INITIAL ENVIRONMENTAL EXAMINATION

PURPOSE STATEMENT:

This document provides the pre-implementation 22 CFR 216 review of potential environmental impacts associated with the new USAID/Madagascar Health Sector Strengthening Project through 2026. The HSS project will strengthen the effectiveness of gender-sensitive and inclusive systems that include financing, human resources, management, logistics, information, and service delivery to improve the sustainability of health services. Capacity building interventions will target national, regional, district, and community structures including health providers in order to improve management and governance of the health systems.

PROJECT DATA:

Project Name:	Health Sector Strengthening (HSS) 2022-2026 Project
Geographic Location(s) (Country/Region)**:**	Madagascar, Southern Africa
Amendment (Yes/No), if Yes indicate # (1, 2...):	No
Implementation Start/End Date (FY or M/D/Y)**:**	2022 - 2026
If Amended, specify New End Date:	
Solicitation/Contract/Award Number(s):	Multiple
Implementing Partner(s):	Multiple
Bureau Tracking ID:	Madagascar Health Sector Strengthening (HSS) IEE https://ecd.usaid.gov/document.php?doc_id=56659
Tracking ID of Related RCE/IEE (if any)**:**	Madagascar Health Sector Portfolio IEE amendment 1 https://ecd.usaid.gov/document.php?doc_id=54987

Tracking ID of Other, Related Analyses:	1. ACCESS IEE 2018-2023 https://ecd.usaid.gov/repository/pdf/50582.pdf 2. IMPACT IEE 2018-2023 https://ecd.usaid.gov/repository/pdf/50480.pdf 3. U.S President's Malaria Initiative Vectorlink Project: Madagascar Supplemental Environmental Assessment (SEA) for Indoor Residual Spraying https://ecd.usaid.gov/repository/pdf/52422.pdf 4. Amendment #1 to the Madagascar Supplemental Environmental Assessment for Indoor Residual Spraying for Malaria Control https://ecd.usaid.gov/repository/pdf/51033.pdf
	5. IVM PEA for malaria vector control https://d1u4sg1s9ptc4z.cloudfront.net/uploads/2021/06/integrated-vector-management-programsfor-malaria-vector-control-programmaticenvironmental-assessment-2017.pdf 6. Madagascar WADA Activity SIEE https://ecd.usaid.gov/document.php?doc_id=55024

ORGANIZATIONAL/ADMINISTRATIVE DATA

Implementing Operating Unit(s): (e.g. Mission or Bureau or Office)	USAID/Madagascar, Africa Bureau
Other Affected Operating Unit(s):	N/A
Lead BEO Bureau:	
Funding Account(s) (if available)**:**	GH, DA
Prepared by:	
Date Prepared:	May 2022

ENVIRONMENTAL COMPLIANCE REVIEW DATA

Analysis Type:	☒ Initial Environmental Examination
Environmental Determination(s):	☒ Categorical Exclusion(s) ☒ Negative Determination w/ Conditions
IEE Expiration Date (if applicable)**:**	**November 30, 2027**

Additional Analyses/Reporting Required:	Climate Risk Management (CRM), see Annex 1
Climate Risks Identified (#):	Low _9____ Moderate __9___ High __0___
Climate Risks Addressed (#):	Low _9___ Moderate __9__ High ___0__

THRESHOLD DETERMINATION AND SUMMARY OF FINDINGS

Specific IEEs or environmental documents exist for the following activities:

- Accessible Continuum of Care and Essential Services Sustained (ACCESS) https://ecd.usaid.gov/repository/pdf/50582.pdf ;
- Improving Market Partnerships and Access to Commodities Together (IMPACT) https://ecd.usaid.gov/repository/pdf/50480.pdf

ACCESS, IMPACT and WADA are implemented by the USAID HPN Office. They are simultaneously implemented with other activities that are covered under their respective activitylevel IEEs. When these activities end in 2023, their follow-on activities will be covered under this Health Sector Strengthening (HSS) 2022-2026 Project IEE.

PROJECT SUMMARY

Since independence, Madagascar has cycled through periods of political instability, natural disasters, and recurrent epidemics that have significantly impeded its progress towards selfreliance. From 2009 to 2014, USAID was prohibited from direct engagement with the Government of Madagascar (GoM) and focused instead on improving health behaviors and services through private sector providers. Since restoration of the USG-GoM relationship, USAID has focused on strengthening its partnership with the GoM, with an emphasis on building the capacity of GoM health systems and strengthening the linkages between USAID's past private sector investments and the public health sector.

According to the national census conducted in 2018, the population of Madagascar is 25,674,196. While Madagascar has made notable improvements in some health statistics, notably a marked increase in contraceptive prevalence rate (Multiple Indicator Cluster Surveys [MICS] 2018), other indicators have stagnated or declined. Most notably, the country continues to suffer from significant infectious disease outbreaks, and the emergency response to these outbreaks draws resources away from building a functional national health system. The COVID-19 pandemic is only the latest health threat; in 2018/2019, the country experienced one of the world's worst measles outbreaks, resulting in 244,569 cases and 1,080 deaths (source DPEV). Malaria cases nearly doubled from 2019 to 2020. While the country was certified polio free in 2018, weaknesses in coverage and equity of services left the country vulnerable to recurrence. The suspension of vaccination campaigns due to COVID-19 resulted in new polio outbreaks in FY 2020 and 2021. These infectious disease outbreaks threaten an already vulnerable population; national stunting rates are 42 percent, access to improved sanitation is 16 percent, and only 43 percent of the population has access to improved sources of drinking water.

The Project will assist the country of Madagascar to reduce maternal, infant, and child mortality and morbidity by promoting the adoption of healthy and care-seeking behaviors such as hand

washing with soap and exclusive breastfeeding. It will also increase the availability and accessibility to quality health, nutrition, and water, sanitation and hygiene (WASH) services with an emphasis on improving the continuum of care throughout the life cycle from pregnancy through the first days of life. The project aims to strengthen the effectiveness of gender-sensitive and inclusive systems that include financing, human resources, management, logistics, information, and service delivery to improve the sustainability of health services. USAID will increase the leadership capacity of Madagascar's health sector, including both the public and private sectors. Capacity building interventions will target national, regional, district, and community structures including health providers in order to improve management and governance of the health systems.

The Project will support both high-impact interventions and the systems required for sustainability and scale-up through engagement of all levels of the sector in a coordinated way. The Health Sector Strengthening Project supports the GoM's vision that "by 2030 the entire Malagasy Population is healthy, lives in a safe environment, and has a better and productive life." It also supports the Madagascar National Development Plan's emphasis on human capital as a pillar of development. This Project incorporates years of lessons learned from a combination of bilateral and field support activities. The expected intermediate results are:

IR 1: Healthy and care-seeking behaviors and social norms adopted

IR 2 : Availability and accessibility to a continuum of quality health and WASH services increased

IR 3: Resources for health and WASH mobilized and optimized

IR 4: Governance, management and leadership for health and WASH strengthened

ENVIRONMENTAL DETERMINATIONS

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

TABLE 1. ENVIRONMENTAL DETERMINATIONS

Categories	Categorical Exclusion Citation (if applicable)	Negative Determination with conditions	Positive Determination	Deferral
Category 1: Capacity building, training, social and behavior change, policy and strategy development				

IR 1: Healthy and care-seeking behaviors and social norms adopted	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
IR2 : Availability and accessibility to a continuum of quality		☒		

health, nutrition and WASH, services increased				

IR3: Resources for health and WASH mobilized and optimized	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
IR 4: Governance, management and leadership for health and WASH strengthened	§216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as construction of facilities, etc.) §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings			

	§216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
Category 2: Research, studies, surveillance, surveys, assessments				
IR 4: Governance, management and leadership for health and WASH strengthened		☒		
Category 3: Small scale rehabilitation excluding WASH				
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		
Category 4: Implementation of community health activities excluding WASH				
IR 1: Healthy and care-seeking behaviors and social norms adopted		☒		
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		

IR3: Resources for health and WASH mobilized and optimized	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

IR 4: Governance, management and leadership for health and WASH strengthened	§216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as construction of facilities, etc.) §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

Category 5: Implementation of Water, Sanitation, and Hygiene activities				

IR 1: Healthy and care-seeking behaviors and social norms adopted	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		
IR3: Resources for health and WASH mobilized and optimized	§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.); §216.2(c)(2)(iii) Analyses, studies,			

	academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
IR 4: Governance, management and leadership for health and WASH strengthened	§216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as construction of facilities, etc.) §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

Category 6: Commodity procurement and transportation of commodities including ITNs				
IR 1: Healthy and care-seeking behaviors and social norms adopted	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		

IR3: Resources for health and WASH mobilized and optimized	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs			
	involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

IR 4: Governance, management and leadership for health and WASH strengthened	§216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as construction of facilities, etc.) §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

Categorical Exclusions are recommended for the classes of actions listed below because no environmental impacts are expected due to these activities. These fall under the following citations from Title 22 of the Code of Federal Regulations, Regulation 216 (22 CFR 216), subparagraph 2(c)(2) as classes of activities that do not require an initial environmental examination:

- Activities involving education, training, technical assistance or training programs except to the extent such programs include activities directly affecting the environment (such as construction of facilities, etc.);
- Activities involving analyses, studies, academic or research workshops and meetings;
- Activities involving document and information transfers;
- 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.);
- 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 small scale construction of facilities, etc.).

Negative Determinations with Conditions 22 CFR 216.3(a) (2) (iii) is recommended for

- Activities involving analysis, operational research, studies to incorporate environmental questions within questionnaires, evaluation and surveillance that could generate medical waste to comply with WHO, national and USAID guidelines.
- Programs involving nutrition, health care, malaria or family planning services, including activities directly affecting the environment (such as rehabilitation; small scale rehabilitation including basic health centers, laboratories such as insectariums etc.; WASH infrastructure and supply systems, wastewater treatment, etc.).
- Implementation of community health activities, including WASH perceived to have adverse environmental and climate risks impacts.
- Procurement of high-quality commodities, including packaging, storage, transport and disposal of related waste.

CLIMATE RISK MANAGEMENT

Climate Risk Management (CRM) is the process of assessing, addressing, and adaptively managing climate risks that may impact the ability of USAID programs to achieve objectives which should be sustainable. The CRM process has been taken into account, in accordance with ADS 201mal and in consultation with the CIL, through risk screening, the identification of opportunities, and the proposal of different approaches from the project design stage. CRM is required for all USAID projects and activities. Climate risks identified in this document may affect activities in this Madagascar HPN IEE as the related risks are ranked as low and moderate in the CRM matrix (Annex 1), where descriptions of addressing climate risks through appropriate mitigation measures in activity design are well demonstrated.

BEO SPECIFIED CONDITIONS OF APPROVAL

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 first conduct an "Initial Site Assessment" to assess whether ITNs are being misused for fishing to an extent that warrants further investigation. The Government of Madagascar has already done initial investigations into this issue, and determined evidence of misuse of bednets for fishing. The Mission has therefore agreed with the AFR BEO Team to proceed with conducting a Rapid Assessment (outlined in the 2018 PMI Toolkit) to determine the extent of misuse and recommend appropriate mitigation measures. The Rapid Assessment can and should use the existing information that has been investigated previously into this issue as source material, along with any other information recommended by the Toolkit that hasn't previously been evaluated. Additionally, since regulations and bans have been implemented in certain areas of Madagascar to prevent bednet misuse, the Assessment is an opportunity to assess the results of those efforts.

The results of the Rapid Assessment will be reviewed in coordination with the AFR BEO, and mitigations will 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. The Rapid Assessment will be completed in coordination between the MEO, AOR, and IPs, within 3-6 months issuance of this IEE.

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/1St5nIkxVs9Rw3U0opgnYO_O94dFu9n7/view?usp=sharing

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.

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 NAME: USAID Madagascar Health Sector Strengthening Project 2022-2026

Bureau Tracking ID: https://ecd.usaid.gov/document.php?doc_id=56659

Approval: 08/01/2022

Officer in Charge- Mission Director Date

Clearance: 08/01/2022

Program Officer Date

Clearance: 06/13/2022

Health Population Nutrition Director Date

Clearance: 06/23/2022

Mission Environmental Officer Date

Clearance: 07/12/2022

Regional Environmental Advisor Date

Clearance: 06/22/2022

Mission Climate Integration Lead Date

Clearance: 09/07/2022

AFR Bureau Climate Integration Lead Date

Concurrence: 01/05/2023

AFR Bureau Environmental Officer Date **DISTRIBUTION:**

USAID Madagascar HPN Office
USAID Madagascar Program Office
USAID Madagascar OAA
USAID South Africa, Pretoria REA
USAID BGH, W.D.C

INITIAL ENVIRONMENTAL EXAMINATION

CONTENTS

1.0 PROJECT DESCRIPTION

1.1 PURPOSE OF THE IEE

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 HPN intervention described herein and recommend determinations and, as appropriate, conditions, for these activities. Upon approval, these determinations become affirmed, and specified conditions become mandatory obligations of implementation. This IEE also documents the results of the Climate Risk Management process in accordance with USAID policy (specifically, ADS 201mal).

Specific IEEs or environmental documents exist for the following activities:

- Initial Environmental Examination for Accessible Continuum of Care and Essential Services Sustained (ACCESS) https://ecd.usaid.gov/repository/pdf/50582.pdf ;
- Initial Environmental Examination for Improving Market Partnerships and Access to Commodities Together (IMPACT) https://ecd.usaid.gov/repository/pdf/50480.pdf;

When the activities under, ACCESS, IMPACT end in 2023, their follow-on activities will be covered under the current Madagascar HPN IEE Health Sector Strengthening (HSS), and which interventions are already included here.

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

This IEE addresses the entire activities anticipated under the USAID-HPN Project Development Document (PDD). It synthesizes the current and anticipated HPN activities into a set of six (6) intervention categories, each of which contains a number of entailed activities. In accordance with 22 CFR 216, this IEE reviews reasonably foreseeable environmental and social effects of each activity. On this basis, this IEE recommends Threshold Decisions and relevant conditions for those activities. This IEE also reviews any foreseeable effects on the environment, and provides the recommended Threshold Decisions for the use of ITN to support the country initiative to combat malaria. Finally, it provides a screening of the Climate Risks Management as per the Executive Order (EO) 13677 on Climate Resilient International Development.

1.2 PROJECT OVERVIEW

Since independence, Madagascar has cycled through periods of political instability, natural disasters, and recurrent epidemics that have significantly impeded its progress towards self-reliance. From 2009 to 2014, USAID was prohibited from direct engagement with the Government of Madagascar (GoM) and focused instead on improving health behaviors and services through private sector providers. Since restoration of the USG-GoM relationship, USAID has focused on strengthening its partnership with the GoM, with an emphasis on building the capacity of GoM health systems and strengthening the linkages between USAID's past private sector investments and the public health sector.

According to the national census conducted in 2018, the population of Madagascar is 25,674,196. While Madagascar has made notable improvements in some health statistics, notably a marked increase in contraceptive prevalence rate (Multiple Indicator Cluster Surveys [MICS] 2018), other indicators have stagnated or declined. Most notably, the country continues to suffer from significant infectious disease outbreaks, and the emergency response to these outbreaks draws resources away from building a functional national health system.

The COVID-19 pandemic is only the latest health threat; in 2018/2019, the country experienced one of the world's worst measles outbreaks, resulting in 244,569 cases and 1,080 deaths (Source DPEV). Malaria cases nearly doubled from 2019 to 2020. While the country was certified polio free in 2018, weaknesses in coverage and equity of services left the country vulnerable to recurrence. The suspension of vaccination campaigns due to COVID-19 resulted in new polio outbreaks in FY 2020 and 2021. These infectious disease outbreaks threaten an already vulnerable population; national stunting rates are 42 percent, access to improved sanitation is 16 percent, and only 43 percent of the population has access to improved sources of drinking water.

The Project will assist the country of Madagascar to reduce maternal, infant, and child mortality and morbidity by promoting the adoption of healthy and care-seeking behaviors, such as hand washing with soap and exclusive breastfeeding. It will also increase the availability and accessibility to quality health, nutrition, and WASH services with an emphasis on improving the continuum of care throughout the life cycle from pregnancy to the first days of life. The project aims to strengthen the effectiveness of gender-sensitive and inclusive systems that include financing, human resources, management, logistics, information, and service delivery to improve the sustainability of health services. USAID will increase the leadership capacity of Madagascar's health sector including both the public and private sectors. Capacity building interventions will target the national, regional, district, and community structures, including health providers to improve management and governance of the health systems.

1.3 PROJECT DESCRIPTION

The Project will support both high-impact interventions and the systems required for sustainability and scale-up through engagement at all levels of the sector in a coordinated way. The Health Sector Strengthening Project supports the GoM's vision that "by 2030 the entire Malagasy population is healthy, lives in a safe environment, and has a better and productive life." It also supports the Madagascar National Development Plan's emphasis on human capital as a pillar of development. This Project incorporates years of lessons learned from a combination of bilateral and field support activities.

IR 1: Healthy and care-seeking behaviors and social norms adopted

Illustrative Indicators: exclusive breastfeeding; utilization of bed-nets by children under-five; utilization of bed-nets by pregnant women; contraceptive prevalence rate; use of improved water sources; use of improved sanitation facilities

The project will improve health outcomes by systematically improving knowledge of healthy behaviors, services, and products; implementing social and behavior change (SBC) interventions that tackle underlying discriminatory social and cultural norms that prevent women, adolescent girls, persons with disabilities, and LGBTI persons from realizing their health care rights and having their needs addressed. These interventions will improve care-seeking related to GBV; reduce barriers to adoption of healthy behaviors; and increase community engagement and ownership of /participation in health programs..

Approaches around specific behaviors will be designed using a human-centered approach. Implementation priorities include 1) increasing capacity of public and private sector actors to design, implement, monitor, and evaluate state-of-the-art SBC strategies and approaches (e.g. arrange events and develop sensitization messages and communication materials and tools; 2) bringing together stakeholders from the community, facility, district, and region to identify barriers to healthy behaviors and options to jointly address barriers; 3) supporting systematic analyses and community-led processes to conduct barrier identification and problem solving activities 4) financing and facilitating the roll-out of SBC activities that use multimedia communication channels, and improving counseling of health workers and CHVs, and interpersonal communication, etc.; 5) developing and testing innovative communication approaches for segmented audiences, such as adolescents, out-of-school youth, and populations living in more remote areas,; 6) fully engaging communities, local traditional and religious leaders, and groups and organizations that represent priority populations in SBC design and roll-out processes; and 7) promoting the use of evidence-based global research.

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased

Illustrative Indicators: average percentage gap in between Ante-Natal Care (ANC) ANC1 and ANC4; percentage of births delivered in facilities; percentage of facilities with drug stock-outs; vaccination rates of under-two children; number of people gaining access to basic drinking water services as a result of U.S. Government assistance; number of people gaining access to basic sanitation services as a result of USG assistance; number of people reached by USG interventions providing GBV services.

The Project will increase the availability and accessibility of quality health and WASH services based on a continuum of care approach. It will work at the national level to support the National Community Health Policy 2020-2024 including preparation of policies, strategies, and technical guidelines that set service norms and standards for the country at the regional and district levels; primary, public, and private health facilities; private sector service providers and vendors; and at the community level with

community organizations, leaders, and community health volunteers (CHVs). The Project will promote integrated services and differentiated approaches of service delivery that are context-specific to meet the needs of priority populations living in hard-to-reach areas.

The Project will support the essential service packages and focus on improving integration, increasing coverage and utilization of all high-impact interventions for reproductive, maternal, newborn, child, and adolescent health (RMNCAH). The Project will continue to support WASH service providers and expand private sector engagement to increase coverage and quality of WASH products and services.

The Project will support activities that address the fundamental challenges to increasing the availability and accessibility of quality continuum of care services and promote and support the critical components of quality of care including: trained and competent health and WASH providers; the continuous supply of efficacious drugs, availability of medical supplies and equipment and WASH products; effective management of health care facilities and WASH infrastructure that is adapted to meet gender-specific and access needs of persons with disabilities; supportive supervision and application of quality assurance measures; appropriate referral and counter-referral mechanisms to ensure the continuity of care, respective patient-centered care, and gender-sensitive care that is free of gender stereotypes with attention given to engaging men in health care (including immunizations and nutrition) of children under 5; and availability of affordable and desirable WASH products and services to underserved market segments.

IR3: Resources for health and WASH mobilized and optimized

Illustrative Indicators: Percentage of GoM budget allocated to health; percentage of the Ministry of Public Health (MoPH) budget expended; percentage of population enrolled in health protection mechanisms; percentage of MoPH budget used towards meeting the needs of priority populations

Access to financial resources impacts both public and private sector capacity to provide adequate, reliable, and affordable services and products. At the individual level, financial resources determine a person's ability to pay for and access health services and commodities. The results of the MICS 2018 clearly show that financial barriers are some of the primary impediments to accessibility of quality health care in Madagascar. The GoM allocates only 3.78 percent of its annual budget to health, a decrease from 7 percent in 2013.

To help the government and private sector move these priority actions forward, the project will continue technical support to the public and private sector for development and implementation of health financing policies and strategies; for advocacy for increased resources for health; for analyses to provide important data for budgeting, planning and identifying efficiencies in service delivery; for quality improvements and scale-up of community-based protection mechanisms; to assist the MoPH and private sector providers and vendors design, test, and roll-out national strategies for increasing resource mobilization including innovative sources of funding; and to improve the financial information systems at all levels for improved monitoring, tracking, accountability, and transparency. The Project will continue to utilize innovative approaches like the Development Credit Authority (DCA) financial mechanisms, Water and Development Alliance (WADA) public-private partnership, and Total Market Approach (TMA) to help expand sources of funding in the health sector to support USAID's vision of a more efficient, equitable, and sustainable health commodity and product market where public, nonprofit, and commercial actors deliver a broad range of high-quality and affordable health commodities and products

Finally, WASH activities at the urban level will work to identify financial resources to fill the financing gap for WASH - targeting households, government, private sector actors, and donors.

IR 4: Governance, management and leadership for health and WASH strengthened

Illustrative Indicators: number of national priority policies and strategies implemented that respond to gender and social inclusion-responsive; number of legal instruments drafted, proposed, or adopted with U.S. Government assistance designed to improve prevention of or response to sexual and gender-based violence at the national or subnational levels; number of WASH and other health-related community committees established; percentage of WASH and other health-related community committee leaders who are female, live with a disability, or identify as LGBTI.

The political volatility of the past has resulted in both frequent changes in leadership throughout government structures and also lack of processes for good governance, management, and accountability. Although there has been some progress in health sector policy and strategy development and identification of management gaps, continued staff changes within the Ministry of Public Health and the Ministry in charge of water and sanitation along with a lack of management capacity at all levels in the government have continued to impact the delivery of basic health and WASH services and products.

The project will strengthen the Madagascar enabling environment by supporting 1) the development and implementation of supportive laws, regulations, and policies that are gender sensitive and inclusive; 2) improvements in coordination and effective partnering between the Government, donors, civil society, community, and the private sector; and 3) improvements of the management capacity and engagement at local and national levels. The project will continue to consolidate and strengthen the national health management information system (DHIS2) in order to provide timely and more reliable data for decision making and management of services. The project will work with the MoPH to identify key management competencies linked to systems ,such as supply chain logistics, financing, human resources, service delivery ,and help the government develop and support training, tools, and supervision approaches to improve systems performance. At the facility level, the project will prioritize supervision and development of leadership and management skills to improve competencies of staff and quality of services. The project will support governance, management and leadership skill-building for hospitals, health centers (*Centres de Santé de Base or CSB*s), and district management teams. In the community, the Project will continue to support the governance, management and leadership interventions to strengthen community organizations and their leadership and to improve transparency and management of community-based health care protection mechanisms and processes. Finally, WASH activities will also consider strengthening national and city governments' capacity in select regions.

The above IRs are grouped under six different **categories** with similar environmental and social impacts. The following table shows the different IRs as well as their corresponding categories.

TABLE 2: DEFINED INTERMEDIATE RESULTS (IR) AND APPLICABLE CATEGORIES:

Intermediate Results	**Applicable categories**					
	1. Capacity building, training, policy and strategy development	2. Research, studies, surveillance, surveys, assessments	3. Small scale rehabilitation excluding WASH	4. Implementation of community health activities excluding WASH	5. Implementation of Water, Sanitation, and Hygiene (WASH) activities	6. Commodity procurement and transportation, including ITN
IR 1: Healthy and care-seeking behaviors and social norms adopted	Applicable	-	-	Applicable	Applicable	Applicable
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased	Applicable	-	Applicable	Applicable	Applicable	Applicable
IR3: Resources for health and WASH mobilized and optimized	Applicable	-	-	Applicable	Applicable	Applicable
IR 4: Governance, management and leadership for health and WASH strengthened	Applicable	Applicable	-	Applicable	Applicable	Applicable

The following table summarizes the recommended determinations and the climate risk ratings for the HSS project, per the six intervention categories established by this IEE for purposes of environmental review. Each of the IRs and Sub-IRs are covered under these categories. For each category, potential environmental impacts are analyzed and determinations and conditions are detailed in this IEE.

The interventions are categorized as shown in the following table:

TABLE 3: CATEGORIES COVERING THE IRs AND THE SUB-IRs

Activity	Categorical Exclusion(s)	Negative Determination (s) with conditions	Climate Risk Rating
1. Capacity building, training, social and behavior change, policy and strategy development	✓	✓	Low, Moderate
2. Research, studies, surveillance, surveys, assessments		✓	Moderate
3. Small scale rehabilitation excluding WASH		✓	Moderate
4. Implementation of community health activities excluding WASH	✓	✓	Low, Moderate
5. Implementation of Water, Sanitation, and Hygiene activities	✓	✓	Low, Moderate
6. Commodity procurement and transportation of commodities including ITNs	✓	✓	Low, Moderate

Will this project/activity involve construction[1] as defined by ADS 201 and 303? Yes ☒No ☐

1. Rehabilitation and construction of WASH infrastructures including latrines, wells, boreholes, water supply systems, latrines, showers, handwashing stations, flush toilets not exceeding $250,000 in a single community or greater than 5 hectares of disturbed land area, starting from the catchment in the case of gravity flow water supply systems;

[1] **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. Renovation of healthcare facilities and other small scale health infrastructures not exceeding $250,000 in a single community or greater than 1000m^2 of disturbed land area. No new health centers infrastructures will be built;

3. Construction and rehabilitation of low environmental impact gravity flow water supply systems, other small-scale water supply systems and small-scale wastewater treatment;

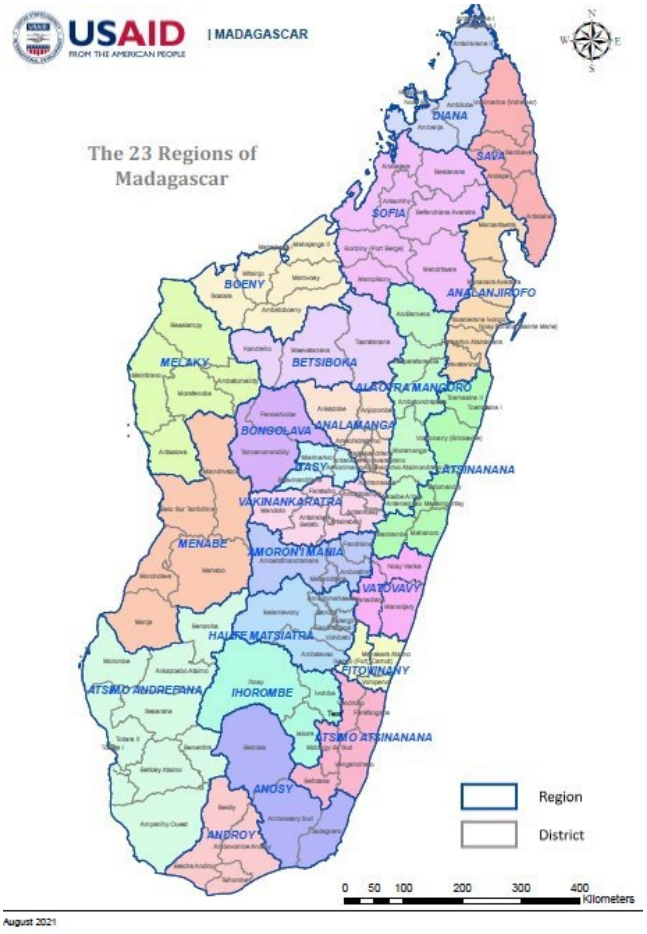
4. Construction and rehabilitation of small-scale sanitation and hygiene infrastructure including latrines and incinerators.

2.0 BASELINE ENVIRONMENTAL INFORMATION

Madagascar is one of the most exceptional places on Earth; at least 80 percent of the plant and animal species found in Madagascar are unique to this vast island. Despite the potential for Madagascar's diverse ecosystem, unique wildlife, and extensive mineral resources to propel its development, it is the world's poorest non-conflict country. An estimated 75 percent of its people live on less than $1.90/day; 80 percent of the population earns its livelihood from subsistence agriculture; and it is the only country where GDP growth has declined since independence (1960) without the occurrence of a war.

Madagascar faces formidable political, social, economic, and environmental challenges that slow or block progress towards sustainable development. At the same time, the country's considerable natural resources, unique biodiversity, and human capital resources from its predominantly young population offer numerous opportunities for potential economic growth and social progress. Capitalizing on these inherent strengths, USAID Madagascar's CDCS identifies an integrated approach designed to build a strong foundation through: 1) improved human capacity; 2) improved government accountability and effectiveness; and 3) greater availability of sustainable economic opportunities.

Reducing maternal, infant, and child mortality is a critical GoM priority and necessary to ensure improved health and well-being for the nation. USAID investments will continue to improve outcomes related to maternal, infant, and child mortality while advancing the health and well-being of the population. Building off prior successes, the Mission will work with the public to adopt better health and care seeking behaviors while addressing traditional beliefs, practices, and social norms that negatively impact them, particularly among women. In coordination with the GoM and other donors, USAID will ensure increased availability of and accessibility to a continuum of quality health, nutrition, and WASH services, and ensure resources for health and WASH are mobilized and optimized.



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

The geographic scope of the Madagascar HSS Portfolio is national. Activities will be implemented in rural, peri-urban, and urban areas in the selected intervention zones and be adapted to the different contexts in these zones.

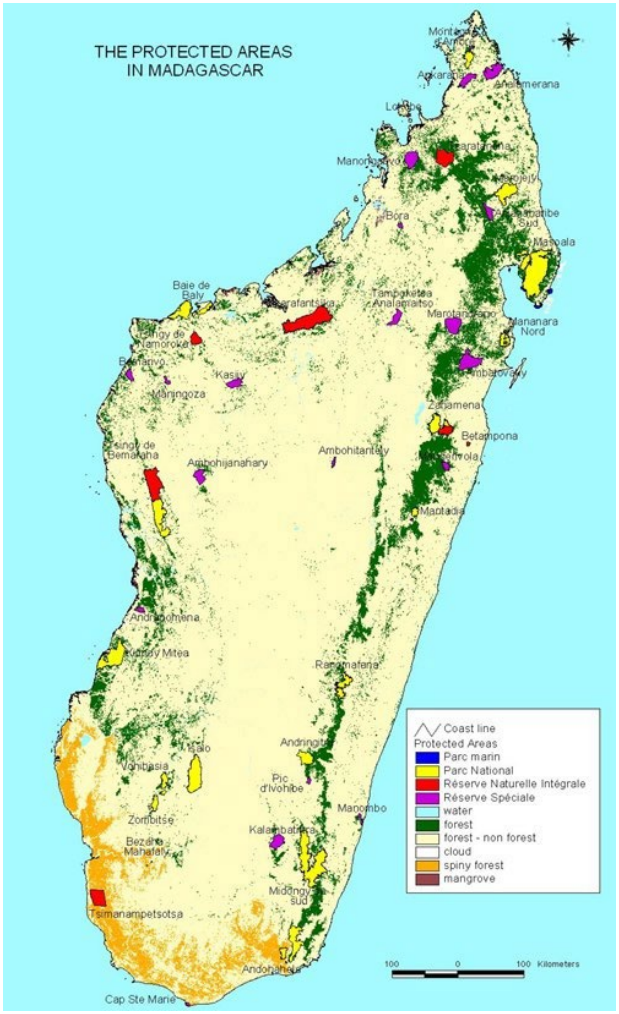
Madagascar is the 2nd largest island country (592,800 km2) in the world and comprises 23 regions with a population of 26 million inhabitants (Map 1).

Madagascar 23 regions (Map 1)

Madagascar is home to 5 percent of the Earth's plants and animals while comprising less than half a percent of the world's landmass. There are more endemic species of plants and animals living in Madagascar than on the entire African continent and more than eighty percent of its species can be found nowhere else on Earth. This exceptional species richness and endemism coupled with the magnitude of threats facing these ecologically, culturally, and economically valuable resources makes Madagascar one of the world's highest priority countries for biodiversity conservation.

Madagascar has made an effort to preserve its natural capital by increasing the size of the country's protected area network to approximately 10 percent of the country's land surface as per the Convention on Biodiversity (CBD) and International Union for Conservation of Nature (IUCN) standard for protected area coverage. Over 6 million hectares of protected areas were created with the goal of representing 100 percent of Madagascar's habitats within the Madagascar Protected Area (map 2).

The marine ecosystems surrounding Madagascar also harbor some of the richest estuarine,



mangrove, seagrass, coastal marsh, and coral reef ecosystems as well as some of the most productive fisheries in the western Indian Ocean, but these habitats face threats due to overfishing, destruction of coral reefs, intensive aquaculture and charcoal production of mangroves, etc.

Madagascar's rich and fragile biological heritage is home to one of the poorest populations in the world. Some regions are cyclone-prone areas, and drought and locusts are among the causes of food insecurity in several regions. These factors are worsened by political instability.

The country ranked 164 out of 189 countries in the 2020 Human Development Index[5] with around 75 percent of the population still estimated to live below the international poverty line of $1.90 in 2019[6]. Per capita income is only $496/year[7].

The national poverty rate climbs even higher in rural areas, where more than two-thirds of the population resides. Natural areas serve ecological functions and provide resources that are crucial to the well-being of many people.

Notably, more than 25 percent of GDP in the country is based on agriculture, fishing, and forestry, and these activities employ more than 80 percent of the population. Therefore, the natural resource base must be maintained for Madagascar to develop economically.

The absence of effective rule of law or government effectiveness and accountability in rural areas coupled with grinding poverty, high birth rates, and unsustainable natural resource management practices in farming, forestry, and fishing systems has placed enormous pressures on the country's natural habitats. Because of the weak governance, there are actors responsible for the illicit trade in wildlife that plagues the country leading to illegal and unsustainable harvesting of precious woods, reptiles, and marine species.

Madagascar Protected Area (map 2)

Madagascar's climate varies greatly across the island (Figure 1). On the east coast, the climate is hot and humid and rainfall varies from 1100-3700 mm per year. The most rain occurs from January to April, although rain falls throughout most of the year, and the average annual temperature is between 23 and 26°C. On the west coast, the climate is tropical with a hot, dry, summer. Annual rainfall decreases from 1500 to 400 mm per year from north to south across the west coast. The dry season lasts from April to October, and the annual average temperature varies between 24 and 27°C.
The southwest part of the island is semi-arid, and annual rainfall is about 500-700 mm per year. In the central highlands, there is a lot of interannual variation in temperature and precipitation. [2]

The average annual rainfall is 900 mm per year in some areas, up to 1500 mm per year in others, and the average annual temperature ranges from 16 to 22°C (Rakotondravony et al., 2018). The north and northwest region has a tropical climate with monsoon conditions driving rainfall in the summer (Rakotoarison et al., 2018). Madagascar ranked #4 on the Climate Risk Index (a level of exposure

and vulnerability to extreme events) in 2018 but did not make the top 10 list for 1999-2018 (Eckstein et al., 2020).

- The eastern coast has a warm and humid tropical climate;
- The central highland has a high altitude tropical climate;
- The western region has a warm climate and two distinct seasons, a dry winter and a hot and humid summer;
- The north and northwest region has a tropical climate, with the northwest monsoon conditions driving rainfall during the summer season;
- The southern region of the country has a semi-arid climate.

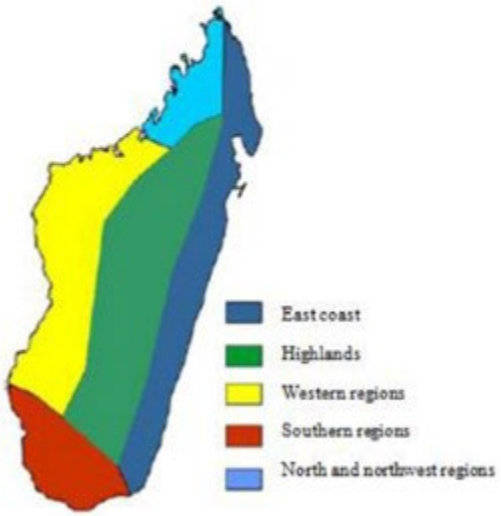


Figure 1. The five climate regions of Madagascar.

Figure 1: The five climate regions of Madagascar **(Rakotoarison et al., 2018)**

Not all areas of the country have adequate weather data. Direction Générale de la Météo (DGM) would like to have at least one weather station every 100 km across the country and an office in each region to collect the data. The World Wildlife Fund (WWF) has installed 14 weather stations. The United Nations Development Programme (UNDP) and GIZ are working on installing an additional 4050 automatic weather stations across Madagascar to provide more fine scale information, but training people to operate the stations can be a challenge, especially as both groups are installing different equipment. Additionally, GIZ is working to modernize DGM's infrastructure to set up a centralized database with data from all weather stations.

[2] Human Development Report 2020

[6] World Bank, 2020

[7] World Bank GDP per capita - Madagascar

Climate change effects on human health

Context

Lack of adequate healthcare and disease prevention, malnutrition, and poverty predisposes many people in Madagascar to the impacts of climate change. Most of the population lacks access to

adequate health services; for example, 40 percent of the rural population is more than 5 km away from a health facility and lacks a means of transportation, and bad weather can make it even more difficult to deliver health care in isolated areas. If roads become impassable after weather events, it can limit the supply of medicines in the health centers (Morondava site visit). Many health facilities also lack sufficient human resources and equipment (Rakotondravony et al., 2018). For example, the basic health center in Marofandilia had no electricity or running water and only one midwife and one volunteer. It also lacked basic supplies, such as tweezers and chairs (Marofandilia site visit). Natural disasters can cause significant damage to the health sector each year, and impacts continue long after the event. In general, the country lacks resources to adequately prepare for, respond to, and recover from damage caused by extreme events (Rakotoarison et al., 2018).

Infectious and non-communicable diseases are the leading cause of morbidity and mortality in Madagascar, and many of these diseases are sensitive to climatic conditions (Rakotoarison et al., 2018). Exacerbating this problem, coverage of sanitation and water supply is low, as is awareness among rural populations of the risks of communicable, diarrheal, and acute respiratory diseases. Outbreaks of communicable diseases often occur after extreme climatic events, and water-borne diseases are becoming more frequent as waterways are contaminated after floods (CPGU and BNCCC, 2017; Rakotondravony et al., 2018).

Effects on human health

Climate changes can directly impact health in Madagascar. Increases in the number of extreme events can reduce quality of life, especially for those without adequate housing (Davis-Reddy and Vincent, 2017). Increasing temperatures and heat waves could increase heat related mortality, especially for the elderly, young children, the chronically ill, and the poor. Under a high emissions scenario, heat related deaths among those 65 years and older is projected to increase to 50 deaths/100,000 by 2080 compared to the average 1 death/100,000 between 1961 and 1990 (World Health Organization, 2016). Additionally, high temperatures can decrease the effectiveness of certain medications and vaccines, such as vitamin A and tests for malaria, if they are not stored in a cold place. For example, if the Marofandilia health center is unable to obtain gasoline, they will not be able to run their gasoline powered refrigerator used to store medicines at an appropriate temperature. In addition, high temperatures and drought can lead to water shortages.

Sea level rise and flooding are also a concern. Currently, 27 percent of people live below 100 m in elevation (Davis-Reddy and Vincent, 2017). Without large investments in adaptation, 573,200 people are projected to be impacted by sea level rise between 2070 and 2100 under a high emissions scenario (World Health Organization, 2016). Inland river flooding risk is also projected to increase as the climate changes (World Health Organization, 2016).

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

The Constitution of the Republic of Madagascar, Article 39, states that “Everyone shall have the duty to respect the environment; the State shall ensure its protection.” The concept of sustainable development underpins all environmental policy and legal documents; three objectives are encompassed in the notion of sustainable development: 1) Maintenance of ecological integrity; 2) Improvement of economic efficiency; and 3) Improvement in social equity. Madagascar’s environmental policy is further informed by the Updated National Charter for Environment (Law 2015003) updating the former National Charter (Law 90-033). It defines the principles and general framework for environmental actors and development actors, as well as the principles and strategic orientations of the country's environmental policy.
The Updated Charter requires an Environmental Impact Assessment (EIA) for all investment projects. This has been implemented through successive decrees and regulations on the Development Compatible with Environmental Investments known as “MECIE” (Decree 99-954 amended by Decree

2004-167). The National Office for the Environment is leading the review and approval of the Environmental Impact Assessment (EIA) process as laid out in the MECIE Decree. At the national level, it was applied within the frame of the former National Environmental Action Plan (NEAP) and is now applied in the Environmental Program for Sustainable Development (Programme Environnemental pour le Développement Durable - PEDD). The PEDD wants to embrace a long-term vision and preserve the integrity of the environment and natural capital of Madagascar while providing sustainable benefits to the people of the country by 2030.

In order to carry out the intent of Article 39, environmental policy, and sustainable development, several institutions and administrative structures are involved, including the following: Ministry of the Environment - Ecology and Forests; the National Office for the Environment, the Technical Evaluation Committee (an ad hoc committee charged with evaluation of EIA requirements), and mandated intersectoral cooperation among ministries to control and monitor the implementation of the environmental and social safeguard management plan.

Several related orders, technical directives, and guidelines support the implementation of the MECIE decree as well as sectoral EIA guidelines for tourism, roads, aquaculture, on-and off-shore petroleum developments, textiles, forestry, mines, wetlands, and sensitive areas. An EIA is required for public or private development projects that could affect sensitive environments as defined in Order No 4355/97, types of developments that may, by its nature, size, and scale, cause an adverse impact on the environment. The related EIA must include an Environmental Management Plan. Madagascar's EIA framework is described in detail here: http://www.saiea.com/dbsa_book/madagascar.pdf.

The National Medical Waste Management Policy issued in 2017 requires a training plan for all health staff members in injection safety and in management of waste related to injections. All public-sector health providers will be equipped with tools to follow up these measures at all levels, and to make sure that any health workers will be provided with training and equipment related to management of waste and safety of injection at all phases while handling, transporting, and disposing of waste.

This policy requires trainings in the following topics:

- Risk assessment
- Injection safety
- Medical waste management
- Awareness raising among communities surrounding health clinics

Injection safety includes rational use of injections, best practices, and surveillance and case management of post injection adverse reactions. Medical waste management topics include classification, separation, storage, and disposal of medical waste, maintenance of incinerator/ safe holes, and development of hospital medical waste management

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

The "Politique Générale de l'Etat" (PGE – General National Policy) intends to build "Madagascar, a modern and prosperous nation". It is translated into a Plan National de Développement/National Development Plan (PND) which is based on the medium and long-term vision and sustainable development. This PND integrates climate change actions, such as implementation of the energy transition and adaptation to risks and disasters. The different sectors are thus moving toward more sustainable development paths in order to face the adverse effects of global warming.

In 2010, the Government set up the "Direction du Changement Climatique" within the Ministry of Environment and Forests. Its mission is to oversee the implementation of the Convention on Climate Change and coordinate all related actions. This "Direction" includes: the Climate Change Impact Adaptation Service, the Climate Change Mitigation Service, the Climate Change Data Base

Management Service, and the Designated National Authority. Since 2015, the Ministry in charge of the Environment has reorganized its structure and created the National Office for Coordination of Climate Change (BNCCC), which takes over from the "Direction du Changement Climatique."

NATIONAL STRATEGIES, POLICIES AND PLANS:

- Convention United Nations Framework on Climate Change (1998);
- Protocol of Kyoto (2003);
- National Adaptation Action Program (2006)
- Initial Communication (2004) and Second National Communication (2010) - National Mitigation Action (2010)
- National Strategy of the Clean Development Mechanism (2010)
- National Policy to Combat Climate Change (2011)
- Environmental Program for Sustainable Development (2015)
- National Environmental Policy for Sustainable Development (2015)
- Madagascar National Determined Contributions (2015)
- SADC Regional Climate Change Strategy-ICZM Action Plan, COI Region. (2016)
- National Framework for Climate Services (2016)
- National REDD + Strategy (2018)
- National Action Plan to Combat Climate Change (2019)
- National Adaptation Plan (2019)
- Sectoral Strategies on Climate Change (2020-2021)
- National Water Code - Code de l'Eau (1999)
- 2018–2022 National Malaria Strategic Plan
- 2023-2027 National Malaria Strategic Plan

Historically, the environmental protection laws introduced by the GOM have not provided new economic development for communities in place of outlawed destructive practices.
Without community engagement in backing legislation, and stopping destructive practices and active community involvement in conservation, the enforcement of new legislation is extremely difficult with the current capacity of local government.

3.0 ANALYSIS OF POTENTIAL ENVIRONMENTAL RISK

As mentioned in the previous sections, the interventions are grouped under six different categories with similar environmental and social impacts.

TABLE 3A. Potential impacts for category 1

Category 1: Capacity building, training, social and behavior change, policy and strategy development	Potential environmental and social impacts
IR 1: Healthy and care-seeking behaviors and social norms adopted. The project will: - increase the capacity of the public and private sector actors including the Directorate of Health Promotion and the National Communication Committee as well as the Ministry of WASH (MoWASH) to design, implement, monitor and evaluate state-of-the-art SBC strategies and approaches, events and activities, and develop sensitization messages, communication materials and tools, products and activities based on solid ethnographic research and local inputs - continue to strengthen the capacity of Community Health Volunteers (CHVs), Health Committees (Comités de Santé or COSAN) and Health Development Committees (Comités Communaux de Développement de Santé or CCDS) to improve community self-assessment, ownership, and actions to better promote healthy behaviors and advocate for quality health services.	No foreseen environmental or social impacts
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased The project will: - support activities that address the fundamental challenges to increasing the availability and accessibility of quality continuum of care services and promote and support the critical components of quality of care including trained and competent health and WASH providers - focus also on improving the competencies of health workers through improvements in both in-service training and pre-service education - strengthen the capacity of the public supply chain logistics system to ensure that high quality commodities are available and accessible throughout the country - support the MoPH at national levels to develop strategies, technical guidelines, tools and training materials to guide referral and counter referral improvements at regional, district and community levels. - continue to build the capacity of all actors at national, regional, district, facility and community levels in commodity forecasting, budgeting, and management.	Risk of non-use and/or nonmaintenance of the physical infrastructure without behavior change interventions. In addition, training curricula and tools that do not appropriately address potential impacts may mislead communication.

IR3: Resources for health and WASH mobilized and optimized The project will: - increase the financial management capacity at district, facility and community levels including private sector area	No foreseen environmental or social impacts
IR 4: Governance, management and leadership for health and WASH strengthened The project will : - work with the MoPH to identify key management competencies linked to systems such as supply chain logistics, financing, human resources, service delivery and help the government develop and support training, tools and supervision approaches to improve systems performance. - continue to strengthen the capacity of the public supply chain and logistics system to ensure that high quality commodities for reproductive, maternal, newborn, child, and adolescent health and malaria are continuously available and accessible. - improve community capacity, through CCDSs, COSANs, CHVs and fokontany (village) leadership to manage financial protection and income generation activities (by putting them in contact with the other relevant stakeholders) as well as to improve communications between the community and the health center staff, hospitals and District Health Management team (Equipe management de district de la Santé or EMAD). - train WASH facility managers on infrastructure management and maintenance and savings/credit schemes and will promote savings and lending and other savings and loan associations to increase household resources and reduce financial barriers to WASH services and products. - strengthen the national and city governments' capacity in selected regions on WASH governance and leadership including data management	No foreseen environmental or social impacts

TABLE 3B. Potential impacts for category 2

Category 2: Research, studies, surveillance, surveys, assessments	**Potential environmental and social impacts**

IR 4: Governance, management and leadership for health and WASH strengthened The project will: - support surveys, research, assessments, evaluations and analyses that would provide an evidence base for new policies and strategies, robust costing activities, stakeholder engagement, advocacy, piloting, monitoring plans and tools, roll-out and implementation that include dissemination workshops and training. - support the development and use of tools like the DemDiv Demographic Dividend and Impact Now to advocate for increased focus and resources for Family Planning (FP). - support the Madagascar Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys [MICS] as well as other studies and assessments that will provide an evidence base for policy and strategy development. The malaria indicator survey (MIS) will continue to include an evaluation of ITN where environmental questions are included - carry out formative Research and Situational Analysis in WASH	Risk of misleading if training, research, studies, assessments do not appropriately address the potential social impacts including the management of the beneficiaries' false expectations

TABLE 3C. Potential impacts for category 3

Category 3: Small scale rehabilitation excluding WASH	**Potential environmental and social impacts**

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased - The project will rehabilitate, refurbish or renovate healthcare facilities and other small scale health infrastructures. No new health infrastructures will be built. - In cases when it improves services and accessibility to quality health services, the project plans to build small scale infrastructure, including incinerators that will be locally managed with the community health centers.	Potential social and environmental risks for healthcare facilities and other small scale health infrastructures construction or rehabilitation include: - Destruction or depletion of flora, fauna, and/or their habitats, leading to losses in biodiversity and ecosystem functioning in or near sensitive areas like wetlands or estuaries. - Disturbance in ecosystem services such as regulation of water flows and water quality, non-consumptive use (for generating power and transport/navigation, aesthetics, and recreational value). - Soil erosion of exposed soils during construction can cause sedimentation into nearby water bodies, reducing the hydraulic capacity and water quality of surface water, and increasing risk of flooding and biodiversity loss. - Disturbance to existing landscapes, habitats, including water flow: construction and rehabilitation works typically necessitates grading, trenching and other activities that can result in near-complete disturbance to the pre-existing landscape/habitat. - Disturbance of surfaces covered with leaded paint, generating hazardous lead-containing paint flakes and dust. These activities put those around the area at risk of lead poisoning by inhalation or ingestion. - Minor repair work involves activities such as repair of damaged walls, doors, windows, construction material transportation, etc. are expected to cause moderate risk to air quality and noise levels. - Improper location of the interventions may lead to risks of interfering with communities or other social risks. - High cost for waste management and transportation with materials often illegally dumped. - Sedimentation/fouling of surface waters due to runoff from cleared ground or materials stockpiles during rehabilitation. - Water stagnation: rehabilitation may result in stagnant water on-site, which readily becomes breeding habitat for mosquitoes and other disease vectors; this is of particular concern as malaria is endemic in much of Madagascar. - Occupational and community health and safety hazards. - Fall and crush injuries, hazards from hand or power tools and equipment used in rehabilitation work, and exposure to hazardous substances, such as solvents in paint, cement dust, etc. - Increased air and noise pollution from failure to provide appropriate conditions, including sanitation on construction sites. - Even if the use of an incinerator is considered a hygienic methodology, it does not necessarily contribute to reduction of wastes. Other potential impacts may include: ● Risk of spread of toxic gas, which might leading to respiratory disease ● Risk of deterioration of air quality for the surrounding areas due to spread of fumes ● Risk of spreading disease to people, animals, plants in surrounding areas due to failure to kill infectious agents if the residues are not well managed

TABLE 3D. Potential impacts for category 4

Category 4: Implementation of community health activities excluding WASH	**Potential environmental and social impacts**

IR 1: Healthy and care-seeking behaviors and social norms adopted	Risk of non-use and/or non-maintenance of the physical infrastructure
The project will: - improve knowledge of healthy behaviors, services and products - reduce barriers to healthy, gender-sensitive and inclusive behaviors - increase gender-sensitive, inclusive, and participatory community engagement and ownership of health	without behavior change interventions.

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased The project will: - increase adapted health, GBV services and products for priority populations - in particular, continue to strengthen the capacity of the public supply chain and logistics system to ensure that high quality commodities for RMNCAH and malaria are continuously available and accessible. - increase and equitably distribute skilled health providers - establish and strengthen referral and counter referral mechanisms	Improper disposal of commodities such as condoms, drugs, and insecticide-treated nets by end-users (the targets of the marketing message) has adverse environmental impacts and may result in the generation of healthcare waste that can be harmful if not properly managed. The procurement, transportation, and/or distribution of these commodities as well are exposed to climate risks. Regarding immunization, one of the key environmental risks is vaccine storage, in case it is not properly stored and is within reach for people who should not have access, due to inadequate security. Vaccine transportation also increases harmful gas emissions. Storing the vaccines safely and at the right temperature is the priority during its transit, as they will not be usable otherwise. As such, there is little that can be compromised when it comes to long distance travel. In terms of Small Project Assistance activities led by the Peace Corps Volunteers, §216.2(c)(i) the action does not have an effect on the natural or physical environment;(2)(i) education, building local technical capacity, methods of community mobilization, and hands-on learning. In addition, the impacts that arise from agricultural activities vary. These include: inadequate knowledge of best practice, poorly considered policies that encourage subsidies for water and agrochemicals, uncertainty about land tenure, poorly supported resettlement programs, and non participatory and undifferentiated extension support. Ultimately, the combination of excessive use of agrochemicals, the over-abstraction of water, land clearing practices (such as slash-and-burn agriculture and deforestation), overgrazing, and inappropriate land preparation methods (for example, deep tillage using disc harrowers) can result in biodiversity loss, soil erosion, reduced soil fertility, and reduced local water availability and quality – all of which translate into fewer livelihood options, increasing vulnerability to climate change. Inadequate or poor management of healthcare wastes can have short- and long-term adverse environmental, human health, and social impacts. Potential climate risk as floods, landslides, cyclones, evapotranspiration

may accentuate the adverse health effects above.

- Potential impacts procurement, storage and distribution of insecticide-treated nets (ITNs):

a) Status of Pyrethroids

Insecticides Assessed for Use in ITNs by USAID

ACTIVE INGREDIENT AI) OR SYNERGIST, AND TREATMENT	MAXIMUM ACTIVE INGREDIENT MG/M^2 ASSESSED IN PEA	CURRENT PRODUCT NAME(S)[1], ACTIVE INGREDIENT(S) (MG/M), STATUS OF WHO AND/OR PQ RECOMMENDATION[2]
Alpha-cypermethrin, polyester Chlorfenapyr, polyester	100 200	Interceptor G2, 100 / 200, Under review
Permethrin, polyethylene Pyriproxyfen, polyethylene	800 400	Olyset Duo, 800 / 400, Under review
Alpha-cypermethrin, polyethylene Pyriproxyfen, polyethylene	225 225	Royal Guard, 225 / 225, Under review Veeralin, 216/79.2, Interim DuraNet Plus, x/x, Under review
Permethrin, polyethylene Piperonyl butoxide, polyethylene	800 400	Olyset Plus, 800 / 400, Interim
Alpha-cypermethrin, polyethylene	261	DuraNet, 261, Recommended MAGNet, 261, Recommended MiraNet, 180, Interim Royal Sentry, 261, Recommended
Permethrin, polyethylene	1000	Olyset, 1000, Recommended

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Deltamethrin, polyethylene	76	Panda Net 2.0, 76, Interim
Deltamethrin coated on polyester and on polyethylene roof	115	PermaNet 3.0, 115 / 25 g/kg, Interim
Piperonyl butoxide incorporated into polyethylene (roof)	25 g/kg	
Deltamethrin, polyester	80	DawaPlus 2.0, 80, Interim PermaNet 2.0, 55, Recommended Yahe, 55.5, Interim Yorkool, 55, Recommended
Alpha-cypermethrin, polyester	200	Interceptor, 200, Recommended SafeNet, 200, Recommended

[2] Status as of April 2016, the most recent summary available from WHOPES.

Cases of occupational or accidental exposure to pyrethroids may result in burning, itching, and tingling of the skin which is resolved after several hours. Reported systemic symptoms included dizziness, headache, anorexia, and fatigue.

b) Acute and Long-Term Toxicological Hazards, either Human or Environmental
Based on clinical signs (e.g., increased body temperature).

c) Adverse health and environmental impacts also arise from fishing with mosquito bed nets. Using ITNs to fish can cause leakage of pesticides into the water which are harmful to fish. The small weave of the nets catches even fingerlings and damages fish stocks where nets are being used.

d) Compatibility with Target and Non-Target Ecosystems While the pesticide products used are highly toxic to aquatic organisms, exposure and therefore risk will be slight.

e) Conditions under which pesticide is to be used

	Insecticide impregnated nets are distributed to users already treated and re-treatment is not promoted during the average lifespan of the net, but due to misuse, there could be contamination of water bodies
IR3: Resources for health and WASH mobilized and optimized The project will: - increase financial protection for poor and vulnerable priority populations - improve financial management capacity at district and lower levels - increase access to finance for health, GBV prevention and response - improve gender-responsive HRH planning and management	No foreseeable social or environmental impacts
IR 4: Governance, management and leadership for health and WASH strengthened The project will: - strengthen governance, management and leadership for health, GBV prevention and response - develop and implement supportive gender-responsive laws, regulations, policies, processes - improve coordination and effective partnering between GoM, donors, civil society, community and private sector - strengthen gender-responsive and inclusive management capacity and engagement at local and national levels	No foreseeable social or environmental impacts

TABLE 3E. Potential impacts for category 5

Category 5: Implementation of Water, Sanitation, and Hygiene activities	**Potential environmental and social impacts**

IR 1: Healthy and care-seeking behaviors and social norms adopted The project will: - improve knowledge of healthy WASH behaviors, services and products - provide technical expertise at the national level to increase capacity of the MoWASH to develop state-of-the-art SBC strategies, messages, products and activities - support the design, implementation and scaling-up of interventions that reduce barriers to accessing WASH products - Improve WASH behavior to increase demand for and use of WASH products and services - expand market-based sanitation to increase WASH markets, especially the sensitization approach to deliver sanitation products and services to low-income beneficiaries for a larger population and increase availability of affordable and desirable WASH products and services to underserved market segments	No foreseeable social or environmental impacts

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased The project will: - increase the availability and accessibility of quality WASH services by intervening at the national level to support policies, strategies, and technical guidelines that set service norms and standards for the country; at the regional and district levels; primary, public, and private health facilities; private sector service providers and vendors; and at the community level with community organizations, leaders, and Community Health Volunteers (CHVs) - continue to support WASH service providers and expand private sector engagement to increase coverage and quality of WASH products and services - increase the availability and accessibility of quality continuum of care services and promote and support the critical components of quality of care including trained and competent health and WASH providers; the continuous supply of WASH products; effective management of WASH infrastructure - increase the capacity of WASH actors in unlocking WASH Finance	Potential social and environmental risks for WASH infrastructure constructions and rehabilitations include: - Destruction or depletion of flora, fauna, and/or their habitats, leading to losses in biodiversity and ecosystem functioning in or near sensitive areas like wetlands or estuaries - Disturbance in ecosystem services such as regulation of water flows and water quality, non-consumptive use (for generating power and transport/navigation, aesthetics, and recreational value). - Soil erosion of exposed soils during construction can cause sedimentation into nearby water bodies, reducing the hydraulic capacity and water quality of surface water, and increasing risk of flooding and biodiversity loss - Disturbance to existing landscapes, habitats, including water flow: construction and rehabilitation works typically necessitates clearing, grading, trenching and other activities that can result in near-complete disturbance to the pre-existing landscape/habitat - Disturbance of surfaces covered with leaded paint, generating hazardous leadcontaining paint flakes and dust. These activities put those around the area at risk of lead poisoning by inhalation or ingestion - Minor repair work involves activities such as repair of damaged walls, doors, windows, construction material transportation, etc. are expected to cause moderate risk to air quality, noise levels - Improper location of the interventions may lead to risks of interfering with communities or other social risks - High cost for waste management and transportation with materials often illegally dumped - Sedimentation/fouling of surface waters due to runoff from cleared ground or materials stockpiles during rehabilitation - Water stagnation: rehabilitation may result in stagnant water on-site, which readily becomes breeding habitat for mosquitoes and other disease vectors; this is of particular concern as malaria is endemic in much of Madagascar - Occupational and community health and safety hazards. - Fall and crush injuries, hazards from hand or power tools and equipment used

in rehabilitation work, and exposure to hazardous substances, such as solvents in paint, cement dust, etc.
- Increased air and noise pollution from failure to provide appropriate conditions, including sanitation on construction site

Improperly designed water supply projects can over-extract fresh water, leading to reduced flows for downstream users as well as flows inadequate to maintain habitat, wetlands,and biodiversity.
Poorly designed sanitation projects can contaminate receiving water with human excreta, causing nutrient enrichment, depletion of dissolved oxygen, and other changes that disturb natural ecosystems and the diversity of flora and fauna and affect human health.
Improper fecal sludge management, including improper handling, collection, transport, and operation and maintenance of sludge management facilities can present a significant risk to public health and pollute land and water.
Social risks include management risks, vandalism and theft for the equipment, land conflict, the aesthetic and olfactory nuisances and frustration of the sensitized populations with regard to our steps towards behavioral change and the payment of services as well as the sale of derived products. Technical risks include the difficulties of access between the sludge location and the treatment site as well as the risk of not mastering the technology.

Latrines, showers, hand washing stations, flush toilets, incinerators: In operation, latrines can contaminate shallow groundwater and wells and, when not well maintained or of an open-pit design, can be the source of multiplication of flies, mosquitoes, spread of diseases, and foul odors.

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

Small scale construction
Construction of small-scale infrastructure may also lead to contamination and/or degradation of water sources. Small scale construction, including health center rehabilitation as well as small scale hygiene and sanitation interventions that fail to consider potential climate risks (floods, landslides, cyclones, droughts) may contaminate or degrade the quality of surface water, ground water, soil, and food as a result of improper siting of sanitation facilities, improper disposal of excreta or

wastewater, improper operation of constructed or rehabilitated facilities, among other causes.

	However, for small-scale interventions, these impacts can be controlled below the level of significance through appropriate siting of sanitation facilities, water quality assurance protocols (including testing), design (including drainage and exclusion of livestock from water points), and maintenance. With respect to design, capacitybuilding on equipment/system maintenance is essential for construction/installation of small-scale infrastructure.
IR3: Resources for health and WASH mobilized and optimized The project will: - increase financial protection for poor and vulnerable priority populations - improve financial management capacity at district and lower levels - increase access to finance for health, GBV prevention and response - improve gender-responsive HRH planning and management	No foreseeable social or environmental impacts.
IR 4: Governance, management and leadership for health and WASH strengthened The project will: - strengthen governance, management, and leadership for health, GBV prevention, and response - develop and implement supportive gender-responsive laws, regulations, policies, and processes - improve coordination and effective partnering between GoM, donors, civil society, community, and private sector - strengthen gender-responsive and inclusive management capacity and engagement at local and national levels	No foreseeable social or environmental impacts.

TABLE 3F. Potential impacts for category 6

Category 6: Commodity procurement and transportation of commodities including ITNs	**Potential environmental and social impacts**

IR 1: Healthy and care-seeking behaviors and social norms adopted The project will: - support the design, implementation, and scaling-up of	No foreseeable social or environmental impacts.
interventions that reduce barriers to accessing health services and commodities - support approaches like social marketing, social franchising, and community drug stores, that bring commodities and products closer to communities at affordable costs both to vendors and prices to clients	

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased The project will: - scale up proven approaches that have worked effectively to address the critical barriers facing communities in underserved areas as well as test the feasibility of new approaches to address major challenges including a continuous supply of affordable essential commodities are available in the community - focus on achieving outcomes that have been lagging such as increasing facility birth delivery, timely diagnosis and treatment of malaria, diarrhea, and pneumonia and increasing the availability and uptake of lifesaving and underutilized commodities, such as misoprostol and Oxytocin for postpartum hemorrhage, magnesium sulfate for eclampsia and severe eclampsia, injectable antibiotics for newborn sepsis, chlorhexidine for umbilical cord sepsis, long-acting contraceptives (implants), and IPTp for malaria - will support USAID's vision of a more efficient, equitable and sustainable health commodity and product market where public, nonprofit, and commercial actors deliver a broad range of high quality and affordable health commodities and products through a total market approach (TMA) - strengthen the capacity of the public supply chain logistics system to ensure that high quality commodities are available and accessible throughout the country. - support the GoM in strengthening the LMIS and in reforming the cost recovery system to increase sustainability of the public supply chain. - support the MoPH to formalize CHVs' role in the commodity supply chain. - help the MoPH to monitor and address corruption, notably related to potential increases in sexual extortion of women when stock outs cause shortages and price increases	The risks related to the procurement and transportation of commodities include: - unsafe transportation, disposal of reproductive health commodities such as condoms can contaminate the environment and spread infections to humans - unsafe transportation, disposal of expired, unused vaccines etc. of maternal and Child Health commodities including child immunization: this can affect primarily the healthcare workers and the communities - disease transmission due to procurement of syringes without retractable needles (smart syringes): this enables unauthorized reuse (or resale by scavengers), thus increasing the risk of disease transmission - disease transmission due to procurement of health commodities (e.g., vaccines) that are defective, expired, or counterfeit - physical injury from procurement of needles that are not single-use smart syringes: this increases the risk of needle-stick injuries - physical injury from procurement or acceptance of health commodities that are defective, expired, or counterfeit: this may cause illness or physical injury from use of defective items and indirectly generating more healthcare wastes - air pollution from procuring an oversupply of health commodities: this increases probability of expiration on the shelf and need for disposal, which increases the potential for air pollution (e.g., due to incineration and/or transportation for disposal) - soil pollution from procuring an oversupply of or health commodities : this increases probability of expiration on the shelf and need for disposal which increases the potential for soil pollution (e.g., due to increased volume of waste requiring sanitary pit burial) - water pollution procuring an oversupply of health commodities: this increases probability of expiration on the shelf and need for disposal which increases the potential for water pollution (e.g., due to leakage and/or spills). Social Impacts might occur from poor procurement processes: this can impede delivery of healthcare services, especially at the basic healthcare center (CSB) level, which may further exacerbate socioeconomic inequities in access to critical health services among vulnerable populations (e.g., poor, elderly, women, and children). In particular, stock outs cause shortages and price increases which sometimes lead to sexual extortion of women. The procurement of poor ITNs may cause environmental impacts in case of inappropriate disposal and use. Also improper storage of ITNs may have consequences on human and environmental exposure.

IR3: Resources for health and WASH mobilized and optimized The project will: - assist both MoWash and the MoPH to develop resource mobilization strategies that identify opportunities for increasing public and private resources for WASH and health services and commodities	No foreseeable social or environmental impacts.
IR 4: Governance, management and leadership for health and WASH strengthened The project will: - work with both the public and private sectors to improve commodity logistics management	No foreseeable social or environmental impacts.

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**

Categories	Categorical Exclusion Citation (if applicable)	Negative Determination with conditions	Positive Determination	Deferral
Category 1: Capacity building, training, social and behavior change, policy and strategy development				

IR 1: Healthy and care-seeking behaviors and social norms adopted	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		

IR3: Resources for health and WASH mobilized and optimized	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
IR 4: Governance, management and leadership for health and WASH strengthened	§216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as construction of facilities, etc.) §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities			

	directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
Category 2: Research, studies, surveillance, surveys, assessments				
IR 4: Governance, management and leadership for health and WASH strengthened		☒		
Category 3: Small scale rehabilitation excluding WASH				
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		
Category 4: Implementation of community health activities excluding WASH				
IR 1: Healthy and care-seeking behaviors and social norms adopted		☒		
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		

IR3: Resources for health and WASH mobilized and optimized	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent			
	designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

IR 4: Governance, management and leadership for health and WASH strengthened	§216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as construction of facilities, etc.) §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
Category 5: Implementation of Water, Sanitation, and Hygiene activities				
IR 1: Healthy and care-seeking behaviors and social norms adopted	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings			

	§216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		
IR3: Resources for health and WASH mobilized and optimized	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

IR 4: Governance, management and leadership for health and WASH strengthened	§216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as			
	construction of facilities, etc.) §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
Category 6: Commodity procurement and transportation of commodities including ITNs				

IR 1: Healthy and care-seeking behaviors and social norms adopted	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased		☒		

IR3: Resources for health and WASH mobilized and optimized	§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.); §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

IR 4: Governance, management and leadership for health and WASH strengthened	§216.2(c)(2)(xiv) Studies, projects or programs intended to develop the capability of recipient countries to engage in development planning, except to the extent [they are] designed to result in activities directly affecting the environment (such as construction of facilities, etc.) §216.2(c)(2)(iii) Analyses, studies, academic or research workshops and meetings §216.2(c)(2)(viii) Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, wastewater treatment, etc.)			

4.2 CLIMATE RISK MANAGEMENT

Climate risk management (CRM) is required for all USAID projects and activities. CRM is the process of assessing, addressing, and adaptively managing climate risks that may impact the ability of USAID programs to achieve objectives which should be sustainable. The CRM process has been taken into account in accordance with ADS 201mal and in consultation with the CIL, through risk screening, the identification of opportunities, and the proposal of different approaches from the project design stage. Identified climate risks may affect activities in this Madagascar HPN IEE, as the related risks are ranked as “low” and "moderate" in the CRM matrix (Annex 1), where descriptions of addressing climate risks through appropriate mitigation measures in activity design are well demonstrated.

The HSS Project's interventions will face exposure to climate-related risks, including risks to the health of the population as well as risks for the health sector. Stresses include: increased temperature, more frequent and/or more severe extreme climate events (such as cyclones and droughts in Madagascar), and changes in seasons (including sudden and intense temperature instability). Direct impacts can occur, such as floods; landslides; high evapotranspiration; disruption of supply chain commodity logistics, storage, and transportation (including corrosion); damaging health-care facilities; changes in quality and quantity of water supply; and shifting and expansion of disease transmission zones of diseases like malaria (due to mosquitos behavior changes linked to climate change). Indirect impacts such as increases of water-borne diseases, increased malnutrition, or post-disaster disease outbreaks might also occur. The HSS Project's interventions will be designed to minimize these impacts. Potential impacts linked to climate risks for those activities are ranked as low or moderate, and appropriate mitigation measures will be planned while taking advantage of existing opportunities and reinforcing resilience when carrying out the activities. Opportunities to build resilience were identified; these will be communicated to the implementing partner to incorporate in their annual work plans and EMMP. Implementing partners will review both low and moderate climate risk activities and interventions in Annex 1 and determine, along with the ARO/COR and/or the activity managers, how or if climate should be incorporated into activities.

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.

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 teams and/or the cognizant environmental officer(s) (e.g. MEO, REA, BEO) will provide pre-award briefings for potential offerors on environmental compliance expectations/responsibilities at bidders’ conferences.

5.1.1.2 Solicitations: The design teams, in coordination with the A/COs, will ensure solicitations include environmental compliance requirements and evaluation criteria. A/COs 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/CORs, in coordination with the A/COs, will ensure all awards and subawards include environmental compliance requirements.

5.1.2 During Post-Award:

5.1.2.1 Post-Award Briefings: The A/CORs and/or the cognizant environmental officer(s) (e.g., MEO, REA, BEO) will provide post-award briefings for the Implementing Partners (IPs) on environmental compliance responsibilities.

5.1.2.3 Work Plans and Budgeting: The A/CORs will ensure the IPs integrate environmental compliance requirements in work plans and budgets to comply with requirements, including EMMP implementation and monitoring.

5.1.2.4 Staffing: The A/CORs, in coordination with the IPs, will ensure all awards have staffing capacity to implement environmental compliance requirements.

5.1.2.5 Records Management: The A/CORs 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/CORs will ensure the IPs comply 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 more stringent shall govern.

5.1.2.7 Work Plan Review: The A/CORs will ensure the IPs verify, at least annually or when activities are added or modified, that interventions remain within the scope of the IEE. Interventions outside of the scope of the IEE cannot be implemented until the IEE is amended.

5.1.2.8 IEE Amendment: If new interventions 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/CORs or designees, 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/CORs will ensure the IPs develop, obtain approval for, and implement Environmental Mitigation and Monitoring Plans (EMMPs) that are responsive to the stipulated environmental compliance requirements.

5.1.2.17 Environmental Compliance Reporting: The A/CORs will ensure the IPs include environmental compliance in regular project/activity reports, using indicators as appropriate; develop and submit the Environmental Mitigation and Monitoring Reports (EMMRs); and complete and submit Records 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 IPs prepare a closeout plan consistent with award documentation for A/COR review and approval that outlines responsibilities for end-of-activity 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/CORs, place a hold on activities, take corrective action, and report on the effectiveness of corrective actions. A/CORs initiate the corrective action process and ensure the IPs complete and document their interventions. Where required by Bureaus or Missions, ensure Record of Compliance is completed. See guidance https://www.usaid.gov/documents/1865/corrective-action-plan-cap

5.2 AGENCY CONDITIONS

5.2.1 Sub-award Screening: The A/CORs will ensure the IPs use 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 falls 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: A/CORs 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/CORs will ensure that the appropriate 22CFR216 environmental analysis and documentation is completed and approved by the BEO before the subject interventions 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: AMs, A/CORs shall assure that the IPs 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 CONDITIONS FOR IMPLEMENTATION FROM THE MISSION

Category 1: Capacity building, training, social and behavior change, policy and strategy development

Negative determination with the following conditions:

- Training/curricula/supervision 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).
- Note that this condition applies to both activities targeting home care and community health workers: implementing partners must, as appropriate, include healthcare waste (HCW) management messages and develop appropriate disposal mechanisms in home-based and community-based situations that are cost effective and safe. Positive messages about personal and household hygiene, sanitation, and proper disposal of condoms and other potentially harmful materials should be delivered, as appropriate, along with standard health care messages, and these messages should be included in training, protocols, and guidelines.

Category 2: Research, studies, surveillance, surveys, assessments

Disease Surveillance, studies, surveys, research and assessments

Negative Determination subject to the following conditions:

- Survey questionnaires/curricula and standard procedures 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, waste from screening).

Category 3: Small scale rehabilitation excluding WASH

Small scale rehabilitation

Negative Determination subject to the following conditions:

- Implementing partners and sub-partners must implement good-practice design standards for new small scale construction and rehabilitation, and upgrade works generally consistent with USAID's Sector Environmental Guidelines: https://www.usaid.gov/environmentalprocedures/sectoral-environmental-social-best-practices/sector-environmental-guidelinesresources

  These standards must be specified in the EMMP. Small scale WASH infrastructures must be located at places where social and environmental impacts are avoided).

  The activities must be reviewed against an Environmental Screening Form (ESF) at the earliest possible time to highlight potential impacts and address them appropriately.

  The screening addresses the following phases:

- Site selection/identification
- Project planning and site design
- Pre-construction or rehabilitation phase
- Construction or rehabilitation phase

- Implementing partners may work with local authorities to administer the legislation, penalties, and effective enforcement, and availability of formal collection and disposal systems should be required to control illegal dumping
- Implementing partners may also conduct a community survey about health care seeking determinants among beneficiaries to better understand related-behavior in order to propose improvements of strategies

Incinerators

Negative Determination subject to the following conditions:

- ***Procurement,*** *installation, commissioning, management, and maintenance of hazardous waste treatment equipment, EXCEPT construction related to installation of hazardous waste treatment equipment*
- For incinerators with capacities ≤ 200 lbs/hour and ≤ 2000 lbs./week and in-ground disposal facilities ≤ 100m3 capacity
- Note that multiple installations serving a facility that in total exceed these thresholds receive a positive determination; see below:
- The USAID operating unit financing the activity must prepare a supplemental IEE (SIEE) pertaining to the specific site and circumstance in question as part of the decision to finance an incinerator. The GH COR must approve the SIEE approved with concurrence by the GH 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.
- 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.

Category 4: Implementation of community health activities excluding WASH

Community social mobilization and outreach activities (programs involving nutrition, family planning, immunization or population, small project assistance activities)

These interventions promote use of commodities such as condoms and drugs. The improper disposal of these items by end-users may have adverse environmental impacts. However,

- The use and subsequent disposal stimulated by these programs is geographically dispersed, reducing the intensity of the impact, and USAID IPs have very limited control over end-user actions.
- It is expected that the health office will include messages that emphasize the proper storage, use, and disposal of these products.

Taken together, these factors suggest that the categorical exclusion to which communication/education/outreach activities normally qualify is also applicable in this case.

Mobilization tools/curriculas 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, waste from screening).

Management and disposal of public health commodities and equipment

Negative Determination subject to the following conditions:
Healthcare Waste Standard Conditions: The Africa Bureau's standard mitigating conditions for IEEs regarding healthcare waste are based upon the Agency's commitment to WHO and local healthcare waste management standards. An important emphasis is placed on the role that USAID should have in ensuring that healthcare waste is managed appropriately in healthcare facilities and activities that USAID supports.

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 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/sectoralenvironmental-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.

Category 5: Implementation of Water, Sanitation, and Hygiene activities

Small scale rehabilitation and construction, water quality activities, fecal sludge management

Negative Determination with the following conditions:

- **Good-practice design standards** must be implemented for new construction and rehabilitation works, generally consistent with USAID's *Sector Environmental Guidelines: Water Supply & Sanitation: https://www.usaid.gov/sites/default/files/documents/1860/Water_SEG_2017.pdf* and *Sector Environmental Guidelines: Construction* https://www.usaid.gov/sites/default/files/documents/1860/SectorEnvironmentalGuidelines_Construction_2017.pdf

These standards must be specified in the EMMP (see Appendices of this IEE) and must include siting of new wells well away from groundwater contamination sources (e.g. latrines, cesspits, dumps), exclusion of livestock from water points, and prevention of stagnant water at water supply points.

- For water supply, they must include siting of new wells well away from groundwater contamination sources (e.g. latrines, cesspits, dumps), exclusion of livestock from water points, and prevention of stagnant water at water supply points
- For latrines and incinerators, they must include provisions to prevent contamination of water supplies, appropriate choice of technology given local environmental conditions (e.g. pit latrines are rarely suitable in locations where the water table is high), provision of handwashing stations, and development and implementation of a system for ongoing cleaning and maintenance
- That the incineration process follows the national guidelines and USAID small scale construction guidelines

All activities must be reviewed against an Environmental Screening Form (ESF)(see Appendices of this IEE) at the earliest possible time to highlight potential impacts and address them appropriately, and reported through the Environmental Screening Report (see Appendices of this IEE), for each site, to be submitted to the A/COR, AM, and MEO for review, clearance and/or approval.

The screening addresses the following phases:

- Site selection/identification
- Project planning and site design
- Pre-construction or rehabilitation phase
- Construction or rehabilitation phase

Capacity-building in equipment/system maintenance must be co-programmed with construction/installation of small-scale water supply infrastructure.

In particular, for sludge management, special precautions will be considered, including specific discussions and sensitizations with the communities and the different stakeholders, at the different stages of the pilot intervention. Sludge treatment systems will be adapted to the local regulations and conditions, and particular attention will be paid to avoid health and safety problems or pollution for communities as well as workers.

Specific measures, including prevention of seepage, transportation in sealed containers, management of the quantity of sludge to be transported, and training workers, need to be ensured during the treatment of the sludge.

Water Quality Assurance Plan: Prior to implementing projects which include the provision of drinking water, the implementing partner will prepare and receive approval for a Water Quality Assurance Plan (WQAP). The purpose of the WQAP is to ensure that all new and rehabilitated USAID-funded sources of drinking water are safe for human consumption.

- The WQAP will be developed in consultation with the cognizant AOR/COR and/or Activity Manager, and approved by, the AOR/COR, Activity Manager, MEO, and REA. The WQAP should be shared with the BEO for cognizance as part of the clearance process..
- The WQAP should include the following:
    i. Description of host-country and USAID water quality standards
    ii. Initial testing schedule for newly constructed or rehabilitated water points, and an ongoing monitoring schedule for all water points.
    iii. Assessment of equipment, resources, and expertise that will be required to monitor and report on compliance with water quality standards (for example, sampling materials, reagents, transportation, storage, laboratory facilities and capacity, communications, training or certification criteria, etc)
    iv. Corrective measures in the case of quality exceedances
    v. Plan for training and stakeholder participation to assure long-term operational sustainability of the water points.
- The WQAP should follow any applicable USAID guidance, as well as local laws, regulations and policies.
- Once approved, the WQAP must be implemented in full, and for the duration of drinking water activities. The document should be uploaded to the Mission's folder within the AFR EC Document Library.

For preparation of the WQAP, refer to the WQAP template and guidance document here: https://www.usaid.gov/environmental-procedures/environmental-compliance-esdm-programcycle/special-compliance-topics/water/wqap-africa-guidance-note

- **Fecal sludge management**

Negative Determination with the following conditions:

- When designing fecal waste management systems, USAID implementing partners must look into the end use or disposal option and it must first be determined, so that the treatment can be designed accordingly.
- The implementation/action plan must be cleared and/or approved by the MEO and by A/COR/Activity Manager prior to initiation of these activities, under the EMMP that will be annexed to the Annual Work Plan. The plan must include and assign responsibility to the implementing partner first to focus on critical short-term interventions that have immediate impact on health and environmental protection, and then the long-term impacts.
- The implementation/action plan must include a plan for safe handling, transportation, treatment, and storage of fecal waste.

Category 6: Commodity procurement and transportation of commodities including ITNs

- **Insecticide Treated nets (ITNs)**

Negative Determination with the following conditions:

- Conduct a "Rapid Assessment" to evaluate the extent of misuse of bednets for fishing, as detailed in the BEO Specified Conditions. Refer to the 2018 PMI Toolkit for guidance on initiating this process.
- Procure ITNs to ensure the quality and efficacy of the ITNs purchased, that they contain effective pyrethroid levels including new generation ITNs

- Distribute ITNs for the 2021 and 2024 campaigns, epidemic response per the national plan, continuous distribution.
- The ITNs program will be evaluated using household surveys including malaria indicator surveys (MIS) or Demographic and Health Surveys (DHS) and ITN durability monitoring studies. Incorporate environmental questions into household surveys for ITNs.
- Disposal or recycling of ITNs: make all appropriate efforts to ensure that the packaging, storage, transport, and disposal of ITNs comply with the WHO Pesticide Evaluation Scheme guidelines, national waste management policy, and USAID guidelines.

- **Procurement of other commodities related to reproductive health, immunization, nutritional supplements**

  Negative Determination with the following conditions:
  22 CFR 216.3(a) (2) (iii) is recommended for the procurement of other commodities related to reproductive health, immunization, nutritional supplements, point-of-use water treatments, test/diagnosis kits and laboratory reagents for disease and condition diagnosis etc.
  - Make all appropriate efforts to ensure that the packaging, storage, and transportation of commodities comply with the WHO Pesticide Evaluation Scheme guidelines, as well as the national policy and guidelines of USAID.

Overall conditions

- Implementing partners should work with local authorities to administer the legislation, penalties, and effective enforcement; and availability of formal collection and disposal systems should be required to control illegal dumping.
- Any grants or fund transfers to other organizations (sub-partners) must incorporate provisions stipulating that an annual environmental monitoring report will be complete, and that activities to be undertaken will be within the scope of the environmental determinations and recommendations of this IEE. This includes assurance that any mitigating measures required for those activities be followed.
- Implementing partners will develop and implement the environmental mitigation and monitoring plan while describing how the activity will, in particular terms, implement the conditions in the IEE that apply to the activity and interventions. This shall include training of contractor staff and sub-partners, when appropriate.
- Implementing partners will complete an annual environmental mitigation and monitoring report of interventions undertaken unless specified otherwise. This report is to be submitted to the appropriate AOR, COR or Activity Manager by the end of September each year. This reporting requirement should be incorporated into performance monitoring plans and annual work plans. Environmental monitoring information shall then be compiled by the HPN team and submitted to the MEO for incorporation into the annual Performance Plan and Report.
- The vaccines must to be transported in mass quantities to minimize greenhouse gas emissions associated with transportation.

5.4 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 activities' Environmental Mitigation and Monitoring Plans (EMMP) and/or the EAs and PERSUAPs, if required.
Categories of interventions with no foreseeable social or environmental impacts do not require further analysis, therefore are not included in the following tables.

TABLE 5A. Summary of mitigation measures for category 1

Category 1: Capacity building, training, social and behavior change, policy and strategy development	**Mitigation measures**
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased - The project will rehabilitate, refurbish or renovate healthcare facilities and other small scale health infrastructures. No new health infrastructures will be built. - In cases when it improves services and accessibility to quality health services, the project plans to build small scale infrastructure, including incinerators that will be locally managed with the community health centers	To avoid risks of non-use and non-maintenance of the infrastructures: ● Include representatives of all stakeholders during local consultations prior to starting the infrastructure ● Integrate behavior change interventions when approaching the different stakeholders, ● Carry out sensitization sessions about the future use of the infrastructure as well as discussions about maintenance modalities, roles and responsibilities ● Ensure that all authorizations will be obtained prior to starting the rehabilitation activities. ● Environmental compliance mitigation measures are written into award documents, implemented over the life of the activities, and monitored and reported for compliance.

TABLE 5B. Summary of mitigation measures for category 2

Category 2: Research, studies, surveillance, surveys, assessments	**Mitigation measures**

IR 4: Governance, management and leadership for health and WASH strengthened The project will: - support surveys, research, assessments, evaluations and analyses that would provide an evidence base for new policies and strategies, robust costing activities, stakeholder engagement, advocacy, piloting, monitoring plans and tools, rollout and implementation that include dissemination workshops and training. - support the development and use of tools like the DemDiv Demographic Dividend and Impact Now to advocate for increased focus and resources for Family Planning (FP). - support the Madagascar Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys [MICS] as well as other studies and assessments that will provide an evidence base for policy and strategy development. The malaria indicator survey (MIS) will continue to include an evaluation of ITN where environmental questions are included - carry out formative Research and	To avoid risks of misleading and not appropriately addressing the potential social impacts including the beneficiaries' false expectations: ● Clarify the planned interventions and expected results to the different stakeholder prior to the different training sessions, research, studies or assessments ● Include representatives of all stakeholders during local consultations prior to starting the infrastructure ● Integrate behavior change interventions when approaching the different stakeholders, ● Carry out sensitization sessions about the future use of the infrastructure as well as discussions about maintenance modalities, roles and responsibilities ● Ensure that all authorizations will be obtained prior to starting the rehabilitation activities. ● Environmental compliance mitigation measures are written into award documents, implemented over the life of the activities, and monitored and reported for compliance.
Situational Analysis in WASH	

CATEGORY 3: Small scale rehabilitation excluding WASH TABLE 5C. Summary of mitigation measures for category 3

Category 3: Small scale rehabilitation excluding WASH	**Mitigation measures**

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased - The project will rehabilitate, refurbish or renovate healthcare facilities and other small scale health infrastructures. No new health infrastructures will be built. - In cases when it improves services and accessibility to quality health services, the project plans to build small scale infrastructures, including incinerators that will be locally managed with the community health centers	● Ensure that all authorizations will be obtained prior to starting the rehabilitation activities. ● Environmental compliance mitigation measures are written into award documents, implemented over the life of the activities, and monitored and reported for compliance. ● Ensure workers are trained on use of personal protective equipment. ● Ensure that waste from rehabilitation activities is processed and disposed of in a secure, controlled landfill site. ● Generation of waste should be kept to the minimum possible by: - reusing material on site - buying the correct amount of materials to be used ● Ensure a waste storage area is available/allocated at the site. ● Ensure leftover material is been properly disposed of, bins provided and garbage is regularly removed. ● Additional measures for disturbance of ecosystems, soil erosion, disturbance of existing landscape or surfaces, or other potential adverse impacts include: - Survey of the site prior to the commencement of site establishment to identify biodiversity and sensitive areas and to inform the implementation of targeted mitigation measures, carried out by an ecologist - Minimize clearance of trees and other vegetation to the extent possible and schedule to avoid the peak period for breeding birds and fauna species - Avoid fragmentation of areas of vegetation - Keep working corridors as narrow as practical and marked with protective fencing where construction corridors run through dense vegetation - Minimize the size of construction areas - Require appropriate procedures (licensing) for felling of trees, appropriate removal of material to avoid risks of fire - Artificial lighting used on construction sites and other project facilities at night should be shaded and directed downwards to avoid light spillage and disturbance to nocturnal birds, bats, and other wildlife - Prohibit excavation of sand and gravel from watercourses and lakes or other sensitive ecosystems - Wherever possible use existing quarries rather than opening new ones - Develop a construction method statement that considers sedimentation and erosion control measures. Avoid sitting in a wetland or next to a river, stream, or lake. Leave a 50m wide strip to prevent erosion around riparian zones - Construct gutters and concrete aprons around buildings to prevent rainwater damage and soil erosion around buildings - Upgrade roads to allow facility access during rainy seasons using techniques to minimize soil erosion and the creation of multiple tracks - Minimize size of cleared areas - Limit earthmoving to dry seasons

	- Use locally-available materials for construction in order to reduce maintenance costs, except where such materials may be taken from protected areas or their extraction may create significant adverse impacts on the local environment
	- Backfill borrow pits when no longer needed, to prevent accumulation of standing water, use for waste disposal, and potential falls
	- Dispose of construction waste in controlled dumps with provisions for groundwater and surface water protection
	- Revegetate with native grasses and shrubs to stabilize soil after construction is complete
	- Avoid building in forested areas. In the case where deforestation is unavoidable, invest in reforestation or protection of nearby forested areas
	- Provide potable water and appropriate sanitary and solid waste disposal facilities for use by construction workers
	- For the use of incinerator:
	  - Ensure that incinerator is built in a site where natural conditions allow total incineration
	  - Consider wind direction, open space, surrounding dwelling localization when choosing incinerator site
	  - Avoid overloading the incinerator
	  - Check that the incinerator is built to the recommended dimensions with the appropriate materials, that it functions properly and that the chimney is not clogged with soot
	  - Adopt strict quality control and ash and fumes treatment system measures (by filtration to stop fly ash and by washing fumes to reduce and improve the number of fumes coming out of the chimney
	  - Define the storage facility and install sewage disposal pit to ensure evacuation of wastewater
	  - Ensure evacuation of wastewater
	  - Ensure that incineration of wastes is conducted in high-temperature incinerators (T°> 850°C (ideally 1200°C)
	  - Ensure appropriate amount of wastes is incinerated to reduce the ash resulting from the combustion
	  - Ensure the ashes and residues will be collected in a semi-buried pit with a cover
	  - Nozzles must be installed in the landfill and cover by concrete to avoid radioactive contamination of soils and underground
	  - Ensure there is a plan in place for ongoing incinerator maintenance and repair
	  - Ensure that there is sufficient staffing for transporting waste and operating the incinerator
	-

CATEGORY4: Implementation of community health activities excluding WASH

TABLE 5D. Summary of mitigation measures for category 4

Category 4: Implementation of community health activities excluding WASH	Mitigation measures
IR 1: Healthy and care-seeking behaviors and social norms adopted The project will: - improve knowledge of healthy behaviors, services and products - reduce barriers to healthy, gendersensitive and inclusive behaviors - increase gender-sensitive, inclusive, and participatory community engagement and ownership of health	To avoid risks of non-use and non-maintenance of the infrastructures: ● Include representatives of all stakeholders during local consultations prior to starting the infrastructure ● Integrate behavior change interventions when approaching the different stakeholders, ● Carry out sensitization sessions about the future use of the infrastructure as well as discussions about maintenance modalities, roles and responsibilities ● Ensure that all authorizations will be obtained prior to starting the rehabilitation activities. ● Environmental compliance mitigation measures are written into award documents, implemented over the life of the activities, and monitored and reported for compliance.
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased The project will: - increase adapted health, GBV services and products for priority populations - increase and equitably distribute skilled health providers - establish and strengthen referral and counter referral mechanisms	Develop and implement a Waste Management Plan (WMP) or comparable SOP for the safe storage of healthcare waste to reduce the potential for disease transmission and physical injury (https://www.usaid.gov/documents/1865/integrated-waste-management-planiwmp) Provide training to workers on the WMP/SOP developed for the safe and effective storage of healthcare commodities and health care waste. Monitor worker welfare to ensure adequate protections are in place Conduct site visits: - to verify that workers are trained and following the WMP/SOPs. - to determine that WMP/SOP and training programs are implemented and effective. Where possible encourage safe transportation of commodities (i.e temperature), and avoid humidity, dust and mud infiltration Establish a system of source separation: provide clearly labeled buckets for sharps, non-hazardous waste, disposable hazardous waste (tissue...), and nondisposable hazardous materials (sheets, towels) Incinerate non-recyclable hazardous waste, sharps, and expired pharmaceuticals Fence the area around burn pits to prevent access by animals, children and others. Also design fencing to serve as a wind barrier to prevent unburned or partially burned materials from blowing out of the pit see guide USAID Sector Environmental Guideline on Healthcare Waste Ensure waste disposal contractors have SOPs established for properly transporting, treating, and disposing of healthcare waste off-site in conformance with host country requirements and USAID's best practices.

CATEGORY 5 : Implementation of Water, Sanitation, and Hygiene activities

TABLE 5E. Summary of mitigation measures for category 5

Category 5: Implementation of Water, Sanitation, and Hygiene activities	Mitigation measures
IR2 : Availability and accessibility to	Avoid locations that pose greater risks of exposure to

a continuum of quality health, nutrition and WASH, services increased The project will: - increase the availability and accessibility of quality WASH services by intervening at the national level to support policies, strategies and technical guidelines that set service norms and standards for the country; at the regional and district levels; primary, public and private health facilities; private sector service providers and vendors; and at the community level with community organizations, leaders and Community Health Volunteers (CHVs) - continue to support WASH service providers and expand private sector engagement to increase coverage and quality of WASH products and services - increase the availability and accessibility of quality continuum of care services and promote and support the critical components of quality of care including trained and competent health and WASH providers; the continuous supply of WASH products; effective management of WASH infrastructure	children and the general population Select a location with access to safe drinking water; consider how climate change may impact water supplies in the future Assess water quality upstream and downstream to determine if water is safe to drink and to establish a baseline so that any future degradation can be detected prior to commissioning Assess the quality of groundwater during investigation and confirm upon commissioning of the system Develop and implement a water quality assurance plan (WQAP).Consider how the project will impact the water table level, particularly in the context of climate change. Provide potable water and appropriate sanitary and solid waste disposal facilities for use by construction workers Regarding sanitation: when rehabilitating or building latrines, include handwashing stations close-by Appropriately design drainage systems taking into account watershed characteristics, storm water runoff flow, and existing sewage systems following the national and international standards No resettlement or displacement of populations due to project interventions Train workers on the importance of using personal protective equipment and the proper handling and disposal of toxic materials so as not to contaminate themselves or surface water Determine a water quality baseline to compare future water tests to detect water quality degradation Ensure latrines, wastewater collection, and sewage systems are designed and constructed to WHO and national standards Train workers on proper use and maintenance of solid waste and waste water storage units on site to avoid leakages or exposures Pit latrines should not be installed where the water table is shallow or where the composition of the overlying deposits make groundwater or an aquifer vulnerable to contamination During the emptying of pit latrines, ensure that a reliable system for safely emptying latrines and transporting the collected material off-site for treatment is used Promote water conservation by adoption of a charging system that allows users to save water through use of educational tools Use locally-available materials for construction in order to reduce maintenance costs, except where such materials may create significant adverse impacts on the local environment Small scale construction: - prior to any construction, an Environmental Review/Screening Form must be submitted and approved by USAID - If potable water systems are constructed, a Water Quality Assurance Plan must be developed and submitted to USAID for approval before the use of the water In particular, for fecal sludge management: - Ensure the protection of the watershed where the sludge management structure is located to ensure long-term water infiltration. - Appropriate sludge stabilization and treatment options must be developed and tested with review by a civil engineer, or equivalent, to ensure safety of the sludge products applied to land. Land applied sludge (i.e., sludge not deposited in a sanitary landfill) must be treated for

	heavy metals and pathogens in compliance with host country regulations and their contaminant limits. Madagascar's Decree No. 2003-464 of 15 April 2003 sets out the effluent quality standards that must be adhered to before discharge into surface waters. The minimum standards for metals in sewage sludge and standards for soil onto which sewage sludge is discharged are stipulated in Article 10. The methods of analysis that should be used are set out in the Annex to the Decree. - The project can also refer to the US 40 CFR Part 503 Rule, which includes pollutant limits (§ 503.13) for land application. - Appropriate technologies include but are not limited to composting, lime stabilization, anaerobic digestion, aerobic digestion, planting drying beds, thermal drying, solar drying, among others. Consider and plan for climate impacts. Cyclones,floods, landslides and droughts may affect related activities.

CATEGORY 6 : Commodity procurement and transportation of commodities including ITNs

TABLE 5F. Summary of mitigation measures for category 6

Category 6: Commodity procurement and transportation of commodities including ITNs	Potential environmental and social impacts

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased The project will: - scale up proven approaches that have worked effectively to address the critical barriers facing communities in underserved areas as well as test the feasibility of new approaches to address major challenges including a continuous supply of affordable essential commodities are available in the community - focus on achieving outcomes that have been lagging, such as increasing facility birth delivery, timely diagnosis and treatment of malaria, diarrhea, and pneumonia; and increasing the availability and uptake of lifesaving and underutilized commodities, such as misoprostol and Oxytocin for postpartum hemorrhage, magnesium sulfate for eclampsia and severe eclampsia, injectable antibiotics for newborn sepsis, chlorhexidine for umbilical cord sepsis, long-acting contraceptives (implants), and IPTp for malaria - will support USAID's vision of a more efficient, equitable, and sustainable health commodity and product market where public, nonprofit, and commercial	● Conduct a "Rapid Assessment" to evaluate the extent of misuse of bednets for fishing, as detailed in the BEO Specified Conditions. Refer to the 2018 PMI Toolkit for guidance on initiating this process. ● Public health commodities procured under this funding will be stored according to the information provided on the manufacturer's Materials Safety Data Sheet (MSDS), and the recommendations found in the World Health Organization (WHO) publication: Guidelines for the storage of Essential Health Commodities. ● Store rooms must be sited outside of flood zones, and be secure, ventilated, and double-locked. Inventory control systems must be designed and used to prevent misappropriation, diversion, or loss. ● Conduct quantification analysis to determine supply needs and develop a supply plan. ● Coordinate forecasting and supply planning activities with a quantification team (Minister of Public Health Staff at all levels including district team) to meet current needs and minimize the risk of stock-outs or surplus of health commodities. ● Procure health commodities that consider the ratio of commodities to target population, existing supply of commodities, and supply of commodities from non-USAID sources (e.g., other donors). ● Manage inventory of stock to minimize potential for diversion in commodity distribution. ● Procure health commodities that comply with host country and international regulatory, shipping, and

- actors deliver a broad range of highquality and affordable health commodities and products through a total market approach (TMA)
- strengthen the capacity of the public supply chain logistics system to ensure that high-quality commodities are available and accessible throughout the country support the GoM in
- strengthening the LMIS and in
- reforming the cost recovery system to increase sustainability of the public supply chain support the MoPH to formalize CHVs' role in the commodity supply chain help the MoPH to monitor and address corruption, notably related to potential increases in sexual extortion of women when stock outs cause shortages and price increases

packaging requirements to ensure that only appropriate products enter the supply system.

- Negotiate manufacturer take-back clauses and sustainability criteria including minimal, recyclable packaging and environmentally preferred transportation in health commodity procurements, if possible.
- Mitigation measures on ITNs
  - Maintain copies of procurement records (e.g., manufacturing records, Certificate of Analysis, etc.) and copies of quality documentation on file
  - Nets will not be retreated. Only factory-treated long-lasting insecticide-treated nets (LLINs) will be used.

Madagascar's ability to regulate or control the storage, use, and disposal of the pesticides

- A national committee for the management of chemical products is created to regulate those issues. The ITNs are kept at the relevant activity's Madagascar warehouse(s). Nets are packaged in plastic bags and stored on wooden pallets. As the insecticide is already incorporated in dilute form in the material of the mosquito net, storage and disposal are of lower concern than with a concentrated retreatment tablet. By the end of the natural life of the net (2-3 years), the residual insecticide is low.

- **Provisions made for training users and applicators**
  - The instructions that accompany the ITN have been tested in Madagascar for ease of comprehension and use. The instructions show the proper utilization of the net including washing and drying procedures.
  - Educational campaign using mass media and interpersonal communication addressing messages related to malaria prevention and proper net use

- **Provisions made for monitoring the use and effectiveness of the pesticide**
  - The National Malaria Control Program (NMCP) is currently undertaking mosquito insecticide resistance monitoring in 26 sites across Madagascar, including 10 sites with Global Fund resources and fully managed by the NMCP.
  - The other sites receive support from PMI and are managed by PMI partners (PMI VectorLink and IPM).
  - The ITN manufacturer also conducts its own quality control to ensure effectiveness of ITNs and is issuing a Manufacturer Certificate of Quality for each order delivered.

Safety rating for products used by USAID Madagascar

Product	Pesticide Active Ingredient	Safety Rating (Unacceptable, Acceptable, Good, Best)
Generic Net White (Yahe)	Deltamethrin	Best: This long-lasting treatment significantly reduces environmental and health risks by avoiding or at least
Permanent White 3.0 (PBO)	-Top: Deltamethrin + Piperonyl Butoxide -side: Deltametrin	Best: This long-lasting treatment reduces environmental and health risks by avoiding or at least significantly

- Although the product names are provided in the table, the data showed calculated risk by factoring in active ingredient, concentration of active ingredient, and material type. Therefore, any new product that has a concentration of active ingredient equal to or less than the concentration of those specified above (and the same netting material) does not need to undergo a USAID risk assessment.
- Implementing partners will be committed to the implementation of the Malagasy National ITN Policy and Strategy and endorse the recent move towards the use of ITN products, now that they have received World Health Organization Pesticide Evaluation Scheme approval or WHO Pre-Qualified. This is not only the most promising approach to achieving the necessary coverage with this intervention but also the safest approach. During a transition period of 3-5 years, insecticides will continue to be used for the retreatment of mosquito nets by the consumers or communities (recommended every six months). The products listed fulfill the recommendations of the Integrated Vector Management Program - Programmatic Environmental Assessment with respect to active ingredients (no permethrin used), formulations used and packaging (no large volume containers).
- Implementing partners will choose to use long-lasting nets that reduce the need for retreatment and thereby address all of the exposure opportunities.
- Consumers and employees should be educated in pesticide safety. Therefore, only WHOPES-

	recommended ITN active ingredients will be used for USAID ITN programs - Studies document that pyrethroid-treated LLINs continue to provide personal protection in areas with documented pyrethroid resistance. Source: Lindblade K, Mwandama D, Mzilahowa T et al. A cohort study of the effectiveness of insecticide-treated bed nets to prevent malaria in an area of moderate pyrethroid resistance, Malawi. Malaria Journal 2015, 14:31.

Implementing partners will develop and implement the Environmental Mitigation and Monitoring Plan (EMMP) integrating the Climate Risk Management Plan (CRMP) (see appendices) while describing how the activity will, in particular terms, implement the conditions in the IEE that apply to the activity. This shall include training of contractor staff and sub-partners, when appropriate.

Implementing partners will complete a regular report as it relates to the evolution of the interventions along with the annual Environmental Mitigation and Monitoring Report (EMMR) and Climate Risk Management Report (CRMR) (see template in appendices) of interventions undertaken unless specified otherwise. This report is to be submitted to the appropriate A/CORs or Activity Managers by the end of September each year. This reporting requirement should be incorporated into performance monitoring plans and annual work plans. Environmental monitoring information shall then be compiled by the HPN team and submitted to the MEO for incorporation into the annual Performance Plan and Report.

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 for project/activity preparation, project/activity 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;
- Support to extractive industries (e.g. mining and quarrying) per FAA 117;
- Promotion of timber harvesting per FAA 117 and 118;
- New construction, reconstruction, rehabilitation, or renovation work per §216.2(b)(1);
- Support for agro-processing or industrial enterprises per §216.1(b)(4);
- Support for regulatory permitting per §216.1(b)(2);
- 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
- Assistance for 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, Activity Manager 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 1. PROJECT CLIMATE RISK MANAGEMENT SUMMARY TABLE

Project Categories	Climate Risks[3]	Risk Rating[4]	How Risks are Addressed at Project Level[5]	Further Analysis and Actions for Activity Design/ Implementation[6]	Opportunities to Strengthen Climate Resilience[7]
Category 1: Capacity building, training, social and behavior change, policy and strategy development					
IR 1: Healthy and care-seeking behaviors and social norms adopted	Cyclones and floods may affect related interventions	Low	Avoid training/workshop/meeting during the cyclonic season. Avoid areas that could potentially be affected by floods/landslides. Backup plans in case of urgent training must be conducted (safe infrastructure and logistics).	Climate Risk Management culture and reflex should be included in behaviors and social norms modules.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field.
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased	Cyclones,floods, landslides and droughts may affect related	Moderate	Develop an appropriate contingency plan addressing	Reinforce assessment of the appropriate contingency plan.	Reinforce collaboration with the national disaster office,

[3] List key risks related to the project elements identified through either the strategy- or project-level climate risk assessment. [4] Low/Moderate/ High [5] Describe how risks have been addressed at the project level. If a decision has been made to accept the risk, briefly explain why. [6] Describe CRM measures to be integrated into activity design or implementation, including additional analysis, if applicable. [7] Describe opportunities to achieve development objectives by integrating climate resilience or mitigation measures.

	interventions		cyclones, floods, landslides and droughts for each related actions		meteo office and other partners doing similar work to develop appropriate contingency plans.
IR3: Resources for health and WASH mobilized and optimized	Cyclones,floods, landslides, heavy rain may affect related interventions	Low	Backup plans in case of urgent surveillance, surveys, assessments must be conducted (safe infrastructure/equipment and logistics). Avoid Research, studies during the cyclonic season. Avoid areas that could potentially be affected by floods/landslides.	Climate Risk Management should be included in surveillance, surveys, and assessments work.	Reinforce collaboration and exchange sessions with other partners doing similar work in the field, also with USAID specialists regarding surveillance, surveys, assessments exercises.

IR 4: Governance, management and leadership for health and WASH strengthened	Cyclones,floods, and landslides may affect related interventions	Low	Avoid trainings/workshops/meetings during the cyclonic season. Avoid areas that could potentially be affected by floods/landslides. Backup plans in case of urgent training must be conducted (safe infrastructure and logistics).	Climate Risk Management culture and mindset should be included in governance, management and leadership modules.	Reinforce collaboration with the national disaster office and meteorology office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/leadership/WASH).
Category 2: Research, studies, surveillance, surveys, assessments					

IR 4: Governance, management and leadership for health and WASH strengthened	Cyclones,floods, landslides, heavy rain may affect related interventions	Moderate	Backup plans in case of urgent surveillance, surveys, assessments must be conducted (safe infrastructure/equipment and logistics). Avoid research, studies during the cyclonic season. Avoid areas that could potentially be affected by floods/landslides.	Climate Risk Management should be included in surveillance, surveys, assessments work.	Reinforce collaboration and exchange sessions with other partners doing similar activity in the field, also with USAID specialists regarding surveillance, surveys, assessments exercises.
Category 3: Small scale rehabilitation excluding WASH					
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased	Cyclones,floods, landslides, heavy rain may affect small scale rehabilitation interventions	Moderate	Small scale rehabilitation should avoid cyclonic periods, heavy rain moments and should not be exposed to landslides and floods risks.	Small scale rehabilitation planning, design, plans and implementation should be well assessed.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce

			Small scale rehabilitation design/plans should be resilient to cyclones/corrosion.		collaboration with other partners doing similar work in the field).
Category 4: Implementation of community health activities excluding WASH					
IR 1: Healthy and care-seeking behaviors and social norms adopted	Cyclones,floods, landslides, heavy rain may affect implementation of community health interventions	Moderate	All logistics related to this work should not be exposed to landslides and floods. The planning should avoid cyclone periods and heavy rain moments.	All logistics related to this work should back up the energy system to ensure activity stability in case of extreme weather risks. Assessment of all equipment and logistics should be effective before and after the rainy season and cyclonic periods.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field.

IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased	Cyclones,floods, landslides, heavy rain and droughts may affect implementation of community health interventions	Moderate	All logistics related to this work should not be exposed to landslides, floods, and should consider droughts/dust infiltration risks. The planning should avoid cyclone periods and heavy rain moments.	All logistics related to this work should back up the energy system to ensure activity stability in case of extreme weather risks. Assessment of all equipment and logistics should be effective before and after the rainy season and cyclonic periods. Assessment of all equipment and logistics should be effective to stabilize temperature for sensitive products, to avoid dust infiltration.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/gender/WASH).

IR3: Resources for health and WASH mobilized and optimized	Cyclones,floods, landslides, heavy rain may affect implementation of community health interventions	Moderate	All logistics related to this work should not be exposed to landslides, floods. The planning should avoid cyclone periods and heavy rain moments.	All logistics related to this work should back up the energy system to ensure activity stability in case of extreme weather risks. Assessment of all equipment and logistics should be effective before and after the rainy season and cyclonic periods.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/gender/WASH)
IR 4: Governance, management and leadership for health and WASH strengthened	Cyclones,floods, landslides, heavy rain may affect implementation of community health interventions	Low	The planning should avoid cyclone periods and heavy rain moments.	Governance, management and leadership thematics should include a Climate Risk Management module	Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/leadership/WASH/CRM).
Category 5: Implementation of Water, Sanitation, and Hygiene activities					

IR 1: Healthy and care-seeking behaviors and social norms adopted	Cyclones,floods, landslides, heavy rain may affect implementation of community health interventions	Low	The planning should avoid cyclone periods and heavy rain moments.	Water, Sanitation, and Hygiene thematics should include a Climate Risk Management module	Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/leadership/WASH/CRM).
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased	Cyclones,floods, landslides, heavy rain may affect implementation of community health interventions	Moderate	The planning should avoid cyclone periods and heavy rain moments. All logistics related to this work should not be exposed to landslides, floods.	All logistics related to Water, Sanitation, and Hygiene interventions should back up the energy system to ensure stability in case of extreme weather risks. Assessment of all equipment and logistics should be effective before and after the rainy season and cyclonic periods. All interventions related to Water, Sanitation, and Hygiene waste management should be protected from floods, cyclones and heavy rain risks.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/gender/WASH)

IR3: Resources for health and WASH mobilized and optimized	Cyclones,floods, landslides,droughts, dust infiltration, extreme events, heavy rain may affect related interventions	Low	The planning should avoid cyclone periods and heavy rain moments. All logistics related to this work should not be exposed to landslides, floods.	All logistics related to this work should back up the energy system to ensure stability in case of extreme weather risks. Assessment of all equipment and logistics should be effective before and after the rainy season and cyclonic periods. Assessment of all equipment and logistics should be effective to stabilize temperature for sensitive products to avoid dust infiltration.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/gender/WASH)
IR 4: Governance, management and leadership for health and WASH strengthened	Cyclones,floods, landslides, heavy rain may affect implementation of community health interventions	Low	The planning should avoid cyclone periods and heavy rain moments.	Water, Sanitation, and Hygiene linked to governance/management/leadership thematics should include a Climate Risk Management module	Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/leadership/WASH/CRM)

Category 6: Commodity procurement and transportation of commodities including ITNs					
IR 1: Healthy and care-seeking behaviors and social norms adopted	Cyclones,floods, landslides,droughts, dust infiltration, extreme events, heavy rain may affect related interventions	Moderate	The planning should avoid cyclone periods and heavy rain moments. All logistics related to this work should not be exposed to landslides, floods.	All logistics related to this work should back up the energy system to ensure stability in case of extreme weather risks. Assessment of all equipment and logistics should be effective before and after the rainy season and cyclonic periods. Assessment of all equipment and logistics should be effective to stabilize temperature for sensitive products to avoid dust infiltration.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/gender/WASH)
IR2 : Availability and accessibility to a continuum of quality health, nutrition and WASH, services increased	Cyclones,floods, landslides,droughts, dust infiltration, extreme events, heavy rain may	Moderate	The planning should avoid cyclone periods and heavy rain moments. All logistics	All logistics related to this work should back up the energy system to ensure stability in case of extreme weather risks. Assessment of all equipment and logistics should be effective before	Reinforce collaboration with the national disaster office and meteo office to help reinforce

	affect related interventions		related to this work should not be exposed to landslides, floods.	and after the rainy season and cyclonic periods. Assessment of all equipment and logistics should be effective to stabilize temperature for sensitive products to avoid dust infiltration.	contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/gender/WASH)
IR3: Resources for health and WASH mobilized and optimized	Cyclones,floods, landslides,droughts, dust infiltration, extreme events, heavy rain may affect related interventions	Low	The planning should avoid cyclone periods and heavy rain moments. All logistics related to this work should not be exposed to landslides, floods.	All logistics related to this work should back up the energy system to ensure stability in case of extreme weather risks. Assessment of all equipment and logistics should be effective before and after the rainy season and cyclonic periods. Assessment of all equipment and logistics should be effective to stabilize the temperature for sensitive products to avoid dust infiltration.	Reinforce collaboration with the national disaster office and meteo office to help reinforce contingency plans and get accurate data. Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/gender/WASH)

IR 4: Governance, management and leadership for health and WASH strengthened	Cyclones,floods, landslides, heavy rain may affect implementation of governance, management and leadership regarding commodity procurement	Low	The planning should avoid cyclone periods and heavy rain moments	Commodity procurement and distribution linked to governance/management/leadership thematics should include a Climate Risk Management module	Reinforce collaboration with other partners doing similar work in the field, also with USAID specialists (governance/leadership/WASH/
	and transportation interventions				CRM).

APPENDICES: REFERENCES AND RESOURCES

- Environmental Mitigation and Monitoring template https://www.usaid.gov/documents/1865/environmental-mitigation-and-monitoring-plan-emmp
- Environmental Mitigation and Monitoring report https://www.usaid.gov/documents/1865/environmental-mitigation-and-monitoring-report-emmr ● 22 CFR 216: http://www.usaid.gov/our_work/environment/compliance/22cfr216 ● ADS 204: Environmental Procedures: http://www.usaid.gov/sites/default/files/documents/1865/204.pdf
- Executive Order13677: Climate-Resilient International Development: https://www.whitehouse.gov/the-press-office/2014/09/23/executive-order-climate-resilientinternational-development, **Climate Change in USAID Strategies , A Mandatory Reference for ADS Chapter 201**
- USAID Sector Environmental Guidelines: https://www.usaid.gov/environmentalprocedures/sectoral-environmental-social-best-practices/sector-environmental-guidelinesresources
- Integrated Vector Management Programs for MalariaVector Control: Programmatic Environmental Assessment (PEA) https://www.pmi.gov/docs/default-source/default-documentlibrary/tools-curricula/integrated-vector-management-programs-for-malaria-vector-controlprogrammatic-environmental-assessment-2017
- Madagascar Supplemental Environmental Assessment for Indoor Residual Spraying for Malaria Control, 2013-2018 : http://gemini.info.usaid.gov/repository/pdf/40038.pdf
- Madagascar National Medical Waste Management Policy https://greenhealthcarewaste.org/wpcontent/uploads/2020/12/Madagascar-National-HCWM-Policy-2018-French.pdf
- Integrated waste management plan https://www.usaid.gov/documents/1865/integrated-wastemanagement-plan-iwmp
- WQAP Guidance : https://www.usaid.gov/environmental-procedures/environmentalcompliance-esdm-program-cycle/special-compliance-topics/water/wqap-africa-guidance-note
- Corrective Action Plan https://www.usaid.gov/documents/1865/corrective-action-plan-cap (for activities that gathers unforeseen environmental impacts, not approved per 22 CFR 216 during implementation reporting and close out)
- Climate Risk Management Plan and Climate Risk Management Report Template
- Environmental Screening Form https://www.usaid.gov/environmentalprocedures/environmental-compliance-esdm-program-cycle/environmentaldocumentation/environmental-and-social-risk-screening/pdf

CLIMATE RISK MANAGEMENT PLAN TEMPLATE (CRMP)

Project/Activity /Sub-Activity	Climate risks	Climate risk rating (low, moderate, high)	Mitigation measures (how to address the climate risks)	Monitoring indicators	Monitoring and Reporting Frequency	Responsible Parties (dedicated staff, COP, COP)
Activity 1 example; workshop	floods/cyclone	moderate-high	scheduling on dry season/select appropriate venu	workshop report, work plan	everytime you organize a site visit.	
Activity 2						
Activity 3						
Activity 4						
Add rows as needed						

CLIMATE RISK MANAGEMENT REPORT TEMPLATE (CRMR)

Project/Activity/Sub-Activity	Mitigation Measure(s), (facing the climate risks identified in the CRMP)	Summary Field Monitoring/Issues/Resolution	Outstanding Issues, proposed resolutions.	Observations, and recommendations
Activity 1				

Activity 2				
Add rows as needed				