & Acholi (TASO)

USAID/Local Partner Health Services-Kigezi & Lango (JCRC)

PMI/Uganda Housing Modification Study and Enhanced Entomological Surveillance Activity. (HMS-EES)

USAID/Uganda Fleet Management Activity

Procurement and Delivery of HIV Antiretroviral (ARV) Medicines for Adults and Children

Procurement of HIV Commodities for the Private Not-For-Profit (PNFP) Sector

Procurement and Delivery of Medicines to Treat or Prevent Sexually Transmitted Infections (STI)

Procurement and Delivery of VL/EID reagents and Sample Collection Items

USAID Local Partner Warehousing and Distribution Activity

USAID Local Partner Health Services – Karamoja (ANNECA)

USAID Local Partner Health Services – Eastern (Baylor)

USAID Local Partner Health Services-TB Activity (IDI)

USAID Local Partner Health Services -East Central (MJAP)

Future Designs /TBDs

Procurement and Delivery of HIV Antiretroviral (ARV) Medicines for Adults and Children

Procurement of HIV Commodities for the Private Not-For-Profit (PNFP) Sector follow-on?

Procurement and Delivery of Medicines to Treat or Prevent Sexually Transmitted Infections (STI)

Procurement and Delivery of VL/EID reagents and Sample Collection Items

UHSS follow-on

Warehousing and Distribution

Uganda Health Activity (UHA)

Fleet management follow-on TBD

Uganda Health Care Waste Management Activity

NMS G2G - TBD

G2G Consolidated Implementation Letter - Regional Referral Hospitals (RRHs):

Jinja RRH

Mbarara RRH

Lira RRH

Moroto RRH

Mbale RRH

Gulu RRH

Kabale RRH

ANY ADDED OR FUTURE MECHANISMS/INTERVENTIONS

For any mechanism/intervention not yet planned or included in this IEE, USAID/ Uganda will assess whether these mechanisms can be covered under the existing Intervention Categories (i.e., do not substantially differ from other activities) or if they require an Amendment to the IEE. The Mission should determine the review and approach to added mechanisms in consultation with the AFR BEO.

This IEE will come into effect from the date of its signature by the Uganda/USAID Mission Director and Africa Bureau BEO for 5 years unless amended or substituted by a BEO-approved environmental document that claims precedence.

TABLE 2: DEFINED INTERVENTION CATEGORIES, SUB-INTERVENTIONS AND ASSOCIATED MECHANISMS

Intervention Category	Associated Mechanisms
Intervention Category 1: Direct and Capacity Building Support for Health Service Delivery, Excluding Commodity Procurement/Supply Chain Strengthening • Provide information sharing opportunities with other activities to host country authorities, healthcare staff, and individuals • Strengthen governance and strategic planning • Provide awareness activities, capacity building, training, workshops, and education • Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management • Providing health service delivery (i.e., providing medical treatment, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.).	• RHITES-E, RHITES-SW, RHITES-EC, , RHITES-North Acholi, RHITES-North Lango, PACT Karamoja, Defeat TB FPA, SBCA, JCRC, KCHS, LPWD, ESC, FMC, SCBA, Local Partner Health Services (LPHS)-Kigezi, Lango; LPHS-Ankole and Acholi; LPHS-Karamoja; LPHS Eastern; and RRHs
Intervention Category 2: Direct Procurement of Commodities & Strengthening of Commodities, Logistics & Diagnostic Systems • Improve pre-qualification standards for product procurement • Review and selection of products available from manufacturers • Establish monitoring inventories indicators and document shelf-life • Support forecasting and supply planning of pharmaceutical and other health-related products • Support and strengthen warehouse inventory and management systems set up to strengthen warehouse systems both physical (seconding TA) and with technology • Asses the distribution networks, in-country logistic service providers, and warehousing capacity • Implement and develop clinical laboratory services and result return systems • Support the government in the setup of a private laboratory network • Provide capacity building, education, and training support on waste management	• LPWD, JCRC, CWM, HCWMA, SBCA, PNFP, and LPWD
Intervention Category 3: Waste recycling, treatment, and disposal of health commodities, general medical supplies, and equipment • Support design and implementation of WMPs, strategies, policies, procedures, and systems to improve the management of healthcare waste at all health system levels (direct control, indirect control, no control) (includes the incorporation of health and environmental safety measures)	• HCWMA and CWM

Intervention Category	Associated Mechanisms
• Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control) • Provide capacity building, education, and training support on waste management	
Intervention Category 4: Implementation of indoor residual spraying (IRS) • Provide procurement, distribution/delivery, storage, application, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved PMI/Malaria control insecticides services. • Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.	• PMI VECTOR LINK Project and PMI's Malaria Reduction Activity
Intervention Category 5: Distribution of insecticide-treated mosquito nets (ITNs) • Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) ITNs services. • Provide operational support (e.g., training, supervision, community mobilization) for ITNs programs.	• PMI VECTOR LINK Project and PMI's Malaria Reduction Activity
Intervention Category 6: Conduct entomological surveillance and vector control monitoring and research • Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the Anopheles. gambiae, An. coluzzii, An. funestus, An. Arabiensis, An. Stephensi, and other Anopheles in malaria vector country. • Determine the bio-efficacy and the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on Anopheles populations under field conditions generate data for the strategic vector control in areas at risk of malaria transmission worldwide. • Provide monitoring and evaluation support for insecticides, ITNs, and IRS programs.	• PMI VECTOR LINK Project and PMI's Malaria Reduction Activity
Intervention Category 7: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns. • Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.	• PMI's Malaria Reduction Activity

Intervention Category	Associated Mechanisms
Intervention Category 8: Conduct small-scale construction activities Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, laboratory, healthcare facility, hospital, HCWM, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m².	PMI VECTOR LINK Project and PMI's Malaria Reduction Activity; RHITES Activities; LPHS Activities; LPHS Activities, RRHs, HCWMA, and CWM
Intervention Category 9: Resource/ Financial Mobilization - Transfer of resources to promote health strengthening efforts - Improve budgeting and financial management systems	- RHITES-E, RHITES-SW, RHITES-EC, RHITES - RRHs

Will this project/activity involve construction²⁴ as defined by ADS 201 and 303? Yes ☒ No ☐

This project may undertake small-scale construction, renovation and/or cosmetic improvements to insectaries and other building and facilities (storerooms, offices, etc.) used in vector control and/or health related activities project activities. Small scale activities are defined as those involving a total disturbed area equal to or less than 1,000m² Negative determination, per 22 CFR 216.3(a)(2)(iii), subject to conditions, is recommended.

²⁴ **Construction, as defined by ADS 201 and 303**, includes: construction, alteration, or repair (including dredging and excavation) of buildings, structures, or other real property and includes, without limitation, improvements, renovation, alteration and refurbishment. The term includes, without limitation, roads, power plants, buildings, bridges, water treatment facilities, and vertical structures. In the box below, describe any construction planned for this project/activity. Refer to [ADS 201maw](#) for required Construction Risk Management procedures.

2.0 BASELINE ENVIRONMENTAL INFORMATION

2.1 LOCATIONS AFFECTED AND ENVIRONMENTAL CONTEXT (ENVIRONMENT, PHYSICAL, CLIMATE, SOCIAL, THREATENED AND ENDANGERED SPECIES)

SUMMARY OF GENERAL CONDITIONS IN UGANDA

USAID/Uganda's Environmental Threats and Opportunities Analysis (ETOA), completed in 2015, summarizes key features of the natural environment. Uganda is a landlocked country on the equator, covering 241,551 sq. km. Approximately 20% of the surface area of Uganda is covered by aquatic systems comprising five major lakes (Victoria, Kyoga, Albert, George, and Edward), the Kazinga Channel, about 160 little lakes, and an extensive river system dams and ponds. These aquatic systems are usually fringed with extensive wetlands. Uganda is among the wealthiest countries concerning its natural environment. The country has various physical environmental features, ranging from tropical forests to grasslands, extensive surface drainage patterns (e.g., lakes, rivers, streams, etc.), arid and semi-arid areas, and the snow-capped Rwenzori Mountains range. The country has seven of Africa's 18 bio-geographic regions, the highest concentration on the continent, and some 90 different vegetation communities.

Given Uganda's location in a zone between the ecological communities characteristic of the drier East African savannas and the moist West African rainforests, combined with high altitude ranges, the country has a high level of biological diversity. Most of Uganda's biodiversity is found in its natural forests, but a considerable number is also found in other natural ecosystems such as mountains, savannahs, wetlands, lakes, and rivers. Uganda is a critical area for biodiversity conservation. The natural resource base, especially its vast diversity of wildlife, is the country's greatest biological and economic asset for sustainable tourism industry development. More than 18,783 species of fauna and flora are recorded, including approximately 5,000 species of higher plants; lower plants, including *algae* (115 species), *Pteridophytes/ferns* (386 species), *bryophytes/mosses* (500 species), and liverworts (250 species); and birds (1,063 species), representing 50% of Africa's bird species. Uganda is second in Africa in the number of mammal species (345 species); 15 mammal species and sub-species are endemic to Uganda, and nine primates are known, including the mountain gorilla, the red Colobus monkey, and the chimpanzee. Over half (53.9% - 400 individuals) of the world's remaining population of mountain gorillas are found in Uganda; along with butterflies (1,249 species), fish (600 species); amphibians (98 species); reptiles (150 species), and insects (8,999 species). The cichlid family consisting of 324 species, of which 292 are endemic to Lake Victoria (NEMA 2012), dominates the fish diversity in Uganda. Lakes Victoria, Kyoga, and George are of international importance in conserving endemic wetland species.

Conservation of crucial biodiversity resource areas is a well-demonstrated priority of the Government of Uganda (GOU). About 13% of the country's land area is protected under a comprehensive National Parks, Wildlife Reserves, and Forest Reserves system. The Uganda Wildlife Authority and the Forest Sector Support Department manage these areas.

Uganda's biodiversity faces many threats and is at significant risk. The USAID/Uganda ETOA, completed in 2015, identified the following threats to biodiversity and forest in order of importance:

- **Agricultural expansion into natural ecosystems:** Agriculture potentially threatens the vitality and health of wetlands through draining of water and clearing of wetland vegetation, especially seasonal woodlands, bush, and thickets, negatively affecting their capability to provide ecosystem services (Turyahabwe et al., 2013). Furthermore, the

promotion of commercial crops reduces available arable land for the rural poor, which may force them to encroach on forests and other natural ecosystems.

- **Charcoal/firewood collection:** Biomass is the dominant energy resource for households and small and medium-scale industries – 92% of Uganda’s energy needs are met from woody biomass (NEMA, 2014a). Fuelwood currently contributes more than 96% of energy for cooking in Uganda (NEMA 2014b). Charcoal production increased from 7,975,000 tons in 2009 to 10,449,000 tons in 2013. Fuelwood for household use increased from 21,905,000 to 25,196,000 tons (UBOS 2014). This has contributed to the loss of forest cover in the country.
- **Infrastructure development:** Urban expansion, energy development, mining. Urbanization and industrialization have exerted pressures mainly on peri-urban forest reserves and wetlands to expand urban and industrial centers, and 30% of Uganda’s wetland ecosystem, or 4.7% of Uganda’s total land area, has been lost in just 15 years (NEMA 2014a).
- **Illegal activities:** Poaching (wildlife, fisheries, timber) and wildlife trafficking. Illegal activities affecting biodiversity inside and outside protected areas and in wetlands and water bodies include hunting for subsistence, commercial trading of wildlife and wildlife products (meat, skins, and other trophies), pit sawing, and fishing. Animals most affected are elephants for ivory, hippopotamus for meat and ivory, sitatunga and other antelopes for subsistence consumption, and pangolins for their scales.
- **Human-wildlife conflict:** These conflicts occur due to wildlife movement from inside to outside protected areas. In addition, these conflicts are occurring due to increased interaction between people and wildlife and the destruction of crops by elephants, chimpanzees, etc.
- **Pollution:** This results from agricultural, industrial, and municipal waste discharge and dumping. This poses a potential threat to biodiversity through habitat modification or loss (NEMA 2014).
- **Climate change:** An overview of climate change and biodiversity conducted by USAID in 2014 found that, “Biodiversity and ecosystem-specific goods and services in Uganda are likely to be adversely affected by climate change. According to projections, Uganda will continue to experience rising temperatures, which will increase by more than 2°C by 2030 (Tetra Tech ARD, 2013). Additionally, the growing variability of inter-annual rainfall is projected to continue, including increased rainfall during the dry season. These new climate scenarios are expected to increase the frequency of floods, droughts, and fires.”
- **Zoonotic diseases:** Zoonotic diseases and vector-borne diseases form more than 70% of the global emerging and reemerging disease burden. Zoonotic diseases are very aggressive and contagious and passed from animals to humans and vice versa. Uganda has experienced eight such outbreaks in the past years (Nabukonya et al., 2014) and is experiencing an outbreak of Ebola Virus Disease (Sudan variant) as this IEE is being approved.

- **Invasive species:** This is a priority concern for protected-area management. Invasives affect nearly half of Uganda's National Parks, including Queen Elizabeth Conservation area, Lake Mburo National Park, Kidepo Valley Conservation Area, Murchison Falls Conservation Area, etc.
- **Over-exploitation of natural ecosystems, especially forests, wetlands, rangelands, and fisheries:** Forest cover change in Uganda has decreased from 24% in 1990 to 9% in 2015. In addition, most logging for timber and fuelwood takes place on private land (MWE 2011), making it difficult for the responsible agencies to enforce the principle of maximum sustainable yield provided for in the legal framework governing the exploitation of natural ecosystems.

NATURAL FOREST (Ha)	1990	2000	2005	2010	2015
On private land	3,319,090	2,546,778	2,117,331	1,046,306	660,986
In protected Areas	1,531,394	1,449,688	1,364,260	1,189,532	1,067,793
Total	4,880,484	4,018,466	3,573,591	2,292,838	1,829,779

Source: Ministry of Water and Environment.

- **Transboundary threats:** Transboundary threats to biodiversity conservation and forest management are mainly poaching across borders, trafficking of wildlife and forest products, seasonal incursion of pastoralists for water and grazing resources, fishing, charcoal burning and timber harvesting. The majority of Uganda's protected areas high in biodiversity are located along international borders, which are largely porous.
- **Human-induced wildfires:** Human-induced wildfires threaten biodiversity resources. Fires are set to prepare land for agricultural production and rangeland regeneration, flush out animals, and ease visibility during hunting. As a result, fires can affect plant species composition, richness, diversity, and cover (Govender et al., 2006).
- **Underlying causes:** The following are the underlying causes of the threats to biodiversity described above:
 - Population growth;
 - Weak governance, including weak implementation and conflicting and overlapping mandates;
 - Limited opportunities for off-farm employment;
 - Poverty;
 - Insecurity of land tenure;
 - Government policies that fail to promote conservation; and
 - Climate change.

Three regions of Uganda have Critical Biodiversity Areas. These are:

- **Western Uganda** forms part of the Albertine Rift Region, one of Africa's most important regions for biodiversity. For example, about half of the mountain gorilla (*Gorilla gorilla berengei*) population lives in the extreme southwestern part of this region. Lakes George and Edward have 79 species of fish; three of these species are endemic to Uganda (*Varicorhinus Ruwenzori*, *Microcteriopoma damasi*, and *Hypsopanchax modestus*) (NEMA, 2009). In addition, an endemic species of papyrus (*Chloropeta gracilirrostris*) grows in the shallower parts of Lakes Edward, George, and Bunyonyi.
- The **Southern Central Region**, which includes Lake Victoria, the lakes of the Kyoga basin, and Sango Bay, initially had more than 600 endemic haplochromine cichlids. They also have essential biodiversity that is highly fragile due to the island's nature. This gives the southern portion of Central Uganda its particular importance for biodiversity (NEMA, 2009).
- **Northeastern Uganda** is important for biodiversity because several species are endemic to this area and areas of Kenya and Southern Sudan. The species include 30 species of birds, among which are the Karamoja Apalis (*Apalis karamojae*), a threatened species, and several species of butterflies, including *Papilio nobilis* and *Charaxes smaragdilis elgonae*, the cheetah (*Acinonyx jubatus*), lesser kudu (*Tragelaphus imberbis*), greater kudu (*Tragelaphus strepsiceros*), roan antelope (*Hippotragus equinus*), a secretary bird (*Sagittarius serpentarius*) and ostrich (*Struthio camelus*).

Baseline Environmental Conditions

- **Climate:** Uganda has a tropical climate, with temperatures ranging from 21-25°C, apart from in the mountainous areas, which are much more remarkable – the top of Mount Rwenzori is often covered with snow.

The hottest months are July to September and December to February. However, evenings can feel chilly after the day's heat, with temperatures around 12-16°C. Apart from the dry area in the north, most regions of Uganda have an annual rainfall of between 1,000 mm and 2,000 mm. There is heavy rain between March and May and October and November (NEMA 2014).

However, within the next 50 years, scientists expect average temperatures in Uganda to rise by around 2°C. Climate change is likely to cause an increase in extreme weather events such as floods, heat, and droughts. While rainfall is expected to decrease slightly across the country, most significantly over Lake Victoria, the west and northwest – mainly highlands – are likely to become slightly wetter. In addition, rainfall is expected to be more erratic, unpredictable, and intense, with shorter rainy seasons (CDKN, 2015).

Uganda is already experiencing the impacts of climate variability and associated economic losses. For example, a drought in 2008 caused losses of approximately 3% of the value of all food and cash crops that year (NEMA, 2008). Two years later, the country suffered economic losses of US\$470 m in food crops, cash crops, and livestock as a result of the 2010/11 drought (OPM, 2012). This equates to about 16% of the total annual value of these crops in 2011.

In 2012, USAID/Uganda commissioned a climate change vulnerability assessment. Results of the assessment indicated that temperatures have and will continue to increase in Uganda, and although average total precipitation is projected to stay the same, the country may experience an increase in rainfall during the dry season and an increase in extreme events such as droughts and floods. The assessment's livelihood analysis indicated that 73% of households surveyed were highly vulnerable to climate change impacts because they relied on sensitive crops and their lack of assets, financial capital, and non-agricultural sources of income that can be used at times of stress. Additionally, due to global climate change, Uganda is experiencing melting glaciers in the Rwenzori Mountains and increasing the intensity and frequency of dry spells and floods. This has led to an increasing prevalence of agricultural pests and human diseases (e.g., malaria). Furthermore, biodiversity and ecosystem-specific goods and services in Uganda are likely to be adversely affected by climate change.

A key message from the CDKN 2015 study is that the cost of inaction is 20 times greater than the cost of adaptation. Therefore, development prospects will only be reached if the impacts of climate change on Uganda are mitigated. In response, Uganda's First National Development Plan (2010–2015) recognizes that climate change will affect most of its key economic sectors and that action on climate change is crucial if the country is to meet its goal of becoming a competitive, upper-middle-income country by 2040 (Vision 2040). The Plan also recognizes that, for development to be economically and socially sustainable, climate resilience must be at the heart of policies for growth and development, energy access and security, increased agricultural production, education and health. Accordingly, the National Climate Change Policy (NCCP) was completed at the end of 2013 (approved by the Cabinet in April 2015). Priorities in the policy have been mainstreamed into the Second National Development Plan (2015–2020).

- **Topography:** Uganda is divided into four relief regions:
 - Above 2,000 m – 2% of the land area;
 - 1,500–2,000 m – 5% of the land area;
 - 900–1,500 m – 84% of the land area; and
 - Below 900 m – 9% of the land area.

A large part of Uganda forms part of the interior plateau of the African continent. The Rwenzori Mountains and the Mufumbiro volcanoes in the West, along with Mt. Elgon, Mt. Moroto, Mt. Morungole, Mt. Timu, and Mt. Kadam in the East (NEMA 2002) delineate the plateau in the eastern and western parts of the country.

- **Soils:** The most dominant soil type is ferralitic soil which accounts for about two-thirds of the soils found in the country. According to Parsons (1970), the soils of Uganda have been classified as:
 - Soils of high productivity, constituting 8% of the land area;
 - Soils of medium productivity, constituting 14% of the land area;
 - Soils of fair productivity, constituting 43% of the land area;
 - Soils of low productivity, constituting 30% of the land area; and
 - Soils of negligible productivity, constituting 5% of the land area (FAO 2006).

- **Water resources:** Uganda is endowed with significant surface and groundwater resources which consist of open water bodies (lakes and rivers), wetlands, groundwater, and rainwater. Of the 241,500 km² total area of the country, freshwater lakes occupy 36,280 km² (15%).

- **Wetlands:** Uganda presently has 12 sites designated as Wetlands of International Importance, with a surface area of 454,303 hectares. Wetlands occupy an estimated 13% of Uganda's national territory and serve a number of functions. For example, they serve as storehouses for fresh water and nurseries for fish, sustain high levels of biodiversity, and represent important bird areas, while some act as basins for tertiary treatment of urban wastewater. Many people depend on wetland resources for their livelihoods. However, the wide distribution of wetlands and the lack of protective mechanisms mean that a large proportion of the population has access to wetlands, resulting in extensive degradation and biodiversity loss. According to a 2012 NEMA report, wetlands in 2008 covered approximately 10.9% of the land area, down from 15.6% in 1994 (MWE, 2012). The ongoing, overall decline in wetlands, particularly in the Lake Victoria and Lake Kyoga drainage basins, is largely attributed to encroachment for expansion of urban centers, housing settlements and industrial developments and extension of agricultural land driven by declining soil productivity in the uplands, pushing people to farm in lowlands, which is further exacerbated by complex land ownership issues.

- **Forest resources:** Forests and woodlands cover approximately 4.9 million hectares in Uganda, about 24% of the total land area in 2012 (UIA, 2012). The vast majority of this is woodland (19%), while the rest is tropical moist forest (5%) and forest plantations (0.2%). According to the National State of Environment Report (NEMA 2012), Uganda's forests and woodland resources contribute 2% of the national GDP; however, the deforestation rate is estimated at 1.8% per year. Between 1995 and 2005, Uganda's forest area declined from 24% to 18% of the land area. Uganda has lost more than three million hectares of forest cover since 1990 (NFA, 2015). This is almost 30% of the 1990 forest acreage. The main factors at play are the rapid expansion of farmlands, the rapidly growing human population, and increased urbanization (NEMA, 2012). In the recent past, the tendency for people to migrate out of the increasingly crowded city into the suburbs of Kampala has seen the forest coverage in the districts of Wakiso, Mukono, and Mpigi reduce to 22% of what they were during the 1990s (NFA, 2011).

- **Population:** Population is an essential factor that affects environmental management in

Uganda. It affects the availability and renewability of natural resources. The use of natural resources is directly proportional to population increase. The vast majority of Uganda's population is very dependent on natural resources. For example, the decline in forest cover at 1.8% per annum is attributed to the increasing demand for land for agriculture and fuelwood by the rapidly increasing population.

The average household size is 4.7 persons, with a sex ratio of 94.5 males per 100 females. An estimated 72% of the population lives in rural areas compared to 28% in urban centers. Moreover, 49% of Uganda's population is under the age of 15, and 18.9% is under five.

Population	Number	Percent
Total	37.7 million	100%
Children aged 0-59 months (under five years)	6.6 million	18.9%
Women of reproductive age (15-49 years)	7.3 million	20.9%
Population that is under 15 years of age	17.0 million	48.7%
Population of adolescents (10-19 years of age)	8.6 million	24.5%

Source: National Population and Housing Census 2014

Despite Uganda's success in reducing poverty, more than 7.5 million Ugandans still live on an income below the minimum required to meet their basic needs, partly due to high population growth (MFPED 2012). The incidence of poverty remains higher in rural areas than in urban areas. With 85% of the population, the rural areas constitute 94.4% of national poverty. The incidence of poverty remains highest in the Northern Region and lowest in the Central Region. On average, poverty in the Northern region (46.2%) remains higher than the national average (24.5%) (UBOS 2010).

2.2 APPLICABLE AND APPROPRIATE PARTNER COUNTRY AND OTHER INTERNATIONAL STANDARDS (E.G. WHO), ENVIRONMENTAL AND SOCIAL LAWS, POLICIES, AND REGULATIONS

The **National Environment Action Plan** (NEAP, 1995) presents strategies for the kinds of development Uganda needs to guide it on the path of improving the quality of human life, while at the same time conserving the environment. The NEAP is a response to the challenge of environmental degradation and is an action agenda to achieve the balance between development and environmental management. It analyses and brings together, coherently, different sector-based activities into one integrated effort. It focuses on critical environmental problems: soil degradation, deforestation, biodiversity loss, wetlands degradation, pollution, management issues, etc. The NEAP aligns with Agenda 21, which Uganda endorsed at the Earth Summit in Rio de Janeiro in 1992. The

NEAP involves all interested organizations, both local and international, in the quest for sustainable development.

Uganda's **Environmental Impact Assessment Regulations (1998)** apply to: 1) all projects included in the Third Schedule to the NEA; and 2) any significant repairs, extensions, or routine maintenance of any existing project that is included in the Third Schedule to the NEA. In addition, the third schedule lists a wide range of project types (agriculture, mining, infrastructure, waste disposal, etc.). No developer shall implement a project for which an environmental impact assessment is required under the NEA and under these regulations unless the environmental impact assessment has been concluded in accordance with these regulations. [It should be noted that in addition to complying with USAID Environmental regulations, all USAID-funded activities must comply with host country environmental regulations unless otherwise directed in writing by USAID. In case of conflict between the host country and USAID regulations, the latter shall govern.]

OHH projects may be responsible for waste management and, accordingly, will manage such waste in accordance with the appropriate national standards. However, where national requirements on waste management associated with solid and equipment do not exist, the awardee will select vendors who comply with International Organization for Standardization (ISO) and WHO standards and best practices (e.g., WHO "Safe Management of Wastes from Healthcare Activities"), and the USAID Sector Environmental Guidelines.

A summary of potentially applicable standards, guidelines, and useful references are provided below for developing the EMMP and updating the OHH project integrated WMP. In addition, other references for waste management are identified in Section 4 as specific conditions of the activities."

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

- Organization for Economic Cooperation and Development (OECD) Council on the Decision on the control of Transboundary Movements of Wastes

USAID Resources and References

- USAID. Sector Environmental Guidelines
 - Solid Waste
 - Healthcare Waste
 - Healthcare Facilities
 - Construction
- USAID. Integrated Waste Management Plan
- USAID. Green Meeting Checklist

Other International References and Standards

- Safe Management of wastes from health-care activities (Note: Where national requirements on proper waste management do not exist, WHO's "Safe Management of Wastes from Healthcare Activities" handbook is the internationally-recognized standard used by the Bureau for Global Health)

2.3 COUNTRY/MINISTRY/MUNICIPALITY ENVIRONMENTAL CAPACITY ANALYSIS (AS APPROPRIATE)

Relevant Ugandan laws and regulations related to environmental protection and natural resources management include:

The Constitution of Uganda (1995) includes provisions related to environmental protection and land tenure, including:

- Section 39- Right to a clean and healthy environment: Every Ugandan has a right to a clean and healthy environment.
- Section 245 -Protection and preservation of the environment: Parliament shall by law provide for measures intended to:
 - Protect and preserve the environment from abuse, pollution, and degradation;
 - Manage the environment for sustainable development; and
 - Promote environmental awareness.
- Section 237-Land Ownership:
 - Land in Uganda belongs to the citizens of Uganda and shall vest in them in accordance with the land tenure systems provided in the Constitution of Uganda.
- Notwithstanding clause (1);
 - The Government or Local Government may subject to article 26 of the Uganda Constitution, acquire land in the public interest; and the conditions governing such acquisition shall be prescribed by Parliament.
 - As determined by Parliament by law, the Government or Local Government shall hold in trust for the people and protect natural lakes, rivers, wetlands, forest reserves, game reserves, national parks, and any land reserved for ecological and touristic purposes for the common good of all citizens.
- Land in Uganda shall be owned in accordance with the following land tenure systems:
 - E. Customary;
 - F. Freehold;
 - G. Mailo; and
 - H. Leasehold.

The National Environment Act (NEA, 1995) establishes the National Environment Management Authority (NEMA) and the governing principles for environmental planning, regulation, and management, including environmental quality standards, requirements for environmental impact assessment (EIA), and penalties for environmental offenses. NEMA is the principal agency in Uganda charged with the responsibility of coordinating, monitoring, regulating, and supervising environmental management in the country. NEMA spearheads the development of environmental policies, laws, regulations, standards, and guidelines and guides the GOU in sound environmental management in

Uganda. In addition, NEMA is expected to encourage, supervise, monitor, and coordinate environmental actions among and between sectors and provide technical and training input and policy-level assistance to other agencies.

The National Environment Management Policy (NEMP, 1995) is the cornerstone of the country's commitment to social and economic development that is environmentally sustainable and which will bring the benefits of a better life to all Ugandans. The overall policy goal is "sustainable social and economic development which maintains or enhances environmental quality and resource productivity on a long term basis that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." The NEMP aims to guide sustainable economic development through sound environmental and natural resources management using a participatory approach. The NEMP promotes environmentally responsible social and economic growth and recognizes biodiversity conservation as a form of natural resources management that is critical to meeting the needs of Ugandans.

Since the mid-1980s, Uganda's development policy has increasingly recognized the critical importance of natural resources to the country's economic base. The current Third National Development Plan (NDP III) 2020/21–2024/25 is the third in a planned series of six five-year plans to achieve Uganda's Vision 2040: *"a transformed Ugandan society from a peasant to a modern and prosperous country within 30 years."* For successful implementation of the NDP III, the following key development strategies will be pursued:

01. Agro-Industrialization;
02. Fast-track oil, gas and mineral-based industrialization;
03. Import replacement/Promotion of local manufacturing;
04. Export Promotion;
05. Harness the tourism potential;
06. Provide a suitable fiscal, monetary and regulatory environment for the private sector to invest;
07. Increase local content participation;
08. Institutionalize infrastructure maintenance;
09. Develop intermodal transport infrastructure to enhance interoperability;
10. Increase access to stable, reliable, and affordable energy;
11. Leverage urbanization as a driver for socio-economic transformation;
12. Improve access to and quality of social services;
13. Institutionalize human resource planning for the economy;
14. Enhance skills and vocational development;
15. Promote science, technology, engineering, and innovation, as well as ICT;

16. Increase access to social protection;
17. Promote development-oriented mind-set;
18. Increase government participation in strategic sectors;
19. Increase resource mobilization for implementation of National Development Programs;
20. Re-engineer the public service to promote investment; and
21. Enhance partnerships with non-state actors for effective service delivery.

Relevant Ugandan laws and regulations related to health and safety include:

The **Constitution of Uganda** requires the GOU to provide essential health services to its people and promote proper nutrition and healthy lifestyles (Objective XIV). The Constitution further provides all people in Uganda to enjoy equal rights and opportunities, access to health services, clean and safe water, and education, among other things. Investing in promoting people's health and nutrition ensures that they remain productive and contribute to national development.

The Second National Health Policy (2010) theme is *"promoting people's health to enhance social-economic development."* The MOH is responsible for coordinating the drafting of bills to promote and regulate health services. However, the process of reviewing legislation and policies has been slow due to the inadequate allocation of financial and human resources for these processes. Various bills such as the Pharmacy Profession and Practice Bill, Uganda Medicines Control Authority Bill, Food and Nutrition Bill, Food and Drug Act, National Health Insurance Bill, and the Traditional and Complementary Medicines Bill are currently at different stages of development. Gaps also exist in the legal framework for the adaptation of new health technologies, and enforcement of legislation and policies remains a significant challenge in Uganda's health sector.

The MOH has developed a **National Policy on Injection Safety and Health Care Waste Management (2004)**. The Policy "sets out strategies for ensuring that patients, health workers, communities and the environment are protected from risks associated with unnecessary and unsafe injections" and "addresses improper disposal and destruction of injection materials and other health care waste." The Policy ensures that each health facility will make guidelines for the proper handling and disposal of health care waste known to the staff, designate a staff member in charge of health care waste and ensure that workers follow procedures.

The **Uganda Clinical Guidelines (2016) National Guidelines for Management of Common Conditions** was produced by the MOH with financial assistance from the USAID-funded Uganda Health Supply Chain and the Clinton Health Access Initiative. The Uganda Clinical Guidelines help achieve high standards of quality and efficiency in health service delivery by presenting updated, practical, and useful information on the diagnosis and management of common conditions in Uganda. The guidelines also establish a strong foundation for the appropriate and cost-effective use of essential medicines.

Section 13 of the **Occupational Safety and Health Act (2006)** states that it is obligatory for an employer to ensure persons' health, safety, and welfare at their workplace. Employers must take measures to keep the workplace pollution-free by employing technical measures, applied to new plants or processes in design or installation or added to existing plants or processes, or by employing supplementary organizational measures. Additionally, the employer should provide and maintain safe and risk-free means of access to and exit from the workplace. Workers must be well informed of the real and potential dangers associated with the use of the substance or machinery, and they must be well equipped with personal protective equipment (PPE) to prevent the risks of accidents or adverse effects on health. The Act further provides that it is the responsibility of the employer to provide free PPE, including clothing, to the workers involved in hazardous work. The type of PPE needed varies depending on the nature of the work being performed. The proper use of PPE reduces the risk of accidents and adverse effects on health.

3.0 ANALYSIS OF POTENTIAL ENVIRONMENTAL RISK

INTERVENTION CATEGORY 1: DIRECT AND CAPACITY BUILDING SUPPORT FOR HEALTH CARE SERVICE DELIVERY, EXCLUDING COMMODITY PROCUREMENT/ SUPPLY CHAIN STRENGTHENING

TABLE 3A. POTENTIAL IMPACTS – INTERVENTION CATEGORY 1

Project/Activity	Potential environmental and social impacts
Sub-activity 1.1: Provide information sharing opportunities with other activities host country authorities, healthcare staff, and individuals	Negligible adverse environmental or social impacts are associated with this sub-intervention.
Sub-activity 1.2: Strengthen governance and strategic planning	Categorical Exclusion under 22 CFR 216.2(c)(2), the following activities are <i>categorically excluded</i> from further environmental analysis: • (i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.); • (iii) Analyses, studies, academic or research workshops and meetings • (v) Document and information transfers • (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.)
Sub-activity 1.3: Provide awareness activities, capacity building, training, workshops, and education	
Sub-activity 1.4: Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	
Sub-activity 1.5: Provide health service delivery activities (i.e., medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.) with capacity building and training opportunities.	• While improved healthcare services are expected to support significant public health benefits, they will also result in increased healthcare waste generation (e.g., blood samples, sharps, and medicines). While increased uptake of detection, testing, and treatment interventions for medical products is expected to support the achievement of significant public health benefits, they also result in increased generation of healthcare waste. • In addition, improving the access to and quality of health care services may lead to increased occupational hazards for healthcare workers involved in handling hazardous wastes.

INTERVENTION CATEGORY 2: TITLE: DIRECT PROCUREMENT OF COMMODITIES & STRENGTHENING OF COMMODITIES, LOGISTICS & DIAGNOSTIC SYSTEMS

TABLE 3B. POTENTIAL IMPACTS – INTERVENTION CATEGORY 2

Project/Activity	Potential environmental and social impacts
Sub-activity 2.1: Develop pre-qualification standards for product procurement	Negligible adverse environmental or social impacts are associated with this sub-intervention. Categorical Exclusion under 22 CFR 216.2(c)(2), the following activities are categorically excluded from further environmental analysis: • (v) Document and information transfers
Sub-activity 2.2: Review and selection of products available from manufacturers	
Sub-activity 2.3: Establish monitoring inventories indicators and document shelf-life	
Sub-activity 2.4: Support forecasting and supply planning of pharmaceutical and other health-related products	• Procuring an oversupply of health care products increases the probability of products expiring on the shelf and the need for waste treatment and/or disposal. The larger the quantity of damaged and/or expired pharmaceuticals or chemicals, the greater the waste stream of potentially hazardous waste and associated environmental impacts. This can also lead to more entry points of pharmaceuticals diverting from the waste stream into the community for improper and possibly hazardous consumption.
Sub-activity 2.5: Support and strengthen warehouse operations, information and inventory management technology systems.”	• Improper storage of PHC can result in pharmaceuticals being damaged due to failure to meet storage condition requirements, theft through inadequate security, damage from pests, and hazards such as fire. Environmental and social impacts may result from damaged products getting into the environment or local community due to improper storage. In addition, equipment used to operate the storage facility (e.g., mobile equipment, chillers, HVAC systems, fuel storage tanks) should be properly maintained to prevent accidents or spills from occurring that may lead to health or environmental impacts.
Sub-activity 2.6: Assess the distribution networks, in-country logistic service providers, and warehousing capacity building actions	Negligible adverse environmental or social impacts are associated with this sub-intervention. Categorical Exclusion: under 22 CFR 216.2(c)(2), the following activities are <i>categorically excluded</i> from further environmental analysis: • (i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities,
Sub-activity 2.7: Implement and develop clinical laboratory services and result return systems	

	etc.) • (iii) Analyses, studies, academic or research workshops and meetings • (v) Document and information transfers
Sub-activity 2.8: Support the government in the setup of a private laboratory network	• Improved laboratory services and systems are expected to support significant public health benefits, they will also result in increased healthcare waste generation (e.g., blood samples, and sharps). While increased uptake of detection, testing, and treatment interventions for medical products is expected to support the achievement of significant public health benefits, they also result in increased generation of healthcare waste.
Sub-activity 2.9: Provide capacity building, education, and training support on waste management during warehousing, transport, and laboratory use.	• While improved healthcare service delivery and systems strengthening are expected to support significant public health benefits, they will also result in increased healthcare waste generation (e.g., blood samples, sharps, and medicines). While increased uptake of detection, testing, and treatment interventions for medical products is expected to support the achievement of significant public health benefits, they also result in increased generation of healthcare waste. • In addition, improving the access to and quality of health care services may lead to increased occupational hazards for healthcare workers involved in handling hazardous wastes.

INTERVENTION CATEGORY 3: TITLE: WASTE RECYCLING, TREATMENT, AND DISPOSAL OF HEALTH COMMODITIES, GENERAL MEDICAL SUPPLIES, AND EQUIPMENT

TABLE 3C. POTENTIAL IMPACTS – INTERVENTION CATEGORY 3

Project/Activity	Potential environmental and social impacts
Sub-activity 3.1: Provide capacity building, education, and training support on waste management and health service delivery activities (i.e., providing medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.).	• While improved healthcare service delivery and systems strengthening are expected to support significant public health benefits, they will also result in increased healthcare waste generation (e.g., blood samples, sharps, and medicines). While increased uptake of detection, testing, and treatment interventions for medical products are expected to support the achievement of significant public health benefits, they also result in an increased generation of healthcare waste. • In addition, improving the access to and quality of health care services may lead to increased occupational hazards for healthcare workers involved in handling hazardous wastes.
Sub-activity 3.2: Treatment and/or disposal of expired, off-	• Testing often requires the sample's treatment and/or disposal, reagents, and other supplies. In addition, recalls

specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control)	requiring the disposal of affected commodities also pose a risk. Due to poor disposal practices, environmental threats include public health impacts (e.g., direct exposure through needle-stick injuries, pathogen release) and soil and water contamination at the disposal site.
Sub-activity 3.3: Procurement, installation, commissioning, management, and maintenance of hazardous waste treatment equipment (EXCEPT construction related to the installation of hazardous waste treatment equipment)	- Worker exposure to pathogens in waste handling and landfills, sewage treatment, composting, and other operations. - Community exposure to pathogens when infectious waste treatment is not practical. - Toxic air emissions and toxic ash from incineration - Odors, litter, noise, and heavy traffic are associated with central waste facilities.

INTERVENTION CATEGORY 4: TITLE: IMPLEMENTATION OF INDOOR RESIDUAL SPRAYING (IRS)

TABLE 3D. POTENTIAL IMPACTS – INTERVENTION CATEGORY 4

Project/Activity	Potential environmental and social impacts
Sub-activity 4.1: Provide procurement, distribution/delivery, storage, application, and disposal of waste associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved insecticides services.	- Health and environmental impacts may result from inadequate quality control of insecticides (i.e., procuring non-approved insecticides, improper storage, or poor inventory management). - Occupational risks for workers involved in IRS campaigns. - Health and safety risks for residents of treated houses (e.g., risks from skin contact and/or ingestion of insecticides). - Nearby residents may be exposed to insecticides if insecticides are not securely stored to prevent theft and misuse incidents, including the illegal resale of insecticides. - Ecological risk to non-target species and water bodies from the use of insecticides.
Sub-activity 4.2: Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.	- The environmental risk from the disposal of liquid and solid wastes. - Improper incineration of wastes and disposal of residual ash can threaten air quality, soil, and the water supply and result in environmental and public health hazards.

INTERVENTION CATEGORY 5: TITLE: DISTRIBUTION OF INSECTICIDE-TREATED MOSQUITO NETS (ITNS)

TABLE 3E. POTENTIAL IMPACTS – INTERVENTION CATEGORY 5

Project/Activity	Potential environmental and social impacts
Sub-activity 5.1: Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health	- Misuse of ITNs (i.e., nets used for nonpublic health purposes such as fishing). - Reduced efficacy of ITNs due to improper storage.

Organization Pre-Qualified (WHO/PQ) ITNs services	• Pilferage of ITNs (during storage and/or transport) and consequential human and environmental exposure. • Worker safety (during handling and distribution of ITNs) • Contamination of edible or potable materials due to contact with ITNs. • Human and environmental impacts of washing ITNs. • Human and environmental impacts of bags and baling materials used to package ITNs. • Adverse impacts to land, water, and/or sensitive ecosystems may occur if pesticide-treated nets are improperly handled during storage, distribution, and use can be released into the environment. Pesticide-treated nets also need to be properly used to prevent theft and misuse incidents (i.e., nets used for non-public health purposes such as fishing), leading to impacts on human health and environmental impacts to water and/or sensitive ecosystems.
Sub-activity 5.2: Provide provision of operational support (e.g., training, supervision, community mobilization) for ITNs programs	

INTERVENTION CATEGORY 6: TITLE: CONDUCT ENTOMOLOGICAL SURVEILLANCE AND VECTOR CONTROL MONITORING AND RESEARCH

TABLE 3F. POTENTIAL IMPACTS – INTERVENTION CATEGORY 6

Project/Activity	Potential environmental and social impacts
Sub-activity 6.1: Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the <i>Anopheles gambiae</i> , <i>An. coluzzii</i> , <i>An. funestus</i> , <i>An. Arabiensis</i> , <i>An. Stephensi</i> , and other <i>Anopheles</i> in malaria vector country.	Negligible adverse environmental or social impacts are associated with this sub-intervention. Categorical Exclusion: under 22 CFR 216.2(c)(2), the following activities are <i>categorically excluded</i> from further environmental analysis: • (iii) Analyses, studies, academic or research workshops and meetings • (v) Document and information transfers
Sub-activity 6.2: Determine the bio-efficacy, as well as the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on <i>Anopheles</i> populations under field conditions to generate data for the strategic vector control in areas at risk of malaria transmission worldwide	
Sub-activity 6.3: Provide monitoring and evaluation support for insecticides, ITNs, IRS programs	

INTERVENTION CATEGORY 7: TITLE: BUILD CAPACITY AND NMCP, DHMTS, AND OTHER GOU AGENCIES TO IMPLEMENT IRS AND ITN CAMPAIGNS.

TABLE 3G. POTENTIAL IMPACTS – INTERVENTION CATEGORY 7

Project/Activity	Potential environmental and social impacts
Sub-activity 7.1: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.	● Misuse of ITN, and IRS materials (i.e., nets used for nonpublic health purposes such as fishing). ● Reduced efficacy of IRS and ITN due to improper storage. ● Pilferage of products (during storage and/or transport) and consequential human and environmental exposure. ● Worker safety (during handling and distribution) ● Contamination of edible or potable materials due to contact with ITNs and IRSs. ● Human and environmental impacts of washing ITNs and IRS spray. ● Human and environmental impacts of bags and baling materials used to package ITNs.

INTERVENTION CATEGORY 8: TITLE: CONDUCT SMALL-SCALE CONSTRUCTION ACTIVITIES**TABLE 3H. POTENTIAL IMPACTS – INTERVENTION CATEGORY 8**

Project/Activity	Potential environmental and social impacts
Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, laboratories, healthcare facilities, hospitals, HCWM facilities, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m ² .	As this activity will involve small scale construction limited to a total disturbed area of less than 1,000m², impacts would generally be controllable with basic good design and operating practices. However, the precise nature of the potential impacts—and the appropriate design and operating practices to mitigate them—are highly dependent both on location and the specific characteristics of the infrastructure. This requires a site-specific, design-specific assessment of potential adverse impacts and the efficacy of available mitigation measures. Construction itself has a well-known set of potential adverse impacts, which spans across nearly all types of construction and rehabilitation. Experience shows that these impacts are controllable below the level of significance with basic good construction management practices, including occupational safety and health practices. ● <u>Disturbance to existing landscape/habitat.</u> Construction typically necessitates clearing, grading, trenching and other activities that can result in near-complete disturbance to the pre-existing landscape/habitat within the plot or right-of-way. If the plot or right-of-way contains or is adjacent to a permanent or seasonal stream/water body, grading and leveling can disrupt local drainage. ● <u>Sedimentation/fouling of surface waters.</u> During construction, runoff from the cleared ground or material stockpiles can result in sedimentation/fouling of surface waters, particularly if the site is close to a stream or water body. ● <u>Standing water.</u> Construction may result in standing

	water on-site, which readily becomes a breeding habitat for mosquitoes and other disease vectors; this is of concern as malaria is endemic in much of Uganda. • <u>Occupational and community health and safety hazards.</u> The construction process and construction sites present a number of hazards: fall and crush injuries, hazards from hand or power tools and equipment used in construction, and exposure to hazardous substances, such as solvents in paint, cement dust, etc. • <u>Increased Air and Noise Pollution</u> can result during construction or rehabilitation from the actions of construction equipment and workers. • <u>Adverse impacts of materials sourcing.</u> Construction requires a set of materials often procured locally: timber, fill, sand, gravel, and bricks. Unmanaged extraction of these materials can have adverse effects on the environment. For example, stream bed mining of sand or gravel can increase sedimentation and disturb sensitive ecosystems; the purchase of timber from unmanaged or illegal concessions helps drive deforestation. • <u>Energy use</u> for construction, maintenance, and operations of water extraction, supply, distribution, and/or wastewater treatment infrastructure can increase greenhouse gas emissions, exacerbating the impacts of climate change. Environmental Impacts • Removal of vegetation and trees and disturbance and fragmentation of existing landscape/habitat. • Destabilization of existing topographic and geographic features such as contribution to land/mudslides. • Deterioration of local habitats, particularly those of endangered species. • Increased erosion and sedimentation and pollution (e.g., oil, fuel, cement, and other substances) of surface waters. • Generation of solid waste. • Use of water and energy and other natural resources. • Accidental leaks/spills of oil/fuel from vehicles, machinery, and storage tanks can pollute groundwater and surface waters. • Groundwater hydrology and quality if the site may need to be drained to provide suitable conditions for the engineering works to occur. • Soil contamination from previous land use may be disturbed during construction works, causing pollutants such as heavy metals to enter ground and surface waters. Social Impacts • Increase in vectors of disease. • Occupational and public health and safety hazards. • Land tenure, eminent domain, and resettlement.
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	• Increased light and noise pollution. • Noise and vibration emissions resulting from the use of machinery and equipment and vehicle circulation. • Release of air pollutants including NO₂, SO₂, Particulate Matter (PM)₁₀ and PM_{2.5} from vehicle circulation. • Changes in local landscape and changes to the scenic attributes of the landscape, during construction phases can impact quality of life for nearby communities, as well as land/property prices.
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INTERVENTION CATEGORY 9: TITLE: RESOURCE/ FINANCIAL MOBILIZATION

TABLE 3I. POTENTIAL IMPACTS – INTERVENTION CATEGORY 9

Project/Activity	Potential environmental and social impacts
Sub-activity 9.1: Transfer of resources to promote health strengthening efforts	Negligible adverse environmental or social impacts are associated with this sub-intervention. Categorical Exclusion: under 22 CFR 216.2(c)(2), the following activities are <i>categorically excluded</i> from further environmental analysis: • §216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves • §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; • §216.2(c)(2)(v),(v) Document and information transfers
Sub-activity 9.2: Improve budgeting and financial management systems	
Sub-activity 9.3: Health support activities, evaluations, studies, surveys, etc.	

3.1 THREATENED AND ENDANGERED SPECIES

The activities proposed include work in already developed areas, clinical settings, and existing infrastructure. Therefore, the activities are not likely to adversely impact threatened and endangered species, or their critical habitat. Activity-level actions that include construction or infrastructure improvements should be assessed for the presence of threatened or endangered species, or their critical habitat. Any activity that may adversely impact threatened or endangered species or their critical habitat may not proceed without an Environmental Assessment.

4.0 ENVIRONMENTAL DETERMINATIONS

4.1 RECOMMENDED ENVIRONMENTAL DETERMINATIONS

The following table summarizes the recommended determinations based on the environmental analysis conducted. Upon approval, these determinations become affirmed, per 22 CFR 216. Specified conditions, detailed in Section 5, become mandatory obligations of implementation, per ADS 204.

TABLE 4: ENVIRONMENTAL DETERMINATIONS

Intervention Category	Categorical Exclusion Citation (if applicable)	Negative Determination	Positive Determination ²⁵	Deferral ²⁶
Intervention Category 1: Direct and Capacity Building Support for Health Service Delivery, Excluding Commodity Procurement/ Supply Chain Strengthening				
Sub-activity 1.1: Provide information sharing opportunities with other activities host country authorities, healthcare staff, and individuals	§216.2(c)(2)(viii) Programs involving nutrition, health care or family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)	☐	☐	☐
Sub-activity 1.2: Strengthen governance and strategic planning	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs	☐	☐	☐

²⁵ Positive Determinations require preparation of a Scoping Statement and Environmental Assessment.

²⁶ Deferrals must be cleared through an Amendment to this IEE prior to implementation of any deferred activities.

	include activities directly affecting the environment (such as the construction of facilities, etc.)			
Sub-activity 1.3: Provide awareness activities, capacity building, training, workshops, and education	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)	☐	☐	☐
Sub-activity 1.4: Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	§216.2(c)(2)(i) Education, technical assistance, or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.)	☐	☐	☐
Sub-activity 1.5: Provide health service delivery activities (i.e., medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.) with capacity building and training opportunities.	☐	☒	☐	☐
Intervention Category 2: Direct Procurement of Commodities & Strengthening of Commodities, Logistics & Diagnostic Systems				
Sub-activity 2.1: Develop pre-qualification standards for product procurement	§216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 2.2: Review and selection of products available from manufacturers	§216.2(c)(2)(v) Document and information transfers	☐	☐	☐

Sub-activity 2.3: Establish monitoring inventories indicators and document shelf-life	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops, and meetings	☐	☐	☐
Sub-activity 2.4: Support forecasting and supply planning of pharmaceutical and other health-related products		☒	☐	☐
Sub-activity 2.5: Support and strengthen warehouse information and inventory management technology systems.		☒	☐	☐
Sub-activity 2.6: Assess the distribution networks, in-country logistic service providers, and warehousing capacity building actions	(iii) Analyses, studies, academic or research workshops and meetings; (v) Document and information transfers;	☐	☐	☐
Sub-activity 2.7: Implement and develop clinical laboratory services and result return systems		☒	☐	☐
Sub-activity 2.8: Support the government in the setup of a private laboratory network		☒	☐	☐
Sub-activity 2.9: Provide capacity building, education, and training support on waste management		☒	☐	☐
Intervention Category 3: Waste, collection, storage, recycling, treatment, and disposal of health commodities, general medical supplies, and equipment				
Sub-activity 3.1: Provide capacity building, education, and training support on waste management and health service delivery activities (i.e., providing		☒	☐	☐

medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.).				
Sub-activity 3.2: Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control)		☒	☐	☐
Sub-activity 3.3: Procurement, installation, commissioning, management, and maintenance of hazardous waste treatment equipment (EXCEPT construction related to the installation of hazardous waste treatment equipment)		☐	☒	☐
Intervention Category 4: Implementation of indoor residual spraying (IRS)				
Sub-activity 4.1: Provide procurement, distribution/delivery, storage, application, and disposal of waste associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved insecticides services.		☐	☒	☐
Sub-activity 4.2: Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.		☒	☐	☐
Intervention Category 5: Distribution of insecticide-treated mosquito nets (ITNs)				
Sub-activity 5.1: Provide procurement, distribution/delivery, storage, and waste disposal associated with World		☐	☒	☐

Health Organization Pre-Qualified (WHO/PQ) ITNs services				
Sub-activity 5.2: Provide provision of operational support (e.g., training, supervision, community mobilization) for ITNs programs		☒	☐	☐
Intervention Category 6: Conduct entomological surveillance and vector control monitoring and research				
Sub-activity 6.1: Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the Anopheles. gambiae, An. coluzzii, An. funestus, An. Arabiensis, An. Stephensi, and other Anopheles in malaria vector country.	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops, and meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 6.2: Determine the bio-efficacy, as well as the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on Anopheles populations under field conditions to generate data for the strategic vector control in areas at risk of malaria transmission worldwide	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and Meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐
Sub-activity 6.3: Provide provision of monitoring and evaluation support for insecticides, ITNs, IRS programs	§216.2(c)(2)(iii) Analyses, studies, academic or research workshops and Meetings §216.2(c)(2)(v) Document and information transfers	☐	☐	☐

Intervention Category 7: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.

Sub-activity 7.1: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.		☒	☐	☐
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Intervention Category 8: Conduct small-scale construction activities

Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, laboratories, healthcare facilities, hospitals HCWM facilities, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m ² .		☒	☐	☐
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Intervention Category 9: Resource/ Financial Mobilization

Sub-activity 9.1: Transfer of resources to promote health strengthening efforts	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐
Sub-activity 9.2: Improve budgeting and financial management systems	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings;	☐	☐	☐

	§216.2(c)(2)(v),(v) Document and information transfers			
Sub-activity 9.3: Health support activities; evaluations, studies, surveys, etc.	§216.2(c)(2)(v),(viii) Program involving nutrition, health care or population and family planning serves §216.2(c)(2)(v),(iii) Analyses, studies, academic or research workshops and meetings; §216.2(c)(2)(v),(v) Document and information transfers	☐	☐	☐

4.2 CLIMATE RISK MANAGEMENT

The Climate Risk Management (CRM) screening identifies climate-related risks to activities that should be addressed to enhance resilience and safeguard activity development objectives. This screening is part of implementing the Reference for ADS Chapter 201 “Climate Risks Management for USAID Projects and Activities.”²⁷

This section summarizes the methodology used and findings of the screening, in accordance with [ADS 201mal](#). The project design team, in consultation with the CIL, considered the potential impact of climate risks/stressors (changing precipitation patterns, rising temperature, floods, droughts, fires, landslides, etc.) on the sustainability and performance of the activities through the CRM screening. The Mission will share CRM results with partners and include climate risk considerations in solicitations and work plan development when appropriate (see Annex 1 for the complete CRM table).

As described in USAID 2020²⁸, the East Africa region, where Uganda is located, is projected to experience the following changes in climate by 2050:

- Increased average annual temperature by 1–3°C
- Increased frequency and duration of heat waves (+4 to 36 days)
- Shift in rainfall seasonality, including increased October–December precipitation and decreased March–May precipitation, and an increase in inter-seasonal and interannual rainfall variability
- Increased frequency and intensity of heavy precipitation events
- Intensified drought occurrence

²⁷ Reference to ADS Chapter 201: <https://www.usaid.gov/ads/policy/200/201mal>

²⁸ USAID, 2020, “Climate Risk Profile: East Africa,”
https://www.climate-links.org/sites/default/files/asset/document/2020_USAID_ATLAS_CRP-East-Africa-Regional.pdf

Uganda's health services are highly vulnerable to climate change impacts, including:

- Increased frequency and magnitude of flooding can increase damage to infrastructure and disrupt construction
- Increased flooding and landslides could block roads, disrupt communication networks, and damage buildings and facilities, affecting ability to carry out capacity-building activities, health service delivery, and health supply chains
- Climate change shocks and stressors could negatively impact people's livelihoods, decreasing incomes and reducing ability to access medications or health services
- Increased temperatures and precipitation could increase mosquito populations, increasing the spread of malaria and affecting activities related to malaria prevention

METHODOLOGY

The CRM screening was conducted through a desk review, followed by a screening assessment by USAID staff. The desk review included reviewing:

- Project specific information, including available descriptions of project activities;
- Climate and governance information, including information specific to Uganda, such as:
 - USAID Uganda Country Development Cooperation Strategy (CDCS) 2016-2021 Climate Change Annex²⁹
 - USAID Climate Risk Profile: East Africa³⁰
 - USAID Uganda Climate Vulnerability Profile³¹
 - World Bank Climate Risk Country Profile: Uganda³²
 - Uganda Health Supply Chain Program: Final Report³³
 - Health supply chain system in Uganda: current issues, structure, performance, and implications for systems strengthening³⁴

Following this desk review, the project design team engaged in a facilitated process to confirm risks for each intervention category; to rate risks as high, moderate, or low; and to define appropriate actions to respond to risks rated high and moderate.

RISK RATINGS AND DEFINED ACTIONS

The following summarizes the risk screening findings and actions. The complete results of the CRM screening are provided in Annex 1.

²⁹ USAID, 2016, "USAID Uganda Country Development Cooperation Strategy 2016-2021," https://www.usaid.gov/sites/default/files/documents/1860/CDCS_FINAL_26092017.tags_.pdf

³⁰ USAID, 2020, "Climate Risk Profile: East Africa," https://www.climatelinks.org/sites/default/files/asset/document/2020_USAID_ATLAS_CRP-East-Africa-Regional.pdf

³¹ USAID, 2012, "Uganda Climate Vulnerability Profile," https://www.climatelinks.org/sites/default/files/asset/document/uganda_climate_vulnerability_profile_jan2013.pdf

³² World Bank, 2020, "Climate Risk Country Profile: Uganda," https://climateknowledgeportal.worldbank.org/sites/default/files/2020-06/15464-WB_Uganda%20Country%20Profile-WEB_v1.pdf

³³ USAID, 2020, "Uganda Health Supply Chain Program: Final Report," https://pdf.usaid.gov/pdf_docs/PA00WZZ3.pdf

³⁴ Lugada, E., Komakech, H., Ochola, I., Mwebaze, S., Oteba, M.O., and Ladwar, D.O., 2022, "Health supply chain system in Uganda: current issues, structure, performance, and implications for systems strengthening," <https://joppp.biomedcentral.com/articles/10.1186/s40545-022-00412-4>

Health Service and Value Chain Risks: Climate change could affect health through increased heat-related illnesses, malaria, waterborne illnesses, and malnutrition due to decreased agricultural production; this may require an increase in capacity-building for healthcare services. Increased flooding and landslides could block roads and damage buildings, disrupting health service delivery, supply chains, and capacity-building activities. Climate shocks that affect livelihoods may decrease ability of people to access medications or health services.

- Risks that may require an increase in capacity-building for healthcare are rated low. Risks that may disrupt health service delivery and supply chains are rated moderate. Risks that decrease accessibility of medication and health services are moderate.

Malaria Activity and Treatment Risks: Climate change could increase mosquito populations, requiring activities to consider this in planning. Increased flooding and landslides could block roads and damage buildings, disrupting activities such as indoor residual spraying (IRS) and distribution of insecticide-treated nets (ITNs).

- Risks of climate change to increases in mosquito populations are moderate. Risks that disrupt implementation of IRS are moderate, while risks that affect distribution of ITNs are rated moderate.

Construction Risks: Increased flooding could increase damage to infrastructure and disrupt construction; this may vary depending on region.

- Risks to construction and infrastructure are moderate to high depending on region.
- Engineering analysis preceding design activities must include consideration of climate change and its potential impacts on the location (siting), functionality and sustainability of resulting infrastructure and infrastructure services. Such analysis must include identification of relevant data sets and gaps, review of local building standards and codes for adequacy; and determination of safety factors or other measures of uncertainty that will be carried through design. The results of this analysis, including risks identified and how they are addressed, shall be documented.

The project team has identified activity actions and analyses to respond to these risks, as documented in Annex 1. These action and activities will be integrated into solicitation language, workplans and EMMPs, and monitored by the AOR/COR. These recommendations include:

- Develop and deliver training programs for healthcare service providers and stakeholders to raise awareness and knowledge of impacts of climate change on health.
- Consider climate change's disproportionate impacts on vulnerable communities when planning health services delivery and incorporate in capacity building activities.
- Integrate climate change into contingency planning and increase access to and use of quality meteorological information and early warning services to reduce the risk of climate change impacts to supply chains.
- Carry out flood risk management measures, such as improved drainage or nature-based solutions that reduce flooding.
- Incorporate climate-related indicators in monitoring of malaria vector populations and distribution.

- Incorporate climate change into design standards for infrastructure. Engineering analysis preceding design activities must, where appropriate, include consideration of climate change and its potential impacts on the location (siting), functionality and sustainability of resulting infrastructure and infrastructure services. Such analysis must include identification of relevant data sets and gaps, review of local building standards and codes for adequacy; and determination of safety factors or other measures of uncertainty that will be carried through design. The results of this analysis, including risks identified and how they are addressed, shall be documented.

5.0 CONDITIONS AND MITIGATION MEASURES

5.1 CONDITIONS

The environmental determinations in this IEE are contingent upon full implementation of the following general implementation and monitoring requirements, as well as ADS 204 and other relevant requirements.

5.1.1 During Pre-Award:

- 5.1.1.1 Pre-Award Briefings: As feasible, the design team and/or the cognizant environmental officer(s) (e.g., MEO, REA, BEO) will provide a pre-award briefing for potential offerors on environmental compliance expectations/responsibilities at bidders' conferences.
- 5.1.1.2 Solicitations: The design team, in coordination with the A/CO, will ensure solicitations include environmental compliance requirements and evaluation criteria. A/CO will ensure technical and cost proposal requirements include approach, staffing, and budget sufficient for complying with the terms of this IEE.
- 5.1.1.3 Awards: The A/COR, in coordination with the A/CO, will ensure all awards and sub-awards include environmental compliance requirements.

5.1.2 During Post-Award:

- 5.1.2.1 Post-Award Briefings: The A/COR and/or the cognizant environmental officer(s) (e.g., MEO, REA, BEO) will provide post-award briefings for the IP on environmental compliance responsibilities.
- 5.1.2.3 Workplans and Budgeting: The A/COR will ensure the IP integrates environmental compliance requirements in work plans and budgets to comply with requirements, including EMMP implementation and monitoring.
- 5.1.2.4 Staffing: The A/COR, in coordination with the IP, will ensure all awards have staffing capacity to implement environmental compliance requirements.
- 5.1.2.5 Records Management: The A/COR will maintain environmental compliance documents in the official project/activity file and upload records to the designated USAID environmental compliance database system.
- 5.1.2.6 Host Country Environmental Compliance: The A/COR will ensure the IP complies with applicable and appropriate host country environmental requirements unless otherwise directed in writing by USAID. However, in the case of a conflict between the host country and USAID requirements, the A/COR must contact the MEO for guidance.
- 5.1.2.7 Work Plan Review: The A/COR will ensure the IP verifies, at least annually or when activities are added or modified, that activities remain within the scope of the IEE. Activities outside of the scope of the IEE cannot be implemented until the IEE is amended.

- 5.1.2.8 IEE Amendment: If new activities are introduced or other changes to the scope of this IEE occur, an IEE Amendment will be required.
- 5.1.2.14 USAID Monitoring Oversight: The A/COR or designee, with the support of the cognizant environmental officer(s) (e.g., MEO, REA, BEO), will ensure monitoring of compliance with established requirements (e.g., by desktop reviews, site visits, etc.).
- 5.1.2.16 Environmental Compliance Mitigation and Monitoring Plan: The A/COR will ensure the IP develops, obtains approval for, and implements Environmental Mitigation and Monitoring Plans (EMMPs) that are responsive to the stipulated environmental compliance requirements.
- 5.1.2.17 Environmental Compliance Reporting: The A/COR will ensure the IP includes environmental compliance in regular project/activity reports, using indicators as appropriate; develops and submits the Environmental Mitigation and Monitoring Reports (EMMRs); and completes and submits a Record of Compliance (RoC) describing their implementation of EMMP requirements in conjunction with the final EMMR or at the close of sub activities (as applicable). And where required by Bureaus or Missions, ensure the IP prepares a closeout plan consistent with contract documentation for A/COR review and approval that outlines responsibilities for end-of-project operation, the transition of other operational responsibilities, and final EMMR with lessons learned.
- 5.1.2.18 Corrective Action: When noncompliance or unforeseen impacts are identified, IPs notify the A/COR, place a hold on activities, take corrective action, and report on the effectiveness of corrective actions. The A/COR initiates the corrective action process and ensures the IP completes and documents their activities. Where required by Bureaus or Missions, ensure Record of Compliance is completed.

5.2 AGENCY CONDITIONS

- 5.2.1 Sub-award Screening: The A/COR will ensure the IP uses an adequate environmental screening tool to screen any sub-award applications and to aid in the development of EMMPs.
- 5.2.2 Programmatic IEEs (PIEE): PIEEs stipulate requirements for additional environmental examination of new or country specific projects/activities. The A/COR of any project/activity being implemented under a PIEE will ensure appropriate reviews are conducted, typically through a Supplemental IEE, and approved by the cognizant BEO.
- 5.2.3 Supplemental IEEs (SIEEs): An SIEE will be prepared for any new project/activity being planned which fall under a PIEE. The SIEE will provide more thorough analysis of the planned activities, additional geographic context and baseline conditions as well as specific mitigation and monitoring requirements.
- 5.2.4 Other Supplemental Analyses: The A/COR will ensure supplemental environmental analyses that are called for in the IEE are completed and documented.

- 5.2.5 Resolution of Deferrals: If a deferral of the environmental threshold determination was issued, the A/COR will ensure that the appropriate 22CFR216 environmental analysis and documentation is completed and approved by the BEO before the subject activities are implemented.
- 5.2.6 Positive Determination: If a Positive Determination threshold determination was made, the A/COR will ensure a Scoping Statement, and if required an Environmental Assessment (EA), is completed and approved by the BEO before the subject activities are implemented.
- 5.2.7 Compliance with human subject research requirements: The AM, A/COR shall assure that the IP and sub-awardees, -grantees, and -contractors demonstrate completion of all requirements for ethics review and adequate medical monitoring of human subjects who participate in research trials carried out through this IEE and ensure appropriate records are maintained. All documentation demonstrating completion of required review and approval of human subject trials must be in place prior to initiating any trials and cover the period of performance of the trial as described in the research protocol.

5.3 MITIGATION MEASURES

The mitigation measures presented in this section constitute the minimum required based on available information at the time of this IEE and the environmental analysis in Section 4. These measures shall provide general direction for completing the project/activity Environmental Mitigation and Monitoring Plan (EMMP) and/or the EA and PERSUAP, if required.

5.3.1 Healthcare Waste Standard Conditions:

- 8. When USAID support increases the delivery of healthcare services, such as through the provision of supplies, equipment, and/or staffing, USAID will take responsibility for ensuring the proper management of medical waste generated by the supported services; including, but not limited to, proper handling, labeling, treatment, storage, transport and final disposal.
- 9. When USAID supports healthcare service delivery solely or in partnership with other actors, including the host country, NGOs, CSOs, etc., USAID will ensure appropriate, sufficient, and sustainable medical waste management for the supported interventions through collaboration. If significant deficiencies* in medical waste management persist in spite of collaborative efforts, USAID must consider whether it can responsibly reallocate its resources to either independently close those gaps or to work in facilities where medical waste is properly managed. *Significant deficiencies are defined as not meeting “minimum approaches” as established by WHO Guidance for each of the following aspects of medical waste management: health care waste management policy; planning; waste minimization; segregation, storage and transport; treatment and disposal; wastewater management; waste management costing; health and safety practices; hygiene and infection control; training, education and public awareness.
- 10. USAID must regularly monitor the state of healthcare waste management system in the facilities it supports, and USAID should request reports on that monitoring with the same regularity as it receives reports on other programmatic objectives of the activity.
- 11. When reports or other information indicate significant deficiencies in the management and disposal of medical waste in a given facility (at minimum for waste resulting from

USAID's interventions), USAID will commit its resources (independently or through collaborative efforts) to a speedy correction of significant deficiencies.

12. As applicable, all efforts to strengthen or improve health commodity supply chains (e.g., pharmaceuticals, equipment, diagnostic tests kits (including malaria test kits), including procurement, storage infrastructure, and distribution must address and take all practicable efforts to assure that adequate facilities, procedures and capacities are in place to properly manage expired, used, obsolete or surplus commodities and/or that plans and strategies incorporate and provide for such management. In any instance that a USAID project controls commodities at end-of-life, appropriate end-of-life management must be assured. Mandatory references for "appropriate end of life management": WHO Guidelines for Safe Disposal of Unwanted Pharmaceuticals.
https://apps.who.int/iris/bitstream/handle/10665/85349/9789241548564_eng.pdf;jsessionid=29E4FC7B647745587FF832EB6C1E8EED?sequence=1 "Healthcare Waste" chapter, USAID Sector Environmental Guidelines: <https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/seg-healthcare-waste/pdf>
13. Any healthcare waste generated by USAID-funded training, capacity building and/or technical assistance activities must be appropriately managed, including disposal, following WHO guidelines as well as the Government mandatory procedures and guidelines.
https://apps.who.int/iris/bitstream/handle/10665/85349/9789241548564_eng.pdf;jsessionid=29E4FC7B647745587FF832EB6C1E8EED?sequence=1
14. Training, supervision, curricula development and other health care workforce capacity building must address appropriate management practices concerning the proper handling, use, and disposal of medical waste, including blood, sputum, and sharps, when techniques or care situations being addressed would generate and require disposal of hazardous or highly hazardous waste (e.g. sharps, afterbirth from delivery, waste from screening for HIV or STDs, sputum samples for diagnosis of TB). Note that this condition applies to activities targeting home care AND community health workers, not just those in clinics and health facilities. Wherever relevant, appropriate disposal mechanisms in home-based and community-based situations that are cost effective and safe must be identified and appropriately incorporated in training, protocols, and guidelines. This includes training home care and community health workers to deliver positive messages about personal and household hygiene, sanitation, and proper disposal of condoms and other potentially harmful materials.

PROJECT/ACTIVITY 1: TITLE: DIRECT AND CAPACITY BUILDING SUPPORT FOR HEALTH SERVICE DELIVERY, EXCLUDING COMMODITY PROCUREMENT/ SUPPLY CHAIN STRENGTHENING

TABLE 5A. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 1

Project/Activity	Mitigation Measure(s)
Sub-activity 1.1: Provide information sharing opportunities with other activities host country authorities, healthcare staff, and individuals	Categorical Exclusion; no conditions or mitigation measures are required.
Sub-activity 1.2: Strengthen governance and strategic planning	

Sub-activity 1.3: Provide awareness activities, capacity building, training, workshops, and education	
Sub-activity 1.4: Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	
Sub-activity 1.5: Provide health service delivery activities (i.e., medical treatment and care, laboratory testing for HIV/AIDS, TB, Malaria, family planning, VMMC, etc.) with capacity building and training opportunities.	Negative Determination is subject to the following conditions: • IP must have, implement, and embed a training program on standard operating procedures SOPs for the safe handling of healthcare waste (HCW). The SOP and/or waste management plan (WMP) should include segregation, containerization, handling, PPE, transportation (e.g., on-site and off-site), treatment and/or disposal, monitoring, and incident reporting. • IP must develop, embed in training, and implement a waste management plan (WMP) or SOPs on managing treatment and/or disposal of health commodities and occupational health and safety. Refer to the following documents for guidance when developing SOPs: • USAID DELIVER Project. The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • Sector Environmental Guideline: USAID: Solid Waste

PROJECT/ACTIVITY 2: TITLE DIRECT PROCUREMENT OF COMMODITIES & STRENGTHENING OF COMMODITIES, LOGISTICS & DIAGNOSTIC SYSTEMS

TABLE 5B. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 2

Project/Activity	Mitigation Measure(s)
Sub-activity 2.1: Develop pre-	Categorical Exclusion; no conditions or mitigation measures

qualification standards for product procurement	are required.
Sub-activity 2.2: Review and selection of products available from manufacturers	
Sub-activity 2.3: Establish monitoring inventories indicators and document shelf-life	
Sub-activity 2.4: Support forecasting and supply planning of pharmaceutical and other health-related products	Negative Determination subject to the following conditions: The IP must ensure that a supply plan is developed and reviewed to ensure it includes the following: • Conduct quantification analysis to determine supply needs and develop a supply plan. ○ Coordinate forecasting and supply planning activities with quantification team (e.g., host country officials, program staff) to meet current needs and minimize the risk of stockouts or surplus of public health commodities (PHC). ○ Procure PHCs that consider the ratio of PHCs to population, the existing supply of PHCs, and the supply of PHCs from other (non-USAID) sources. • Manage inventory of stock to minimize the potential for diversion. Refer to the following documents for guidance when developing a supply plan: • USAID DELIVER Project. Quantification of Health Commodities: A Guide to Forecasting and Supply Planning for Procurement (2014). Task Order 4. • USAID DELIVER Project. The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities (2011). • USAID. Sector Environmental Guideline: Healthcare Waste (2019). • WHO. Safe management of waste from health-care activities (2014).
Sub-activity 2.5: Support and strengthen warehouse inventory and management systems set up to strengthen warehouse systems both physical (seconding TA) and with technology	Negative Determination subject to the following conditions: Develop, implement, and train staff on standard operating procedures (SOPs) for the safe and effective storage of PHC to reduce damage or early expiration. Storage considerations include, but are not limited to: storage ambient conditions (e.g., temperature, humidity), security, stock inventory and records,

	fire control, and HCWM. Refer to the following documents for guidance when developing SOPs: • John Snow, Inc./USAID DELIVER Project in collaboration with WHO. Guidelines for the Storage of Essential Medicines and Other Health Commodities (2003). • USAID DELIVER Project. Guidelines for Warehousing Health Commodities (Second Edition 2014). Task Order 4. • USAID. Sector Environmental Guideline: Healthcare Waste (2019). • WHO. Safe management of waste from health-care activities (2014).
Sub-activity 2.6: Asses the distribution networks, in-country logistic service providers, and warehousing capacity building actions	Categorical Exclusion; no conditions or mitigation measures are required.
Sub-activity 2.7: Implement and develop clinical laboratory services and result return systems	Negative Determination subject to the following conditions: Develop, provide training for, and implement a laboratory environmental, health, and safety (EHS) Manual with standard operating procedures (SOPs) that address the management of waste streams associated with laboratory operations. Recommended components of the EHS Manual include: • Chemical hygiene plan • Safety Data Sheets (SDS) for chemicals used in the lab • Use of appropriate personal protective equipment (PPE) • Inspection and permit records • Integrated Waste Management Plan (IWMP) or SOPs providing procedures for properly handling, treating, and disposing of healthcare wastes • Spill prevention plan • Injury and illness prevention plan • Develop training requirements on SOPs and record-keeping system Refer to the following document for guidance when developing a laboratory: • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • EHS Manual: WHO. Laboratory Biosafety Manual- Third

	<u>Edition (2004)</u>
Sub-activity 2.8: Support the government in the setup of a private laboratory network	Negative Determination subject to the following conditions: Develop, provide training for, and implement a laboratory environmental, health, and safety (EHS) Manual with standard operating procedures (SOPs) that address the management of waste streams associated with laboratory operations. Recommended components of the EHS Manual include: • Chemical hygiene plan • Safety Data Sheets (SDS) for chemicals used in the lab • Use of appropriate personal protective equipment (PPE) • Inspection and permit records • <u>Integrated Waste Management Plan (IWMP)</u> or SOPs providing procedures for properly handling, treating, and disposing of healthcare wastes • Spill prevention plan • Injury and illness prevention plan • Develop training requirements on SOPs and record-keeping system Refer to the following document for guidance when developing a laboratory: • Sector Environmental Guideline: USAID: <u>Healthcare Waste (2019)</u>

	• WHO: Safe management of waste from health-care activities • EHS Manual: WHO. Laboratory Biosafety Manual- Third Edition (2004)
Sub-activity 2.9: Provide capacity building, education, and training support on waste management	Negative Determination subject to the following conditions: • IP must have, implement, and embed a training program on standard operating procedures SOPs for the safe distribution of health commodities transported in bulk in motorized vehicles. Distribution considerations include but are not limited to transport needs and availability, fleet management and monitoring, theft prevention procedures, accident and spill response, incident reporting, and vehicle maintenance. • IP must provide training to workers and drivers on the standard operating procedures SOPs developed for the safe distribution of health commodities. • IP must develop, embed in training, and implement a waste management plan (WMP) or SOPs on managing treatment and/or disposal of health commodities and occupational health and safety, including in the host country's health care supply chain systems. Refer to the following documents for guidance when developing SOPs: • USAID DELIVER Project. The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • Sector Environmental Guideline: USAID: Solid Waste

PROJECT/ACTIVITY 3: TITLE WASTE RECYCLING, TREATMENT, AND DISPOSAL OF HEALTH COMMODITIES, GENERAL MEDICAL SUPPLIES, AND EQUIPMENT

TABLE 5C. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 3

Project/Activity	Mitigation Measure(s)
Sub-activity 3.1: Provide capacity building, education, and training support on waste management	Negative Determination subject to the following conditions:

Sub-activity 3.2: Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control)	• IP must have, implement, and embed a training program on standard operating procedures SOPs for the safe distribution of health commodities transported in bulk in motorized vehicles. Distribution considerations include but are not limited to transport needs and availability, fleet management and monitoring, theft prevention procedures, accident and spill response, incident reporting, and vehicle maintenance. • IP must provide training to workers and drivers on the standard operating procedures SOPs developed for the safe distribution of health commodities. • IP must develop, embed in training, and implement a waste management plan (WMP) or SOPs on managing treatment and/or disposal of health commodities and occupational health and safety, including in the host country health care supply chain systems. Refer to the following documents for guidance when developing SOPs: • USAID DELIVER Project. The Logistics Handbook: A Practical Guide for the Supply Chain Management of Health Commodities • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • Sector Environmental Guideline: USAID: Solid Waste
Sub-activity 3.3: Procurement, installation, commissioning, management, and maintenance of hazardous waste treatment equipment (EXCEPT construction related to the installation of hazardous waste treatment equipment)	For incinerators with capacities ≤ 200 lbs/hour and ≤ 2000 lbs./week³⁵ and in-ground disposal facilities $\leq 100\text{m}^3$ capacity Note that multiple installations serving a facility that in total exceed these thresholds receive a positive determination; see below: Negative Determination, per 22 CFR 216.3(a)(2)(iii), subject to the following conditions: • The USAID operating unit financing the activity must prepare a supplemental IEE (SIEE) pertaining to the <u>specific</u> site and circumstance in question as part of the decision to finance an incinerator. The COR must

³⁵ Size definition for incinerators is based on US Clean Air Act Section 129(a)(2) implementing regulations (“Hospital Medical Infectious Waste Incineration (HMIWI) Regulation”), and conservatively combines the “very small” weekly limit and the “small” pounds/hr limit. See e.g. <http://www.combustionportal.org/hmiwi.html>. This is also in line with USAID’s PATH Incinerator Guidebook (https://www.path.org/publications/files/TS_mmis_incin_guide.pdf)

approve the SIEE approved with concurrence by the MEO, REA, and BEO prior to detailed design, procurement, or operation. The SIEE must be informed by relevant industry Environmental, Health and Safety Guidelines and require Best Management Practices.³⁶

- If the SIEE results in a positive threshold determination, the operating unit must prepare a scoping statement and, as necessary, an EA. See below for scoping requirements pertaining to incinerators.

For incinerators > 200 lbs./hour or 2000 lbs./week and in-ground disposal facilities > 100m3 capacity*

Positive threshold determination, per 22 CFR 216.3(a)(2)(iii), with resulting scoping study and, as necessary, an EA approved by the MEO, REA, and BEO.

- Scoping studies for incinerators must analyze, at a minimum: the waste stream content and quantity, required pollution control technology, the capacity of the host country to manage and operate the incinerator to comply with environmental and health standards, estimated operating costs, and other factors that the COR and BEO may determine necessary to ensure successful operation of the incinerator.
- The scoping study will outline the pollution control technology that will be required with the procurement to ensure that the incinerator operates within and does not exceed the WHO or host country air quality standards. The result of the scoping study may result in the preparation of a full EA. The scoping statement must be informed by relevant industry Environmental, Health and Safety Guidelines and Best Management Practices. Incinerators must contain adequate air pollution control technology to ensure compliance with host country guidelines and applicable international air-quality emission requirements, including:
 - 74 FR 51367: US Environmental Protection Agency. Standards of Performance for New Stationary Sources and Emissions Guidelines for Existing Sources: Hospital/Medical/Infectious Waste Incinerators; Final Rule. October 6, 2009.
 - Directive 2000/76/EC: Of the European Parliament and of the Council of 4 December

³⁶ <http://www.ifc.org/wps/wcm/connect/1cd72a00488557cfbdf4ff6a6515bb18/Final+-+Waste+Management+Facilities.pdf?MOD=AJPERES>

	2000 on the incineration of waste. • AP 42 and Emission Factors: US Environmental Protection Agency. • Ugandan National Regulations
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PROJECT/ACTIVITY 4: TITLE: IMPLEMENTATION OF INDOOR RESIDUAL SPRAYING (IRS)

TABLE 5D. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 4

Project/Activity	Mitigation Measure(s)
Sub-activity 4.1: Provide procurement, distribution/delivery, storage, application, and disposal of waste associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved Malaria Vector control insecticides services.	Positive Determination: USAID completed an Integrated Vector Control Programmatic Environmental Assessment in 2017 which addresses the Positive Determination for the Malaria Vector control: 2017 IVM PEA. The Mission shall carry out the Uganda Malaria Vector Control Supplemental Environmental Assessment. IRS activities must comply with the requirements of the 2017 Malaria Vector Control PEA and the Uganda SEA. Training of spray operators must conform to PMI Best Management Practices for IRS, available at: www.fightingmalaria.gov/technical/pest/bmp_manual_aug10.pdf Procurement and distribution of Insecticide Treated Bednets (ITNs): As referenced in the BEO Specified Conditions, the results of the Initial Site Assessment will inform mitigation measures that may be needed to prevent or reduce misuse and may indicate the need for further analysis. The Initial Site Assessment must be approved by the MEO, and completed within 6 months from the date of issue of this IEE. The results of the Initial Site Assessment must be shared with the BEO upon completion, along with recommended mitigation measures. Based upon the results of the Initial Site Assessment, the BEO will work with the Mission to evaluate whether the recommended mitigation measures are appropriate for continued implementation of the bednet activity, or whether further investigations are necessary. Additional investigations would likely take the form of the Rapid Assessment detailed in the Toolkit. At that time, this IEE will be amended accordingly. Refer to the 2018 PMI Toolkit for

	guidance on initiating this process. The Initial Site Assessment should include the following: • Survey the extent of misuse of bednets for fishing in the activity area using the list of recommended stakeholders and guiding questions outlined on page 5 of the 2018 PMI Toolkit. If no reports or evidence is found through consultations and observations, the activity should document the findings and continue to monitor for any changes in the zone of influence. If the survey indicates occurrences or prevalence of misuse for fishing, a full rapid assessment should be completed to thoroughly evaluate the magnitude, impact, and drivers of the issue. • Once the scope, scale, actors, and drivers of the issue is characterized, the Country Office must work with implementing partners and local stakeholders to identify interventions and mitigate the misuse. • Mitigation measures should be considered at the procurement, distribution, and disposal phases of ITNs, and may include enforcement of stiff penalties for ITN use in fishing, social behavior change communication campaigns, development of an accountability system for distribution, or other regionally appropriate measures. • Refer to Annex L of the 2017 IVM PEA for a list of potential mitigation measures which should be applied to the extent possible in order to reduce the potential for impact on aquatic ecosystems. Identifying and Mitigating Misuse of Insecticide-Treated Nets for Fishing Toolkit: https://drive.google.com/file/d/1tXue5o6PkU3B2DzewY7QctMKpSGG8ztk/view?usp=sharing Integrated Vector Management Programs for Malaria Vector Control, 2017 Programmatic Environmental Assessment: https://drive.google.com/file/d/1St5nlkxVs9R-w3U0opgnYO_O94dFu9n7/view?usp=sharing • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • USAID: Integrated Vector Management Programs for Malaria Vector Control Programmatic Environmental Assessment. • Sector Environmental Guideline: USAID: Safer Use Pesticides • Sector Environmental Guideline: USAID: Solid Waste
Sub-activity 4.2: Provide operational support (e.g., training, supervision,	Negative Determination subject to the following conditions:

community mobilization) for insecticide programs.

- Upon the appropriate the documentation completion, the following actions must occur:
 - Procurement and inventory logs must be maintained.
 - Ensure storage facility and personal protective equipment (PPE) are appropriate for the active ingredient used and in accordance with approved SOPs.
 - Distribute insecticides to facilities that can manage such commodities safely in storage, use, and disposal.
 - The health test of all spray team members for duty fitness.
 - Train all workers with potential insecticide contact on the use of PPE.
 - Train operators on mixing insecticides and the proper use and maintenance of application equipment.
 - Enforce application and cleanup procedures.
 - Implement Information, Education, and Communication (IEC) campaigns to inform homeowners of responsibilities and precautions.
 - Storage facilities and vehicles must be physically secured to prevent theft.
 - Maintain records of all insecticide receipts, issuance, and return of empty containers.
 - Conduct analysis comparing the number of houses treated vs. the number of containers used.
 - Examine houses treated to confirm the application.
 - Perform physical inventory counts during the application season.
 - Ensure application equipment and PPE are appropriate for the active ingredient used and in accordance with approved SOPs and maintain equipment to avoid leaks.
 - Handling, treatment, and disposal of nonhazardous (general waste) and hazardous wastes must be in accordance with the approved WMP/SOPs and the PMI BMPs.
 - Choose sites for disposal of liquid wastes, including fixed and mobile soak pit sites according to PMI BMPs
 - Maintain soak pits as necessary during the season.
 - Monitor waste storage and management during the campaign.
 - Monitor disposal procedures post-campaign.
 - Wastes will only be disposed of in incinerators that comply with PMI BMPs

Refer to the following documents for guidance when developing

	material(s): • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • USAID: Integrated Vector Management Programs for Malaria Vector Control Programmatic Environmental Assessment.
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PROJECT/ACTIVITY 5: TITLE DISTRIBUTION OF INSECTICIDE-TREATED MOSQUITO NETS (ITNS)

TABLE 5E. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 5

Project/Activity	Mitigation Measure(s)
Sub-activity 5.1: Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) ITNs services	Positive Determination: USAID has in place the 2017 IVM PEA which addresses the Positive Determination. The PEA states in Annex L (Recommended LLIN Mitigation Measures): “where there is evidence of misuse for fishing, assess extent of misuse and collaborate across sectors to develop a sustainable, locally relevant solution”. The 2018 PMI guidance document, “Identifying and Mitigating Misuse of Insecticide-Treated Nets for Fishing Toolkit”, specifies an approach that programs distributing ITNs can utilize to evaluate the extent of the misuse of ITNs for fishing in their country. As referenced in the BEO Specified Conditions, the results of the Initial Site Assessment will inform mitigation measures that may be needed to prevent or reduce misuse and may indicate the need for further analysis. The scope of work for the Initial Site Assessment must be approved by the MEO, and completed within 6 months from the date of issue of this IEE. The results of the Initial Site Assessment must be shared with the BEO upon completion, along with recommended mitigation measures. Based upon the results of the Initial Site Assessment, the BEO will work with the Mission to evaluate whether the recommended mitigation measures are appropriate for continued implementation of the bednet activity, and whether more investigations are necessary. Additional investigations would likely take the form of the Rapid Assessment detailed in the Toolkit. At that time, this IEE will be amended accordingly. Refer to the 2018 PMI Toolkit for guidance on initiating this process. The evaluation should include the following: • Survey the extent of misuse of bednets for fishing in

	the activity area using the list of recommended stakeholders and guiding questions outlined on page 5 of the 2018 PMI Toolkit. If no reports or evidence is found through consultations and observations, the activity should document the findings and continue to monitor for any changes in the zone of influence. If the survey indicates occurrences or prevalence of misuse for fishing, a full rapid assessment should be completed to thoroughly evaluate the magnitude, impact, and drivers of the issue. • Once the scope, scale, actors, and drivers of the issue is characterized, the Country Office must work with implementing partners and local stakeholders to identify interventions and mitigate the misuse. • Mitigation measures should be considered at the procurement, distribution, and disposal phases of ITNs, and may include enforcement of stiff penalties for ITN use in fishing, social behavior change communication campaigns, development of an accountability system for distribution, or other regionally appropriate measures. • Refer to Annex L of the 2017 IVM PEA for a list of potential mitigation measures which should be applied to the extent possible in order to reduce the potential for impact on aquatic ecosystems. Refer to the following documents for guidance when developing material(s): • Identifying and Mitigating Misuse of Insecticide-Treated Nets for Fishing Toolkit • Integrated Vector Management Programs for Malaria Vector Control, 2017 Programmatic Environmental Assessment • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • USAID. Integrated Vector Management Programs for Malaria Vector Control
Sub-activity 5.2: Provide provision of operational support (e.g., training, supervision, community mobilization) for ITNs programs	Negative Determination subject to the following conditions: • The USAID-supported malaria program is subject to the USAID Programmatic Environmental Assessment criteria, IEE and/or country SIEE and SEA, and host country requirements. Upon the proper documentation completion, the following actions must occur: ○ Storage facilities and vehicles must be physically secured to prevent theft.

	- Where there is evidence of misuse for fishing, assess the extent of misuse and collaborate across sectors (Ministries of Health, Environment, Fisheries, and Agriculture) to develop a sustainable, locally relevant solution (e.g., SBC, monitoring). - Store ITNs in dry, ventilated, secure facilities, and on pallets (off the ground). - Do not store ITNs with food, feed, or potable water supplies. - Provide worker training on the proper handling of ITNs. - Ensure that SBC activities are coordinated with ITN distribution activities during campaigns as well as normal distribution and include guidelines on how to wash properly and care for ITNs (e.g., discourage disposal of wash water in sensitive ecosystems, discourage washing of ITNs in water bodies). - Ensure that SBC messages inform campaign distributors and local communities about the potential harm to human health and the environment if bags and baling materials are reused; support the development of a communication plan that provides messages on best practices for handling and disposing bags and baling materials. Refer to the following documents for guidance when developing material(s): - Sector Environmental Guideline: USAID: Healthcare Waste (2019) - WHO: Safe management of waste from health-care activities - USAID: Integrated Waste Management Plan (IWMP) - USAID. Integrated Vector Management Programs for Malaria Vector Control Programmatic Environmental Assessment. - Sector Environmental Guideline: USAID: Safer Use Pesticides - Sector Environmental Guideline: USAID: Solid Waste
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PROJECT/ACTIVITY 6: TITLE CONDUCT ENTOMOLOGICAL SURVEILLANCE AND VECTOR CONTROL MONITORING AND RESEARCH

TABLE 5F. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 6

Project/Activity	Mitigation Measure(s)
Sub-activity 6.1: Perform	Categorical Exclusion: no conditions or mitigation measures

surveillance to gather information on the seasonality, density, behavior, and habitat indices of the <i>Anopheles gambiae</i> , <i>An. coluzzii</i> , <i>An. funestus</i> , <i>An. Arabiensis</i> , <i>An. Stephensi</i> , and other <i>Anopheles</i> in malaria vector country.	are required.
Sub-activity 6.2: Determine the bio-efficacy, as well as the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on <i>Anopheles</i> populations under field conditions to generate data for the strategic vector control in areas at risk of malaria transmission worldwide	
Sub-activity 6.3: Provide provision of monitoring and evaluation support for insecticides, ITNs, IRS programs	

PROJECT/ACTIVITY 7: TITLE: BUILD CAPACITY AND NMCP, DHMTS, AND OTHER GOU AGENCIES TO IMPLEMENT IRS AND ITN CAMPAIGNS

TABLE 5G. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 7

Project/Activity	Mitigation Measure(s)
Sub-activity 7.1: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.	Negative Determination subject to the following conditions: Develop an Integrated Waste Management Plan (IWMP) that includes procedures for treating and/or disposing of IRS and ITN wastes in conformance with international best management practices. The plan should include, but not be limited to: proper handling and storage of wastes (including PPE), containers and labeling, safe treatment and/or disposal practices and procedures, documentation requirements (e.g., waste treatment and/or disposal records). Refer to the following documents for guidance when developing an IWMP: - WHO. Pesticides and Their Application: For the Control of Vectors and Pests of Public Health Importance (2006). - FAO. International Code of Conduct on the Distribution

	<u>and Use of Pesticides: Guidelines on Management Options for Empty Pesticide Containers</u>. (May 2008). - Chandonait, Peter. <u>President's Malaria Initiative BMP Manual Best Management Practices (BMP) For Indoor Residual Spraying (IRS) In Vector Control Interventions</u>. (February 2015) PMI Africa IRS (AIRS) Project, Abt Associates Inc. - USAID. <u>Sector Environmental Guideline: Healthcare Waste Management</u> (2019).
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PROJECT/ACTIVITY 8: TITLE: CONDUCT SMALL-SCALE CONSTRUCTION ACTIVITIES

TABLE 5H. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 8

Project/Activity	Mitigation Measure(s)
Sub-activity 8.1: Renovation and/or cosmetic improvements to health-related facilities (i.e., storerooms, offices, healthcare facilities, laboratories, hospitals, HCWM facilities, waste pits, foundations, etc.). Small scale activities will only involve a total disturbed area equal to or less than 1,000m ² .	Negative Determination subject to the following conditions: The IP is required to perform the following: - Obtain all needed authorizations before construction: permits, environmental and social impact assessments, as required by host country procedures. - Retain competent, licensed professionals to design and supervise construction - Establish health, safety and environmental obligations in all contracts. - Complete a site emergency action plan - Provide safety training to all workers using construction equipment. - Identify closest health care facility to handle injuries. - Develop and follow a waste management plan (WMP). - Identify authorized recycling or disposal facilities before the generation of waste. - Ensure all workers are trained and dispose of wastes properly. - Contractors comply with the minimum recommended Occupational Safety and Health practices for construction (Construction Sector Environmental Guideline, Annex 3). See: https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/sector-environmental-guidelines-resources#co - Undertake individual site assessments and any construction activities that are likely to adversely affect threatened or endangered species would require an environmental assessment regardless of the scope or size of the construction activity. (The IP must specify an appropriate instrument for the site assessments for

	approval as part of the EMMP.) Refer to the following documents for guidance when developing material(s): • Sector Environmental Guideline: USAID: Healthcare Waste (2019) • WHO: Safe management of waste from health-care activities • USAID: Integrated Waste Management Plan (IWMP) • Sector Environmental Guideline: USAID: Construction • Sector Environmental Guideline: USAID: Solid Waste Sector Environmental Guideline: USAID: Healthcare Facilities
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PROJECT/ACTIVITY 9: TITLE: RESOURCE/ FINANCIAL MOBILIZATION

TABLE 5I. SUMMARY OF MITIGATION MEASURES FOR INTERVENTION CATEGORY 9

Project/Activity	Mitigation Measure(s)
Sub-activity 9.1: Transfer of resources to promote health strengthening efforts	Categorical Exclusion: no conditions or mitigation measures are required.
Sub-activity 9.2: Improve budgeting and financial management systems	
Sub-activity 9.3: Health support activities: evaluations, studies, etc.	

6.0 LIMITATIONS OF THIS INITIAL ENVIRONMENTAL EXAMINATION

The determinations recommended in this document apply only to projects/activities and sub-activities described herein. Other projects/activities that may arise must be documented in either a separate IEE, an IEE amendment if the activities are within the same project/activity, or other type of environmental compliance document and shall be subject to an environmental analysis within the appropriate documents listed above.

Other than projects/activities determined to have a Positive Threshold Determination, it is confirmed that the projects/activities described herein do not involve actions normally having a significant effect on the environment, including those described in 22 CFR 216.2(d).

In addition, other than projects/activities determined to have a Positive Threshold Determination and/or a pesticide management plan (PERSUAP), it is confirmed that the projects/activities described herein do not involve any actions listed below. Any of the following actions would require additional environmental analyses and environmental determinations:

- Support project preparation, project feasibility studies, or engineering design for activities listed in §216.2(d)(1);
- Affect endangered and threatened species or their critical habitats per §216.5, FAA 118, FAA 119;
- Provide support to extractive industries (e.g. mining and quarrying) per FAA 117;
- Promote timber harvesting per FAA 117 and 118;
- Lead to new construction, reconstruction, rehabilitation, or renovation work per §216.2(b)(1);
- Support agro-processing or industrial enterprises per §216.1(b)(4);
- Provide support for regulatory permitting per §216.1(b)(2);
- Lead to privatization of industrial facilities or infrastructure with heavily polluted property per §216.1(b)(4);
- Research, testing, or use of genetically engineered organisms per §216.1(b)(1), ADS 211
- Assist the procurement (including payment in kind, donations, guarantees of credit) or use (including handling, transport, fuel for transport, storage, mixing, loading, application, clean-up of spray equipment, and disposal) of pesticides or activities involving procurement, transport, use, storage, or disposal of toxic materials. Pesticides cover all insecticides, fungicides, rodenticides, etc. covered under the Federal Insecticide, Fungicide, and Rodenticide Act per §216.2(e) and §216.3(b).

7.0 REVISIONS

Per 22 CFR 216.3(a)(9), when ongoing programs are revised to incorporate a change in scope or nature, a determination will be made as to whether such change may have an environmental impact not previously assessed. If so, this IEE will be amended to cover the changes. Per ADS 204, it is the responsibility of the USAID A/COR to keep the MEO/REA and BEO informed of any new information or changes in the activity that might require revision of this environmental analysis and environmental determination.

ATTACHMENTS:

Annex 1: Climate Risk Management Summary Table

Annex 2: AFR Environmental Review Form/Environmental Review Report

ANNEX 1. CLIMATE RISK MANAGEMENT SUMMARY TABLE

Defined or Anticipated Project Elements ³⁷	Climate Risks ³⁸	Risk Rating ³⁹	How Risks are Addressed at Project Level ⁴⁰	Further Analysis and Actions for Activity Design/ Implementation ⁴¹	Opportunities to Strengthen Climate Resilience ⁴²
Intervention Category 1: Direct and Capacity Building Support for Health Service Delivery, Excluding Commodity Procurement/Supply Chain Strengthening ● Provide information sharing opportunities with other activities' host country authorities, healthcare staff, and individuals ● Strengthen governance and strategic planning ● Provide awareness activities, capacity building, training, workshops, and education ● Train staff on administrative issues, ordering, GPS routing, and ERP systems, financial management, and supply chain and fleet management	Climate change could impact health through heat-related illnesses, increased incidences of malaria and other endemic diseases in Uganda, flooding that increases outbreaks of waterborne disease like dengue and cholera, and impacts to agriculture that reduce food security and increase malnutrition. Climate change could also worsen health for patients with existing illnesses such as HIV/AIDS. These could increase the number of patients that need care throughout Uganda, requiring an increase in capacity-building for healthcare services to meet the need of patients.	Low	Climate risks are not addressed at the project level.	Develop and deliver training programs for healthcare service providers and stakeholders to raise awareness and knowledge of impacts of climate change on health. Work with community members to identify alternate locations/travel routes or methods to deliver health services and capacity-building activities.	Conduct further analysis on climate change effects to health service delivery.
	Increases in flooding and landslides could block access routes, damage healthcare facilities, and disrupt supply chains, affecting ability to carry out capacity-building activities and service delivery.	Moderate			
	Climate change shocks and stressors could negatively impact people's health	Low			

³⁷ Purpose/Sub-purpose, Area of Focus, or Activity/ Mechanism, etc.

³⁸ List key risks related to the project elements identified through either the strategy- or project-level climate risk assessment.

³⁹ Low/Moderate/ High

⁴⁰ Describe how risks have been addressed at the project level. If a decision has been made to accept the risk, briefly explain why.

⁴¹ Describe CRM measures to be integrated into activity design or implementation, including additional analysis, if applicable.

⁴² Describe opportunities to achieve development objectives by integrating climate resilience or mitigation measures.

Defined or Anticipated Project Elements ³⁷	Climate Risks ³⁸	Risk Rating ³⁹	How Risks are Addressed at Project Level ⁴⁰	Further Analysis and Actions for Activity Design/ Implementation ⁴¹	Opportunities to Strengthen Climate Resilience ⁴²
	(both physical and mental), putting increased stress on health workers and potentially resulting in high workforce turnover.			Increase the health workforce's capacity to identify and manage climate-related diseases, as well as adaptation responses to severe weather events.	
	Climate change shocks and stressors could negatively impact people's livelihoods, decreasing individual and household incomes and reducing their ability to access medications or health services.	Moderate		Consider climate change's disproportionate impacts on vulnerable communities when planning health services delivery and incorporate in capacity building activities. Work with health care managers to incorporate climate change projections into strategic planning for health services.	
Intervention Category 2: Direct Procurement of Commodities & Strengthening of Commodities,	Increased frequency and magnitude of flooding may disrupt or damage roads, bridges, communication networks, and storage, which can have a significant impact on procurement and logistics in	Moderate	Install temperature regulators to monitor medication temperature in warehouses,	Explore backup power options for critical health care,	Integrate climate change into contingency planning and increase access to

Defined or Anticipated Project Elements ³⁷	Climate Risks ³⁸	Risk Rating ³⁹	How Risks are Addressed at Project Level ⁴⁰	Further Analysis and Actions for Activity Design/ Implementation ⁴¹	Opportunities to Strengthen Climate Resilience ⁴²
Logistics & Diagnostic Systems ● Improve pre-qualification standards for product procurement ● Review and selection of products available from manufacturers ● Establish monitoring inventories indicators and document shelf-life ● Support forecasting and supply planning of pharmaceutical and other health-related products ● Support and strengthen warehouse inventory and management systems set up to strengthen warehouse systems both physical (seconding TA) and with technology ● Asses the distribution networks, in-country logistic service providers, and warehousing capacity ● Implement and develop clinical laboratory services and result return systems ● Support the government in the setup of a private laboratory network ● Provide capacity building, education, and training	the health products value chain and result in delays.		storage, and transport.	laboratory, and supply chain facilities.	and use of quality meteorological information and early warning services to reduce the risk of climate change impacts to supply chains.
	Increased temperatures could negatively impact medicine in storage or transport by reducing their potency and increasing their expiry rates.	Moderate	Install solar panels for backup power and have standby generators in place.	Provide resources for workers that increase knowledge on climate change impacts to health.	
	Climate change could result in impacts to energy infrastructure. This may include falling lake levels that affect hydropower generation and increased heat that can impact generation and transmission. Extreme weather could also affect the reliability of electricity distribution as power outages tend to increase during the rainy season. These impacts to electricity may result in power failure for cold storage facilities, potentially destroying health commodities (such as vaccines or medicines) that require cold storage. Power failures could also impact laboratories and testing facilities, resulting in delays or destroyed samples.	Low			
	Climate change shocks and stressors could negatively impact people's health (both physical and mental), putting increased stress on health and supply chain workers and potentially resulting in high workforce turnover.	Low			

Defined or Anticipated Project Elements ³⁷	Climate Risks ³⁸	Risk Rating ³⁹	How Risks are Addressed at Project Level ⁴⁰	Further Analysis and Actions for Activity Design/ Implementation ⁴¹	Opportunities to Strengthen Climate Resilience ⁴²
support on waste management					
Intervention Category 3: Waste recycling, treatment, and disposal of health commodities, general medical supplies, and equipment - Support design and implementation of WMPs, strategies, policies, procedures, and systems to improve the management of healthcare waste at all health system levels (direct control, indirect control, no control) (includes the incorporation of health and environmental safety measures) - Treatment and/or disposal of expired, off-specification, recall, or mishandled products throughout the supply chain (direct control, indirect control, no control) - Provide capacity building, education, and training support on waste management	Increased frequency and magnitude of flooding may disrupt or damage roads and waste sites, which can have a significant impact on waste recycling, treatment, and disposal of health commodities.	Low	Climate risks are not addressed at the project level.	Provide resources for workers that increase knowledge on climate change impacts.	
	Increased temperatures could negatively impact medicine in storage or transport by reducing their potency and increasing their expiry rates. This could increase the amount of medicine that must be disposed of or recycled.	Moderate		Integrate climate change into waste management planning and increase access to and use of quality meteorological information and early warning services to reduce the risk of flooding to health waste management processes.	
	Climate change shocks and stressors could negatively impact people's health (both physical and mental), putting increased stress on health workers and health waste management personnel and potentially resulting in high workforce turnover.	Low			
Intervention Category 4: Implementation of indoor residual spraying (IRS) Provide procurement, distribution/delivery, storage,	Increased frequency and magnitude of flooding may disrupt or damage roads, bridges, communication networks, and storage, which can have a significant impact on implementation of IRS.	Moderate	Climate risks are not addressed at the project level.	Carry out flood risk management measures, such as improved drainage or	Integrate climate change into IRS planning and increase access to and use of quality meteorological

Defined or Anticipated Project Elements ³⁷	Climate Risks ³⁸	Risk Rating ³⁹	How Risks are Addressed at Project Level ⁴⁰	Further Analysis and Actions for Activity Design/ Implementation ⁴¹	Opportunities to Strengthen Climate Resilience ⁴²
application, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved insecticides services. ● Provide operational support (e.g., training, supervision, community mobilization) for insecticide programs.				nature-based solutions that reduce flooding.	information and early warning services to reduce the risk of flooding and extreme precipitation to IRS.
Intervention Category 5: Distribution of insecticide-treated mosquito nets (ITNs) ● Provide procurement, distribution/delivery, storage, and waste disposal associated with World Health Organization Pre-Qualified (WHO/PQ) ITNs services. ● Provide operational support (e.g., training, supervision, community mobilization) for ITNs programs.	Increased frequency and magnitude of flooding may disrupt or damage roads, health facilities, and community centers, which can have a significant impact on distribution of ITNs.	Low	Plan distribution during times when flooding is less probable.		Integrate climate change into planning ITN distribution and increase access to and use of quality meteorological information and early warning services to reduce the risk of flooding and extreme precipitation to ITN distribution.
Intervention Category 6: Conduct entomological surveillance and vector control monitoring and research ● Perform surveillance to gather information on the seasonality, density, behavior, and habitat indices of the Anopheles.	Increased frequency and magnitude of heat and flooding could increase mosquito populations. Higher temperatures could expand habitat suitability for mosquitos into higher elevations, while increased precipitation may result in more standing pools of water that serve as mosquito breeding sites. If climate change is not incorporated	Moderate	The PMI Malaria Reduction Activity will increase surveillance of disease outbreaks, respond rapidly to epidemics, and increase the health workforce	Incorporate climate-related indicators in monitoring of malaria vector populations and distribution.	Incorporate climate change into research on malaria vectors and vector control.

Defined or Anticipated Project Elements ³⁷	Climate Risks ³⁸	Risk Rating ³⁹	How Risks are Addressed at Project Level ⁴⁰	Further Analysis and Actions for Activity Design/ Implementation ⁴¹	Opportunities to Strengthen Climate Resilience ⁴²
gambiae, An. coluzzii, An. funestus, An. Arabiensis, An. Stephensi, and other Anopheles in malaria vector country. - Determine the bio-efficacy and the residual efficacy of Health Organization Pre-Qualified (WHO/PQ) and/or U.S. Environmental Protection Agency (USEPA)-approved products on Anopheles populations under field conditions generate data for the strategic vector control in areas at risk of malaria transmission worldwide. - Provide monitoring and evaluation support for insecticides, ITNs, and IRS programs.	into entomological surveillance and vector control monitoring and research, this could result in maladaptation or underperforming activities.		awareness of the relationship between climate change and malaria. The contractor will also use results from malaria indicator surveys to establish climate impacts on malaria, establish if malaria is spreading to new districts or altitudes, and inform malaria policies and tools.	Enhance reach of malaria services.	
Intervention Category 7: Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns. Build capacity and NMCP, DHMTs, and other GOU agencies to implement IRS and ITN campaigns.	Increased flooding and landslides could block access routes and damage buildings, disrupting ability for staff and participants to gather for capacity-building exercises.	Low	Climate risks are not addressed at the project level.	Increase access to and use of quality meteorological information and early warning services.	Incorporate climate change projections, such as likelihood of increased extreme precipitation and flooding, into IRS and ITN campaigns and services.
	Climate change shocks and stressors could negatively impact people's health (both physical and mental), affecting their ability to attend trainings and participate in capacity-building exercises.	Low		Work with community members to identify alternate locations/travel routes	

Defined or Anticipated Project Elements ³⁷	Climate Risks ³⁸	Risk Rating ³⁹	How Risks are Addressed at Project Level ⁴⁰	Further Analysis and Actions for Activity Design/ Implementation ⁴¹	Opportunities to Strengthen Climate Resilience ⁴²
				or methods to carry out trainings.	
Intervention Category 8: Conduct small-scale construction activities Renovation and/or cosmetic improvements to insectaries and other health care facilities related areas (i.e., storerooms, offices, etc.) used in vector control projects and/or healthcare activities. Small scale activities will only involve a total disturbed area equal to or less than 1,000m².	Increased frequency and magnitude of flooding will increase damage to infrastructure and disrupt construction. This can include damage to the building, blocked entrances or exits, damage to utility functions like water and energy, and potential inundation that could require relocation of vulnerable patients and critical equipment.	Moderate /High	Climate risks are not addressed at the project level.	Promote climate-smart infrastructure for health care facility construction investments.	Incorporate climate change into design standards for infrastructure.
	Climate change could result in impacts to energy infrastructure. This may include falling lake levels that affect hydropower generation and increased heat that can impact generation and transmission. Extreme weather could also affect electricity distribution as power outages tend to increase during the rainy season. These impacts to electricity may negatively impact construction of small-scale health care and related facilities.	Low		Invest in resilient energy alternatives, such as solar energy, to develop localized sources of power and provide backup power in extreme weather events.	
	Extreme heat can threaten the health and safety of construction workers, as well as affect efficiency or productivity of construction operations.	Low			
Intervention Category 9: Resource/ Financial Mobilization	Climate shocks and stressors may result in increased government costs related to addressing damage, decreased agricultural production, and water shortages. This could redirect government	Low	The government already plans for climate shocks in	Develop and track climate vulnerability indicators for funding as they relate to	Mainstream climate change considerations into government planning for

Defined or Anticipated Project Elements ³⁷	Climate Risks ³⁸	Risk Rating ³⁹	How Risks are Addressed at Project Level ⁴⁰	Further Analysis and Actions for Activity Design/ Implementation ⁴¹	Opportunities to Strengthen Climate Resilience ⁴²
• Transfer of resources to promote health strengthening efforts • Improve budgeting and financial management systems	resources and funds away from promoting health strengthening efforts.		the disaster department.	health-strengthening efforts.	health-related activities.

ANNEX 2: AFRICA BUREAU ENVIRONMENTAL REVIEW FORM & INSTRUCTIONS

Appropriate use

3. The Environmental Review Form (ERF) can only be used when and as specifically authorized by the IEE or EA governing the project or program in question. For IEEs, this authorization is made in the form of a negative determination with conditions. *Authorized use of the ERF is limited to the specific class of activities enumerated in the determination.*
4. The BEO will not clear an IEE or EA that authorizes use of the ERF unless ALL of the following are true:
 - a. **the general nature or potential scope of the activities for which the ERF will be used are known** at the time the IEE is written (e.g. small infrastructure rehabilitation, training and outreach for a specified purpose, etc.).
 - b. **these activities will be executed under a grant or subproject component of a parent project/program.** The ERF cannot be used in lieu of a request for categorical exclusion, IEE or IEE amendment when new activities/components are to be added to existing projects, programs or sector portfolios.
 - c. of their general nature, **foreseeable adverse environmental impacts are small or easily controllable with BASIC MITIGATION TECHNIQUES that can BE SUCCESSFULLY IMPLEMENTED BY FIELD STAFF.**
 - d. of their general nature, the **activities are NOT large-scale.**

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

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



Environmental Review Form for
XXX Activity subgrants

Follow, but do not submit, the attached instructions.

D. Applicant information

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

E. Activities, screening results, and findings

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

2.						
3.						
4.						
5.						
6.						

7.						
8.						

*These screening results require completion of an Environmental Review Report

F. Certification:

I, the undersigned, certify that:

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

(Signature) _____

(Date) _____

(Print name) _____

(Title) _____

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

BELOW THIS LINE FOR USAID USE ONLY

Notes:

3. For clearance to be granted, the activity **MUST** be within the scope of the activities for which use of the ERF is authorized in the governing IEE. **Review IEE before signature.** If activities are outside this scope, deny clearance and provide explanation in the comments section. The Partner, C/AOTR, MEO and REA must then confer regarding next steps: activity re-design, an IEE or EA.

4. Clearing an ERF containing one or more findings that **significant adverse impacts are possible** indicates agreement with the analysis and findings. It does NOT authorize activities for which “significant adverse impacts are possible” to go forward. It DOES authorize other activities to go forward. The Partner, C/AOTR, MEO and REA must then confer regarding next steps: activity re-design, an IEE or EA.

Clearance record

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

Bureau Env. Officer (BEO)*	(print name)	(signature)	(date)
☐ Clearance given ☐ Clearance denied			

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

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