



INITIAL ENVIRONMENTAL EXAMINATION

Project/Activity Data

Project/Activity Name:	USAID Bureau of Humanitarian Assistance (BHA) FY22 Request for Applications (RFA) for Resilience Food Security Activities in Haiti
Geographic Location(s) (Country/Region):	Northeast (Nord-Est), Center (Centre), Southern (Sud), and Grand'Anse Departments in Haiti
Amendment (Yes/No)	N
Implementation Start/End Date	Pre-Award, to be determined upon award(s)
Solicitation/Contract/Award Number(s):	
Implementing Partner(s):	To be determined upon award(s)
Link to IEE:	
Link of Other, Related Analyses:	Haiti 118/119, ¹ Haiti Climate Risk Profile , Haiti Resilience IEE , Haiti Mission-wide PERSUAP

Organizational/Administrative Data

Implementing Operating Unit(s): (e.g. Mission or Bureau or Office)	Bureau of Humanitarian Assistance (BHA)
Funding Operating Unit(s): (e.g. Mission or Bureau or Office)	Same as above
Other Affected Operating Unit(s):	USAID/Haiti
Lead BEO Bureau:	Humanitarian Assistance
Funding Account(s) (if available):	Title II
Original Funding Amount:	\$50M, Title II over a five-year period
Prepared by:	Environmental Compliance Support (ECOS) contract
Date Prepared:	September 2020

Environmental Compliance Review Data

Analysis Type:	<input checked="" type="checkbox"/> Initial Environmental Examination	<input type="checkbox"/> Amendment
Environmental Determination(s):	<input type="checkbox"/> Categorical Exclusion(s) <input type="checkbox"/> Negative <input checked="" type="checkbox"/> Positive <input checked="" type="checkbox"/> Deferral	
IEE Expiration Date (if applicable):	2026, End of Awards	
Additional Analyses/Reporting Required:	Implementing Partners to develop Supplemental IEEs	
Climate Risk Rating for Risks Identified:	Low <input checked="" type="checkbox"/> Moderate <input checked="" type="checkbox"/> High <input checked="" type="checkbox"/>	

¹ Still in progress; will be posted to the Environmental Compliance Database.

THRESHOLD DECISION MEMO AND SUMMARY OF FINDINGS

PURPOSE AND SCOPE OF THE INITIAL ENVIRONMENTAL EXAMINATION

The purpose of this RFA-level Initial Environmental Examination (IEE) is to establish environmental compliance procedures and templates² for future awarded activities under the Food for Peace (BHA)³ [Fiscal Year 2022 Request for Application \(RFA\)](#) for Haiti Resilience Food Security Activities.

ACTIVITY SUMMARY

As specified in the RFA, these activities will contribute to the achievement of resilience and economic and social development plans while reducing food insecurity in the target countries. This RFA IEE also addresses COVID-19 22 CFR 216 response elements of BHA programming.

ENVIRONMENTAL DETERMINATIONS AND CLIMATE RISK RATINGS

The table below summarizes the Environmental Determinations and Climate Risk Ratings for activities analyzed in this RFA IEE.

Interventions	22 CFR 216 Environmental Determination	Climate Risk Rating
Commodity Fumigation	Positive Determination	Low, moderate, and high (see CRM table)
Increased use of disinfectants/germicides to minimize COVID-19 transmission.	Negative Determination	Low
Increased use of PPE and support for PPE production to minimize COVID-19 transmission.	Negative Determination	Low and Moderate
Other BHA Activities	Deferral for all other BHA Activities, to be assessed in the Supplemental IEE. Activities which previously qualified as a Categorical Exclusion, but now propose a risk to COVID-19, must be classified as a Negative Determination ⁴ until further notice.	Postponed Assessment, Rating to be assessed along with Supplemental IEE analysis

² Word versions of the required templates can be found at a Google drive [here](#).

³ Please note that per USAID's strategic reorganization, the offices of Bureau of Humanitarian Assistance (BHA) and Foreign Disaster Assistance (OFDA) have now merged into the Bureau for Humanitarian Assistance.

⁴ As new COVID-19 safety protocols are established globally and implemented (e.g., social distancing, virus and antibody testing, contact tracing, etc), this determination may be subject to change.

BEO SPECIFIED CONDITIONS OF APPROVAL

- Condition 1: Applicant to submit Environmental Safeguards Plan.
- Condition 2: Awardee to develop Supplemental IEE for Mission and Washington clearance by the end of the R&I year.⁵
- Condition 3: Awardee to develop and align Environmental Mitigation and Monitoring Plan (EMMP) and Climate Risk Management (CRM) with performance M&E systems.
- Condition 4: Awardee to submit Environmental Status Reports (ESRs⁶) annually before the Pipeline Resource Estimate Proposal (PREP). Additional reporting is reflected in the Annual Results Report (ARR).
- Condition 5: Awardee to develop an Environmental Assessment for any actions with potential for significant impact to ecological habitats, as determined by USAID.
- Condition 6: Awardee to plan for a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP), which includes for pesticide procurement and/or use (e.g. agriculture, livestock, public health, construction), and/or commodity fumigation mitigation requirements.
- Condition 7: Awardee to support the Mission in the development of any Best Practice Review (BPR) for environmental safeguarding.
- Condition 8: Awardee to ensure compliance with partner country environmental regulations, including COVID-19 local and international standards.
- Condition 9: Awardee to plan for management of packaging waste associated with commodity distribution and increased waste streams due to COVID-19.
- Condition 10: Awardee to include awareness of pandemic health risks of activities (e.g., irrigation, roads) that disrupt wildlife habitat and are exacerbated by climate risks in the IEE.

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. Any significant delinquencies and lack of compliance with 22 CFR 216 will result in a [Corrective Action Plan \(CAP\)](#)⁷.

⁵ The Supplemental IEE is subsidiary analysis to the RFA-IEE, and may also be referred to as the “Activity IEE”.

⁶ The ESR is similar to the Environmental Mitigation and Monitoring Report (EMMR) used elsewhere in USAID. However, the ESR meets purposes of annual reporting and budget planning for environmental compliance.

⁷ The CAP is mandatory when a project or activity is found to be noncompliant—e.g., failure to comply with IEE conditions, use of pesticides without a PERSUAP, or failure to follow other ADS 204 procedures. The CAP is initiated by USAID and directed to the Process Owner (e.g., AOR/COR, Mission Director, Implementing Partner).

USAID APPROVAL OF INITIAL ENVIRONMENTAL EXAMINATION

PROJECT/ACTIVITY NAME: USAID Food for Peace (BHA) FY22 Request for Applications Initial Environmental Examination (RFA IEE) for Resilience Food Security Activities in Haiti.

Bureau Tracking ID: BHA FY22 RFA IEE Haiti

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INITIAL ENVIRONMENTAL EXAMINATION

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I.0 ACTIVITY DESCRIPTION

I.1 PURPOSE AND SCOPE 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 USAID interventions described herein and recommend determinations and, as appropriate, conditions, for these activities. Upon approval, these determinations become affirmed, per 22 CFR 216 and BEO Specified Conditions become mandatory obligations of implementation. This RFA-level IEE (herein, "RFA IEE") also includes the RFA-level Climate Risk Management screening results in accordance with USAID policy (specifically, [ADS 201mal](#)).

This RFA IEE is a critical element of USAID's mandatory environmental review and compliance process meant to achieve environmentally sound activity design and implementation. This RFA IEE, cleared by BHA Washington, also establishes the requirements for post-award implementing partners (IPs) to develop their own Supplemental IEEs for Mission clearance and outlines other BEO-specified Conditions for implementation and reporting throughout the life of the awards.

This RFA IEE analyzes the environmental impacts and climate risks related to Commodity Fumigation, and COVID-related activities, given that environmental impacts of and climate risks to these activities are globally consistent. Other activity-types must be analyzed in the partner's Supplemental IEE to ensure the baseline environmental situation is taken into account.

USAID BHA has developed Guidance for [BHA Resilience Food Security Activity Partners Working in COVID-19 Affected Operating Environments](#). However, this guideline was not focused on the environmental compliance issues described within this IEE. These include the environmental impacts associated with increased disinfectant and PPE use, as well as risks associated with habitat encroachment and increased zoonotic disease outbreaks

I.2 ACTIVITY OVERVIEW

The Bureau of Humanitarian Assistance (BHA), in the U.S. Agency for International Development's (USAID) is the U.S. Government leader in international food assistance. Through BHA, USAID supports multi-year development (i.e., non-emergency) food security activities to improve and sustain the food and nutrition security of vulnerable populations. Development activities are mandated in the Food for Peace Act and are aligned with the [USAID 2016-2025 Food Assistance and Food Security Strategy](#)⁸. These activities work at the individual, household, community and systems level to address the underlying causes of chronic and acute food insecurity and strengthen transformative opportunities. USAID also provides emergency food assistance to address needs arising from natural disasters and complex emergencies, which are often characterized by insecurity and population displacement.

Overall, the Strategic Results Framework Strategic Objectives (SOs) and accompanying Intermediate Results (IRs) address key drivers of food insecurity, creating a map of the broad platform of capabilities that BHA and its partners bring to bear in supporting improved food security for vulnerable populations. Implementing partners are expected to use innovative approaches to promote environmental risk management to improve and sustain food and nutrition security of vulnerable populations, as articulated in both SO1 and SO2 of the [USAID 2016-2025 Food Assistance and Food Security Strategy](#).

⁸ Please note that BHA will be developing new strategies. See webpage here: <https://www.usaid.gov/humanitarian-assistance> for updates.

As specified in the RFA, BHA investments in the target BHA geographies⁹ will contribute to USAID's Strategy by strengthening community resilience, protecting and enhancing livelihoods, and improving food and nutritional security of vulnerable households.

I.3 ACTIVITY DESCRIPTION

As described in the RFA, BHA resilience food security activities in Haiti are intended to improve and sustain the food and nutrition security of vulnerable populations. These activities work at the individual, household, community, and institutional levels to address the underlying causes of food insecurity and malnutrition and strengthen transformative opportunities. This includes a focus on improving food access and incomes through agriculture and other livelihoods initiatives; enhancing ecosystem services through natural resources management; combating under-nutrition, especially for children under 2 and pregnant and lactating women; and reducing and mitigating disaster impact through early warning and community capacity building and preparedness activities. RFSAs are intended to strengthen resilience in populations vulnerable to acute, chronic hunger, malnutrition, and recurrent shocks, stresses, and crises, and to reduce extreme poverty.

This RFA IEE covers three main activities types: commodity fumigation, support for increased use of disinfectants/germicides and PPE in response to COVID-19, and support for small and medium enterprises (SMEs) responding to COVID-19. These activities are able to be analyzed at this RFA level given the environmental impacts and climate risks associated with them are applicable globally.

COMMODITY MANAGEMENT: FUMIGATION

BHA makes commodity donations to private voluntary organizations (PVOs) and international organizations (IOs), such as the UN's World Food Program (WFP). The large majority of commodities are purchased from US farmers and shipped abroad from US ports; however, activities can also distribute locally, regionally, internationally procured (LRIP) food commodities as long as the use of LRIP resources clearly supports interventions that sustainably reduce vulnerability to food insecurity.

In order to prevent the spoilage and waste of food commodities procured by resilience food security funds, a range of protective measures are implemented in commodity storage warehouses. One common protective measure to prevent loss of commodity from insect, fungal or mammal infestations is fumigation utilizing phosphine gas and/or the application of contact pesticides to warehouse surfaces.

COVID-RELATED ACTIVITIES

This RFA IEE also covers two activities specifically related to COVID-19 response:

Support for increased use of disinfectants/germicides to minimize COVID-19 transmission. In order to prevent spread of the virus, it is expected that BHA partners will be relying on the increased use of germicides (e.g., disinfectants, sanitizers) to clean surfaces. BHA partners will also be using or supporting the use of increased Personal Protective Equipment (PPE) to minimize the spread of the virus.

Increased use of PPE and support for PPE production to minimize COVID-19 transmission.

⁹ Northeast (Nord-Est), Center (Centre), Southern (Sud), and Grand'Anse Departments in Haiti.

USAID approved the use of program funds to finance the local production of medical-grade and non-medical grade personal protective equipment (PPE), including for small and medium enterprises (SMEs). PPE production includes (but is not limited to) masks, gowns, face shields, protective eyewear, boot covers, linens, and gloves.

OTHER BHA ACTIVITIES AND SECTORS

The exemplary range of sectors which may be supported within these resilience food security activities are listed below and further described in the [FY22 RFA for Resilience Food Security Activities in Haiti](#).

TABLE I: EXAMPLE ACTIVITIES AND SECTORS

Commodity Fumigation
Other BHA Program Areas or Elements
Civil Society
HIV/AIDS
Maternal and child health
Family planning and reproductive health
Water supply and sanitation
Environment
Climate Change - adaptation
Climate Change - clean energy
Nutrition
Basic education
Social assistance
Agriculture
Private sector productivity
Financial sector
Protection, assistance and solutions
Disaster readiness

2.0 BASELINE ENVIRONMENTAL INFORMATION

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

Implementing partners are expected to design their programs to address intervention area-specific biophysical, socioeconomic and cultural conditions, as well as the political and institutional context in which the resilience food security activities will operate. Applicants are expected to draw from existing USAID or other country-level environmental analyses, including USAID climate change vulnerability and adaptation analyses, (which can be found by searching for Haiti in the [Climatelinks](#) resource library), [Haiti-specific reports](#), and [Foreign Assistance Act \(FAA\) 118/119 Biodiversity and Tropical Forestry Assessments](#).

The following sub-sections provide a brief overview of the baseline climate and environmental information, for the sub-national areas of Haiti in the BHA geographic zones in the Northeast (Nord-Est), Center (Centre), Southern (Sud), and Grand'Anse Departments. It is crucial to understand the baseline (the existing environmental situation or condition in the absence of USAID activities) in order to understand and measure the impacts, or change from the baseline, caused by an activity in these regions.

- I. Socio-Economic Overview
- II. Key Geographic Features
 - A. Geography
 - B. Soil & Forests
 - C. Water Resources
- III. Key Ecological Habitats
 - A. Protected Areas
 - B. Wetlands
- IV. Threats
 - A. Environmental Threats Overview
 - B. Invasive Species
 - C. Climate Risks
- V. Pests and PERSUAP
- VI. Other Key Stakeholders

SOCIO-ECONOMIC OVERVIEW

Haiti's environmental crisis is compounded by its socio-economic conditions. Haiti has one of the lowest life expectancies in the world, and is the poorest country in the Western Hemisphere. Haiti continues to experience high infant mortality, and a rapidly growing population with over one-third under the age of 15,¹⁰ and 30% of youth unemployed¹¹ Haiti received a Human Development Index¹² ranking of 169 out of

¹⁰ "Haiti". Encyclopædia Britannica, inc., March 2020. <https://www.britannica.com/place/Haiti/Climate#ref54461>

¹¹ <https://www.statista.com/statistics/812081/youth-unemployment-rate-in-haiti/>

¹² HDI is a measurement showing average achievement in key dimensions of human development: life expectancy, education, and standard of living. For more information see: <http://hdr.undp.org/en/content/human-development-index-hdi>

189 countries in 2019.¹³ Inequality is pronounced in the country, with large geographically disparities. 70% of rural households are chronically poor compared to 20% of households in cities, with the gap continuing to expand.¹⁴

Four-fifths of Haiti's population lives in poverty and three-fifths are under or unemployed. The majority of the population works in the informal sector, with two-thirds of the population working in agriculture. However, agriculture only accounts for one-fourth of GDP. International food imports have undercut local production, with one-fifth of consumed food being imported. This lowers food prices, greatly reducing the income of local farmers.¹⁵ Lack of economic opportunities in more rural areas has led to migration to cities, and Port-au-Prince in particular, with a large percent of this migration being youth.¹⁶

Haiti's once robust natural resources have been depleted due to colonial exploitation, corruption, and unplanned urban and rural development. This lack of planning combined with the growing population has led to increased deforestation, lack of available fertile agricultural land, poor waste management and poor road conditions. During extreme precipitation events, poor road conditions are more susceptible to flooding and turning to mud, contributing to increased flow of waste and water-borne disease, and barriers to accessing markets.

Social and political unrest, along with disaster relief and need for infrastructure projects has led to the postponement of many large-scale reforestation projects and continued high levels of poverty.¹⁷ Hurricane Matthew, which devastated Haiti in 2016, is estimated to have caused damages at 32% of the country's GDP.¹⁸

KEY GEOGRAPHIC FEATURES

GEOGRAPHY

Haiti's area of 27,750 sq km (10,714 sq mi, which includes the islands of Tortuga (La Tortue), Gonâve, Les Cayemites, and La Vache), is categorized as rugged and mountainous, as two-thirds of the country contains mountain ranges.¹⁹ Comprising the western portion of the island Hispaniola, Haiti lies east of Cuba between the North Atlantic Ocean and the Caribbean Sea, with 360 km of border with the Dominican Republic, with another 1,771 km of coastline. The BHA geographic zones of the Northeast, Central, Southern, and Grand'Anse Departments, are four of the ten departments (administrative divisions) of the country. The Central Department has the third largest area of the departments in Haiti, while the Northeast Department is the second smallest. A brief geographic overview of each department within the BHA geographic zones is provided below (see also Figure 1).

¹³ World Bank. "Haiti: Overview". <https://www.worldbank.org/en/country/haiti/overview>

¹⁴ <https://www.worldbank.org/en/news/feature/2014/07/11/while-living-conditions-in-port-au-prince-are-improving-haiti-countryside-remains-very-poor>

¹⁵ "Haiti". Encyclopædia Britannica, inc., March 2020. <https://www.britannica.com/place/Haiti/Climate#ref54461>

¹⁶ <http://documents1.worldbank.org/curated/en/195991468033348282/pdf/wps4110.pdf>

¹⁷ "Haiti". Encyclopædia Britannica, inc., March 2020. <https://www.britannica.com/place/Haiti/Agriculture-forestry-and-fishing>

¹⁸ World Bank. "Haiti: Overview". <https://www.worldbank.org/en/country/haiti/overview>

¹⁹ "The Geology of Haiti". Army Geospacial Center, 2010. <https://apps.dtic.mil/dtic/tr/fulltext/u2/a528274.pdf>.

1. The **Central (Centre) Department** (3,487 km²) contains two mountain ranges, as well as two plains. The Plateau Central (Central Plateau) is thirty kilometers wide, running eighty-five kilometers from southeast to northwest. The Centre department is the only land-locked department, partially bordered by the BHA zone of the Northeast department, and the Dominican Republic to the east. The Central Department contains the second largest lake in the country, Lake Peligre, which was artificially created from the Peligre Dam.
2. The **Southern (Sud) Department** (2,654 km²) is partially bordered by the Gran'Anse Department to the north, and the Caribbean Sea. This department contains the Massif de la Hotte, and the Plaine of the South, a natural depression, and the mountainous southern peninsula which is an extension of the Sierra de Baoruco mountain chain from the Dominican Republic.²⁰
3. The **Grand'Anse Department** (1,912 km²) is on the western-most point of the country, bordered partially by the Caribbean Sea and the Southern Department. The Grand'Anse includes the mountain range Massif de la Hotte, which also extends into the Southern Department.
4. **The Northeast (Nord-Este) Department** (1,623 km²) is partially boarded by the Atlantic Ocean, the Centre Department, and the Dominican Republic. This department includes the Massif du Nord (Northern Massif) mountain range, numerous savannas in the north, and the Plaine de North (Northern Plain). The mountainous terrain in Haiti provides important habitats for flora and fauna, but also carries unique climate risks (described further below).

SOIL & FORESTS

Haitian soil fertility and fragility is largely at risk due, in part, to extensive deforestation throughout the country.²¹ While 6% of Haiti's land areas is considered severely eroded,²² over 50% of the country is affected by erosion, across all BHA zones, leading to decreased agricultural yields, fragmented land ownership, increased flooding, and degraded coastal resources due to sediment deposits.²³ Deforestation, the leading cause of this extensive erosion, is widespread across the country, resulting in only 1.5%-2% of forest cover remaining in the country. This leads to increased flooding and decreased biodiversity. Exact data for deforestation and erosion in each department is varying due to the differentiation in studies of naming areas based on departments or general areas, and the changing of departments from nine to 10 in the early 2000s. The use of charcoal for cooking is a large contributor to deforestation. A survey from 2014 conducted in Grand'Anse found that around 6,000 bags of charcoal per day leave the department, equating to around 372,000 kg of wood.²⁴ The Centre Department has increased the amount of charcoal it provides to Port-au-Prince, from 2.3% in 1985 to 20.3% in 2016.²⁵ Hurricane Matthew's devastation to

²⁰ Country Studies, 2017. <http://countrystudies.us/haiti/19.htm>

²¹ USAID/Haiti Environment & Natural Resources Management Fact Sheet. January 2020.

https://www.usaid.gov/sites/default/files/documents/1862/USAID_Haiti_Environment_Fact_Sheet_-_January_2020.pdf

²² FAO, Action Against Desertification, 2020. <http://www.fao.org/in-action/action-against-desertification/countries/caribbean/haiti/en/>

²³ USAID/Haiti Environment & Natural Resources Management Fact Sheet. January 2020.

https://www.usaid.gov/sites/default/files/documents/1862/USAID_Haiti_Environment_Fact_Sheet_-_January_2020.pdf;

²⁴ "South Department Forest Energy Supply Chains". UNEP Haiti, September 2016.

https://postconflict.unep.ch/publications/Haiti/Haiti_Charcoal_report_EN_WEB.pdf.

²⁵ "Charcoal in Haiti". World Bank. 2018.

<http://documents1.worldbank.org/curated/en/697221548446232632/pdf/134058-CharcoalHaitiWeb.pdf>

Haiti's remaining forests, impacted the Sud and Grand Anse Departments most. One study found over 50% of trees felled by the hurricane in these departments were mango, coconut, and breadfruit trees.²⁶

WATER RESOURCES

While water stress levels in Haiti are considered low to medium²⁷ and groundwater resources are abundant, access to clean water and adequate sanitation remains a major concern across the country. These WASH concerns are contributed to by the lack of consistent or high yielding aquifers which are at increasing risk of saltwater intrusion, contamination, and reduced recharge due to population growth and climate change.²⁸ There are 11 primary drainage basins that are responsible for providing the water supply to Haiti, including the Grande Anse River. Due to the mountainous geography of the country, these basins are fed from typically short and interweaving streams bringing water from the mountains. These rivers and watershed areas are prone to flash flooding, which will continue to increase in risk due to climate change.

Haiti primarily relies on rainwater for its water supply, including around 92% of its agriculture.²⁹ Around 65.5% of the population is using basic drinking water services,³⁰ and only 34.7% of the population is using basic sanitation services.³¹ Increased flooding events coupled with the under-developed waste management system, has increased the risk of water-borne diseases. Climate change is expected to further impact WASH concerns across Haiti largely because of increased risk of water-borne diseases, and reduced availability of clean drinking water due to increased drought, and extreme rainfall.³² In addition, the 2010 earthquake destroyed many sanitation services and infrastructure, exacerbating an already serious problem in public service delivery.

²⁶ "Charcoal in Haiti". World Bank. 2018.

<http://documents1.worldbank.org/curated/en/697221548446232632/pdf/134058-CharcoalHaitiWeb.pdf>

²⁷ "Country Rankings". World Resources Institute. <https://wri.org/applications/aqueduct/country-rankings/?country=HTI>

²⁸ James K. Adamson, Gérald Jean-Baptiste, W. Javan Miner, 2016. "Summary of groundwater resources in Haiti", Geoscience for the Public Good and Global Development: Toward a Sustainable Future, Gregory R. Wessel, Jeffrey K. Greenberg. <https://pubs.geoscienceworld.org/books/book/688/chapter/3808567/Summary-of-groundwater-resources-in-Haiti>

²⁹ World Bank, Climate Knowledge Portal, 2020.

<https://climateknowledgeportal.worldbank.org/country/haiti/impacts-water>

³⁰ FAOSTAT, Selected Indicators, 2020. <http://www.fao.org/faostat/en/#country/93>

³¹ FAOSTAT, Selected Indicators, 2020. <http://www.fao.org/faostat/en/#country/93>

³² Climate Risks To Food Security In Food For Peace Geographies Haiti, July 2019.

https://www.climatelinks.org/sites/default/files/asset/document/2020_USAID_FFP-CRP-Haiti.pdf

KEY ECOLOGICAL HABITATS

The four BHA geographic zones (out of ten departments in Haiti) contain ecosystems that serve as important sources of biodiversity. See Figure I, which shows the districts targeted by BHA activities, and their proximity to protected areas.

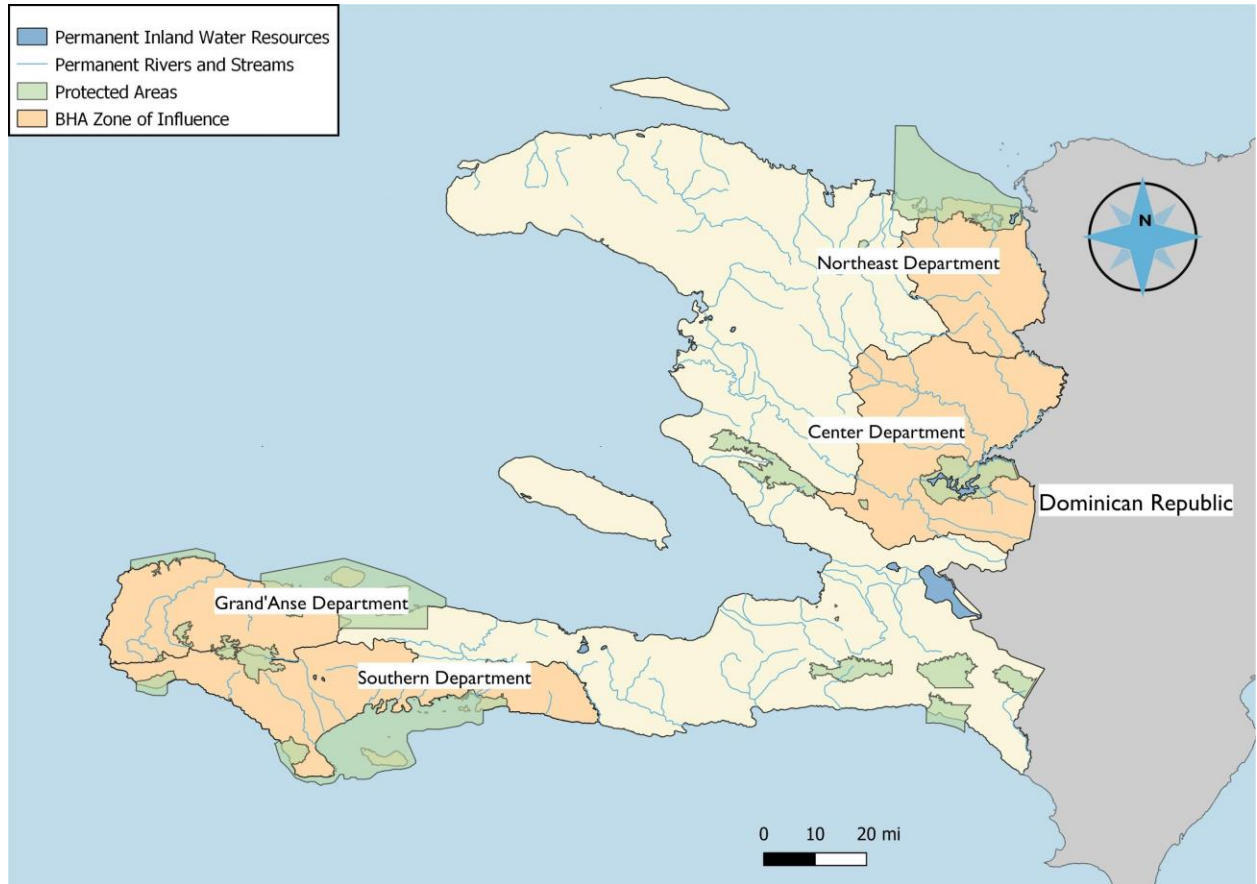


Figure I. BHA geographic zones and proximity to protected areas^{33*}

**Specific orientation within BHA Geographies to be determined*

Ecosystem services provide vital benefits to communities, such as water provisioning, carbon sequestration, and flood prevention. Healthy and well-managed ecosystems play an important role in enhancing the resilience of communities to shocks.³⁴ According to the [Journey to Self-Reliance](#) FY 2019 Country Roadmap for Haiti, Haiti receives a score of 0.01 out of 1 for Biodiversity and Habitat Protection,

³³ Haiti Inland Water Resources. Digital Chart of the World. Downloaded 8 June from <http://www.diva-gis.org/gData/>.

Haiti Administrative areas (boundaries). GADM, version 1.0. Downloaded 8 June from <http://www.diva-gis.org/gData/>.
Haiti, Latin America & the Caribbean. World Database of Protected Areas. Downloaded 8 June from <https://www.protectedplanet.net/country/HT>.

Flanders Marine Institute (2018). IHO Sea Areas, version 3. Available online at <https://www.marineregions.org/>
<https://doi.org/10.14284/323>

³⁴ More information can be found here:

https://www.usaid.gov/sites/default/files/documents/1860/USAID_ES_Factsheet_Final_1May2018.pdf.

or least advanced globally.³⁵ This metric is drawn from the [Yale University/Columbia University Center for International Earth Science Information Network \(CIESIN\) Environmental Performance Index \(EPI\)](#) to evaluate a country's performance in habitat conservation and species protection. The score relates to the degree to which a country's laws, policies, actions, and informal governance mechanisms - such as cultures and norms - support progress towards self-reliance. It measures the extent of marine protected areas, terrestrial biome protection (weighted for both national and global scarcity), representativeness of protected areas, and whether protected areas cover the ranges and habitats of critical species. For more information see USAID's [Factsheet](#). Haiti's protected areas network is made up of valuable ecosystems, including wetlands and national parks.

PROTECTED AREAS

BHA geographic zones include numerous key protected areas in Haiti and BHA projects must pay particular attention to these areas. There are currently 20 protected areas in Haiti, including 15 national parks, and three managed natural resource protected areas,³⁵ covering 7.14% of Haiti's land, and 1.46% of its marine area.³⁶ However, it is evaluated that less than 0.5% of land is effectively protected.³⁷ Among others, the major protected areas in the RFSA geographic zones include the Massif de la Hotte, Three Bays Marine Protected Area, the Port Salut-Aquin, Baradères-Cayemites, the Les Trois Baies National Park, and the Zone Reservée Péligre National Park.³⁸

The Massif de la Hotte, in the southeast of Haiti (including running through the Grand'Anse Department), is the most biodiverse region of the country and is part of UNESCO's Man and Biosphere Reserve Network as of 2016. The Macaya National Natural Park lies within this mountain range and is a key protected area, as it contains the last primary forest in the country is a main freshwater source (receiving around 4000 cubic millimeters of rain each year).³⁹ and is considered a biodiversity hotspot, hosting many endemic species due to the wide climatic range. La Hotte also contains six mountain ranges, as well as mangroves and marine ecosystems. The Macaya National Natural Park is protected by the Macaya Management Plan.⁴⁰

³⁵ Convention on Biological Diversity, Fifth National Report - Haiti, 2016. <https://www.cbd.int/doc/world/ht/ht-nr-05-fr.pdf>

³⁶ UNEP-WCMC (2020). Protected Area Profile for Haiti from the World Database of Protected Areas, August 2020. Available at: www.protectedplanet.net

³⁷ "Haiti Biodiversity and Tropical Forest Assessment". [https://usaidegms.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20\(1\).pdf](https://usaidegms.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20(1).pdf)

³⁸ "Protected Areas". Protected Planet, 2020. <https://www.protectedplanet.net/search?country=Haiti&designation=National+Park&main=country>

³⁹ "Macaya National Park: Preserving one of Haiti's key natural sanctuaries". UN Environment Program, August 2017. <https://www.unenvironment.org/news-and-stories/story/macaya-national-park-preserving-one-haitis-key-natural-sanctuaries>

⁴⁰ "Biodiversity and Protected Areas". UN Environment Program, 2020. <https://www.unenvironment.org/explore-topics/disasters-conflicts/where-we-work/haiti/biodiversity-and-protected-areas>

Port Salut-Aquin was Haiti's first Marine Protected Area in Southern Haiti by a decree in 2013, containing over 1,000 km² of terrestrial and marine territory. The Three Bays Marine Protected Area, also designated by decree in 2013, is Haiti's second Marine Protected Area, located in Northeastern Haiti.⁴¹

The Baradères-Cayemites is a Marine Protected Area and Managed Natural Resources Protected Area in Grande'Anse with 441 km² of marine area and 887 km² in total including terrestrial area. While this area is protected< some resource extraction activities are allowed>

The second most biodiverse region, and a newly protected area, is the Massif de la Selle, containing the highest peak in the country, 'Pic la Selle' (2684 m).⁴² This biosphere reserve was brought together with the Jaragua-Bahoruco-Enriquillo biosphere reserve in the Dominican Republic in 2017 in hopes to improve environmental management.

WETLANDS

Mangroves are an essential and disappearing ecosystem both in Haiti and around the world. Mangroves provide critical ecosystem services such as protecting coastal towns from heavy winds and waves, filtering water, housing hundreds of species, and providing key fishing grounds for the tens of thousands of fishermen in Haiti.⁴³ However mangroves have been increasingly exposed to harmful plastics and waste over the past twenty years in part due to an increased number of landfills around the country, and the lack of waste management or sewer systems in Port-au-Prince.⁴⁴

The estimated 134-225 km² of mangroves in Haiti are most prominent in the Northeast and Southern departments including: Fort Liberte and Caracol of the Northeast department; the Artibonite estuary and Gonaives in the Artibonite department; and Les Cayes and Ile à Vache island in the Southern department. The northern mangals form part of the Critical Endangered Greater Antilles ecoregion.⁴⁵

Seagrass beds and coral reefs are also important wetland ecosystems distributed along the coastal zones of Haiti. For more information on biodiversity and marine debris in Latin America and the Caribbean, see [this USAID white paper](#). In addition, mangrove areas are being cleared for charcoal creation. The consequence of deforestation on mangroves leads to increased siltation, significantly threatening marine diversity and fisheries and reduced protection against extreme weather.

⁴¹ "Legal Framework for Marine Protected Area Enforcement in Three Bays National Park, Haiti: Challenges and Opportunities" 2018. <https://www.eli.org/sites/default/files/eli-pubs/legal-framework-mpa-enforcement-haiti-country-profile.pdf>

⁴² "La Selle - Jaragua-Bahoruco-Enquirillo Transboundary Biosphere Reserve (Dominican Republic / Haiti)". UNESCO, June 2017. <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/latin-america-and-the-caribbean/dominican-republichaiti/la-selle-jaragua-bahoruco-enquirillo/>

⁴³ "Mangroves, the biological link between environmental protection and economic development". IADB, October 2018. <https://blogs.iadb.org/sostenibilidad/en/mangroves-biological-link-environmental-protection-economic-development/>

⁴⁴ "Managing waste to protect Haiti's mangroves". UN Environment Program, October 2017.

"<https://www.unenvironment.org/news-and-stories/story/managing-waste-protect-haitis-mangroves>

⁴⁵ "Haiti". UNDP. 2015. https://info.undp.org/docs/pdc/Documents/HTI/PID_90545_EBA_PRODUC_2015.pdf

While Haiti is currently not a signatory to the RAMSAR Convention, there are several regulatory structures that include legal instruments for the protection of wetlands and marine environments. These protections include the 2006 Decree on the Environment which bans pollution substances in marine waters, and the Fisheries Decree of 1978 which bans fishing activities that may disrupt the reproduction of fish.⁴⁶

THREATS

ENVIRONMENTAL THREATS OVERVIEW

Haiti is currently facing a serious environmental crisis. The principal threats to Haiti's biodiversity stem from 1) increased vulnerability to extreme weather events and changes in rainfall; 2) deforestation and degradation of habitats including overexploitation of fisheries resources and mangrove areas; 3) rapid population growth leading to increased pollution, poor waste management and fragmentation of habitats; and 4) weak institutional and financial capacity to manage protected areas. Protecting key ecological processes and providing refuge for flora and fauna is important for counteracting the above threats. The combination of lack of solid waste management, poor road infrastructure, and increasing flooding risks will continue to lead to contamination of water supplies, disease, and degradation of coastal ecosystems. However, the protected areas systems in Haiti are increasingly degraded and therefore continue to be at risk to these threats. Haiti's 80% poor population, women, and youth are disproportionately affected by these environmental threats, as they have less resources to adapt, women tend to collect water and firewood which will be disrupted, and other systemic inequalities.

The coastal areas, particularly in the south, are largely threatened by mangrove and coastal tree deforestation for wood energy, whereas in the buffer zone of the Macaya National Natural Park, deforestation is largely driven by tree species including pine, for wood planks.

Haiti is at risk of losing over 50% of its species by 2035 due to deforestation,⁴⁷ including the majority of its endemic species.⁴⁸ Population growth has led to fertile lands being used for informal housing, with agriculture encroaching onto steeper landscapes which are less fertile and rarely terraced, increasing risk of erosion.⁴⁹ Land tenure issues are complicated in Haiti, with poorly defined land use strategies.⁵⁰ One-fifth of the land is suitable for agriculture, however over twice that area is under cultivation.⁵¹

INVASIVE SPECIES

⁴⁶ <https://www.eli.org/sites/default/files/eli-pubs/legal-framework-mpa-enforcement-haiti-country-profile.pdf>

⁴⁷ Miller, Perry. "Deforestation could wipe out over 50 percent of species in Haiti". January 2019.

<https://inhabitat.com/deforestation-could-wipe-out-over-50-percent-of-species-in-haiti/>

⁴⁸ Hedges, S. B., Cohen, W. B., Timyan, J., & Yang, Z. (2018). Haiti's biodiversity threatened by nearly complete loss of primary forest. Proceedings of the National Academy of Sciences, 201809753. Available at:

<https://news.mongabay.com/2018/11/haiti-may-lose-all-primary-forest-by-2035-mass-extinction-underway/>

⁴⁹ Wilson Center, Environmental Vulnerability in Haiti, 2006. <https://www.wilsoncenter.org/event/environmental-vulnerability-haiti>

⁵⁰ Environment Fact Sheet, USAID, 2017. https://2012-2017.usaid.gov/sites/default/files/documents/1862/FINAL_Environment_Fact_Sheet_March_2017.pdf

⁵¹ "Haiti". Encyclopædia Britannica, inc., March 2020. <https://www.britannica.com/place/Haiti/Agriculture-forestry-and-fishing>

Invasive species in Haiti are often highly adaptable and can respond to rising temperatures and variable climate conditions. Humanitarian assistance initiatives to support agriculture may inadvertently promote invasive species expansion to the detriment of land productivity, biodiversity and ecosystem function. The potential impacts of invasive species in regions where BHA is active need to be addressed with priority in order to avoid economic damage and costly removal efforts.

BHA projects are specifically prohibited from using USAID support for promotion of any invasive species. The 40+ non-native species that have been introduced to Haiti have rapidly expanded their range, resulting in negative (and also some positive) effects on ecosystems and native biodiversity, including damage to crops^{52,53} Some examples of these invasive species are:

- The invasive house mouse (*Mus musculus*), destroys crops and consumes contaminated food.⁵⁴
- *Bidens pilosa* is an herb that threatens crops and native fauna.⁵⁵
- The fire ant (*Solenopsis geminata*) can also damage crops as it promotes honeydew-producing insects.

As is evident by Haiti's low Biodiversity and Habitat protection score, all BHA projects will need to pay particular attention to the barriers to environmental protection and incorporate mitigation efforts into their project planning. Projects should align with Haiti policy which has been put in place to help mitigate invasive species expansion and biodiversity protection. These policies include their Nationally Determined Contribution which prioritizes developing the bioeconomy and integrated management, and the National Biodiversity and Action Plan (NBSAP) which prioritizes controlling invasive foreign species through promoting awareness and identifying needs and priorities to address threats from invasive species.⁵⁶

CLIMATE RISKS

According to the Global Climate Risk Index of 2017, Haiti is the third most vulnerable country in the world to climate change, driven by recurring extreme climate events impacting food systems, government capacity, population growth, poverty, and history of armed conflict.⁵⁷ The largest drivers of Haiti's vulnerability to climate change are deforestation and land degradation, geography, weak institutional capacity and poverty.⁵⁸ Additional information on climate risks to Haiti can be found in the USAID 2020 Haiti [Climate Risk Profile](#) (CRP). The data in the CRP provides a broad overview of climate risk to BHA

⁵² UCN ISSG. n.d. Invasive species in Haiti.

<http://issg.org/database/species/search.asp?st=sss&sn=&rn=Republic%20of%20Haiti&ri=18996&hci=-1&ei=-1&fr=1&sts=&lang=EN>

⁵³ IUCN ISSG. n.d. Invasive species in Haiti.

<http://issg.org/database/species/search.asp?st=sss&sn=&rn=Republic%20of%20Haiti&ri=18996&hci=-1&ei=-1&fr=1&sts=&lang=EN>

⁵⁴ USAID & USDA Forest Service. 2010. Haiti Biodiversity and Tropical Forest Assessment.

[https://usaidegms.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20\(1\).pdf](https://usaidegms.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20(1).pdf)

⁵⁵ USAID & USDA Forest Service. 2010. Haiti Biodiversity and Tropical Forest Assessment.

[https://usaidegms.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20\(1\).pdf](https://usaidegms.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20(1).pdf)

⁵⁶ Convention on Biological Diversity, Haiti, 2020. <https://www.cbd.int/nbsap/search/>

⁵⁷ Germanwatch. 2017. Global Climate Risk Index 2017. Available at

<https://germanwatch.org/sites/germanwatch.org/files/publication/16411.pdf>

⁵⁸ "National Adaptation Plans in focus: Lessons from Haiti". UNDP, February 2018. https://www.adaptation-undp.org/sites/default/files/resources/haiti_nap_country_briefing_final_online.pdf

sectors, but more detailed and localized data may be required for program activity and/or engineering design.

Temperature. Haiti has a tropical climate, with a typical daily temperature range of 18°C to 29°C (66°F to 82°F) in the winter and 22°C to 32°C (72°F to 90°F) in the summer. The Southeast, West, Central, and Northeast departments are generally classified as equatorial savannah, while the northwestern and southwestern departments are generally classified as equatorial rainforest. The northwestern edge of Grande’Anse is classified as an equatorial monsoon climate. According to the USAID Climate Risks and the [Climate Change Knowledge Portal](#), temperatures are expected to increase substantially over the next decade, with an annual average increase of 0.5°C–0.7°C by 2030, and 0.9°C–1.4°C by 2050, and increased yearly number of hot days and nights.⁵⁹

Rainfall. The country experiences two rainy seasons, the first from April to June and a second from August to November. Annual rainfall varies substantially between departments and livelihood zones, ranging from 400 millimeters (mm) in dry coastal regions (zone 01) to 2,000 mm in the southwestern coast (zone 08), with most regions receiving between 800 and 1,500 mm/year.⁶⁰ Variations in precipitation between years are largely affected by El Niño and La Niña events; the former is associated with drier, hotter, conditions, while the latter is associated with wetter, cooler, conditions.⁶¹ Hurricane season typically lasts from June to November, bringing intense rainfall leading to flash flooding. Haiti has been hard hit by six hurricanes over the past 30 years, including Hurricane Matthew in 2016, which caused much devastation, and contributed to drastic deforestation as described above. The combination of increasingly extreme weather events and widespread deforestation also increases the frequency of landslides throughout the country.⁶² Gran’Anse is one of the hardest hit regions for extreme rainfall, and the capital Port-au-Prince largely lies on flood plains making its inhabitants especially vulnerable to flooding.^{63,64} The BHA geographic low plains (West and Artibonite departments) and coastal zones (Southern and Grande’Anse departments) are particularly vulnerable to flood events.⁶⁵ Sea levels are expected to rise by up to 0.40 meters over the next decade.

The Northwest, Artibonite, Northeast, Central, and West departments have historically been experiencing frequent, recurring drought due to a combination of erratic rainfall patterns and limited water management infrastructure.⁶⁶ Droughts are projected to increasingly affect the Northeast,

⁵⁹ <https://climateknowledgeportal.worldbank.org/country/haiti>

⁶⁰ USAID and FEWS NET. 2018. Haiti: Staple Food Market Fundamentals. <https://reliefweb.int/report/haiti/haiti-staple-food-market-fundamentals-march-2018>

⁶¹ USAID and FEWS NET. 2018. Haiti: Staple Food Market Fundamentals. <https://reliefweb.int/report/haiti/haiti-staple-food-market-fundamentals-march-2018>

⁶² “Haiti - Vulnerability”. World Bank, 2020. <https://climateknowledgeportal.worldbank.org/country/haiti/vulnerability>

⁶³ “Haiti: Flash Appeal October 2016”. OCHA, October 2016. <https://reliefweb.int/report/haiti/haiti-flash-appeal-october-2016>

⁶⁴ <https://climateknowledgeportal.worldbank.org/country/haiti/vulnerability>

⁶⁵ USAID, Climate Risks in Food For Peace Haiti (Procurement Sensitive), 2019.

⁶⁶ World Bank. 2019. Climate Change Knowledge Portal: Haiti Impacts: Agriculture. <https://climateknowledgeportal.worldbank.org/country/haiti/impacts-agriculture#>

Northwest, Central, and West departments.⁶⁷ Overall, over the next decade, annual rainfall is expected to decrease by 68 mm, with rainfall becoming more intense during the rainy season⁶⁸

Extreme weather events. The combination of increasingly changing climate and rainfall, political instability, and economic conditions, are leading to increased food insecurity. Climate hazards, such as increased drought and shorter rainy seasons, threaten to impact crop production, erode soil, damage crops, and lead to malnutrition. Since the 1970s, the intensity of tropical storms in the North Atlantic have increased, and are projected to continue increasing driven by higher peak winds and lower central pressure. Over 96% of the population in Haiti are exposed to these increasing environmental climate changes including hurricanes and floods.⁶⁹ The 2010 earthquake also severely damaged Haiti's agriculture irrigation infrastructure.⁷⁰ Within the BHA geographic zones, livelihoods are largely agriculture-based, and the changes in rainfall and extreme weather events will continue to contribute to the structural food insecurity the country faces. These climate predictions outline a grim future particularly for the Haitian agricultural economy.

Additional information on Haiti's climate baseline and the projected impacts of climate change on food security can be found in the USAID Climate Risks in BHA Geographies-Haiti, which will be uploaded on the [USAID Country Website](#) as well as [Climatelinks.org](#). All relevant threats should be considered by implementing partners in their Supplemental IEEs.

PESTS & PERSUAPS

Pests and crop diseases are a large contributing factor in the lack of agricultural productivity across Haiti. Some of the most widespread pests include locusts, predatory birds, caterpillars attacking cacao, maize and beans, maracas attacking tubers and maize, and diseases like the black sigatoka fungus, attacking banana plantations.⁷¹ Throughout the country, pesticide use is most common in the Mirebalais, Cul-de-Sac and Matheux Corridors due to its wide availability.⁷² However, throughout the country, generally, pesticide, fertilizer or production infrastructure use by farmers is low, largely due to lack of resources to obtain inputs.⁷³ Additionally, those that use pesticides often do not have the resources or access to information to properly protect themselves from the risks, such as using protective equipment when spraying.⁷⁴ Between 2005 and 2008, according to research conducted by the Ministry of the Environment, national-level agricultural pesticide use was 700 to 900 metric tons/year. The continued abuse of pesticides is

⁶⁷ https://www.climatelinks.org/sites/default/files/asset/document/2020_USAID_FFP-CRP-Haiti.pdf

⁶⁸ https://www.climatelinks.org/sites/default/files/asset/document/2020_USAID_FFP-CRP-Haiti.pdf

⁶⁹ <https://www.worldbank.org/en/country/haiti/overview>

⁷⁰ <https://climateknowledgeportal.worldbank.org/country/haiti/impacts-water>

⁷¹ IPC. 2019. IPC Country Maps: Haiti Chronic Food Insecurity Situation, October 2015–2018/20 and Haiti Acute Food Insecurity Situation, October 2018–February 2019. <http://www.ipcinfo.org/ipc-countryanalysis/country-maps/compare-maps/en/?mapid=1151865,459668>

⁷² FEWS NET. 2015. Haiti Rural Livelihood Profiles. <http://fewsn.net/sites/default/files/documents/reports/HaitiLH-profiles-2015-04.pdf>

⁷³ USAID and FEWS NET. 2018. Haiti: Staple Food Market Fundamentals. <https://reliefweb.int/report/haiti/haiti-staple-food-market-fundamentals-march-2018>

⁷⁴ Programmatic Environmental Assessment, Feed the Future, Haiti, 2015.

⁷⁵ https://www.climatelinks.org/sites/default/files/asset/document/2020_USAID_FFP-CRP-Haiti.pdf

⁷⁶ USAID/Haiti Mission-Wide Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP), 2010. <https://www.usaidgems.org/Workshops/Haiti2014Materials/Reference%20Documents/02%20PERSUAP%20English.pdf>

causing pest resistance and further complicates the phytosanitary conditions in the country. Further, the absence of strong legal frameworks to enforce international standards on pesticide use, along with lack of formal distribution and marketing networks has led to increased negative impacts on human, animal, and ecosystem health.⁷⁵

Currently, 5.4 million Haitians are undernourished, largely in part to the low agricultural productivity.⁷⁶ Climate change is expected to increase this agricultural need for pesticides due to increased geographic ranges for both pests and diseases, and their increased population growth, coupled with increased drought, reduced soil fertility, and runoff from extreme rainfall.⁷⁷ For a more complete list of these climate risks on pesticide use, see Haiti's BHA Climate Risk Profile, which will be posted to BHA's [Environmental Safeguard Guidance and Resource page](#).

The Decret Gestion de l'Environnement of 2005 provides for the registration and control of pesticides under the responsibility of the Ministry of Agriculture. This decret requires pesticide registration on the basis of effectiveness, human safety, and non-target organisms and the environment (Articles 99, 122, and 125).⁷⁸ [Haiti's Mission-wide PERSUAP](#) (Pesticide Evaluation Report and Safer-Use Action Plan) was developed in 2016 and will expire on April 30th, 2021. This PERSUAP covers all active USAID programs.

OTHER KEY STAKEHOLDERS

There are many humanitarian assistance stakeholders currently working in Haiti, including non-RFSA USAID Partners. For example, USAID/Haiti has a resilience program⁷⁹ that is focused on mapping targeted resilience zones, increasing economic opportunity for vulnerable households, and improving community infrastructure and stewardship of productive land.

Non-USAID stakeholders include the Global Environment Facility (GEF) Agencies, The World Bank, United Nations Development Programme (UNDP), Inter-American Development Bank, FAO, EU, Inter-American Development Bank (IDB), and United Nations Environment Programme (UNEP). The GEF currently has 29 ongoing projects in Haiti totalling \$174.9 million with an additional \$382.4 million in co-financing.⁸⁰ Also of note, though not in a BHA zone, the World Bank is implementing a COVID-19 Response and Resilience Development Policy Operation in Artibonite through 2022.

⁷⁵Pest and Pesticide Management Plan, Government of Haiti, November 2017.

http://agriculture.gouv.ht/view/01/IMG/pdf/pgpp_tpr_version_final-2.pdf

⁷⁶ <http://www.fao.org/faostat/en/#country/93>

⁷⁷ Deutsch, C. A., Tewksbury, J. J., Tigchelaar, M., Battisti, D. S., Merrill, S. C., Huey, R. B., & Naylor, R. L. 2018. Increase in crop losses to insect pests in a warming climate. *Science*, 361(6405), 916–919. 44 Ziska, L., Bradley, B., Wallace, R., Barger, C., LaForest, J., Choudhury, R., ... & Vega, F. 2018. Climate Change, Carbon Dioxide, and Pest Biology, *Managing the Future: Coffee as a Case Study*. *Agronomy*, 8(8), 152

⁷⁸Julio Guzmán, Haiti EIA Report, 2016, https://agriculture.gouv.ht/view/01/IMG/pdf/sisalco_eia_haiti_20161004-2.pdf

⁷⁹ The IEE for the Resilience Program can be found here: <https://ecd.usaid.gov/repository/pdf/52182.pdf>

⁸⁰ Global Environment Facility, "Haiti", 2020. <https://www.thegef.org/country/haiti>.

Select current ongoing World Bank⁸¹ projects in BHA zones of influence include:

Project	Budget	Dates	Location	Objective
Haiti Rural Accessibility & Resilience Project	\$75M	May31 2018-Jun 28 2024	Centre, Southern, Grand'Anse	To (i) increase all-weather road access in selected sub-regions; and (ii) improve the resilience of selected segments of the road network.
AF Haiti Rural Accessibility & Resilience Project	\$33M	June 18 2020 - TBD	Centre, Northeast	
Strengthening Primary Health Care and Surveillance in Haiti	\$55M	May 16 2019 - Dec 31 2024	Centre, GrandAns, Northeast	To increase utilization of primary health care services in selected geographical areas, and strengthen surveillance capacity especially for cholera.
Haiti: Renewable Energy for All	\$20M	Oct 25 2017 to Dec 31 2024	Centre, Grand Anse, Southern	To scale-up renewable energy investments in Haiti in order to expand and improve access to electricity for households, businesses, and community services.
Disaster Risk Management and Reconstruction Additional Financing	\$20M	June 8 2017 - TBD	Southern	To support the Recipient in improving disaster response capacity and enhancing the resiliency of critical transport infrastructure.

While there are thousands of NGOs working in Haiti, key stakeholders include World Vision, World Concern, and Action Against Hunger.⁸²

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

The principal framework for environmental management in Haiti is established by the 1987 Constitution of Haiti, updated in 2012. Article 52-1(h) of the Constitution states: “Civic duties are the citizen’s moral,

⁸¹ World Bank, 2020. <https://maps.worldbank.org/>

⁸² Haiti Aid Map, 2020. <https://haiti.ngoaidmap.org/>

political, social and economic obligations as a whole to the State of the country.” One of these obligations includes “to respect and protect the environment”. Articles 245 to 252 of Chapter 1 of the Constitution focus on economics and agriculture, while Articles 253 to 258 of Chapter 2 of the Constitution, addresses environmental topics, including, flora, fauna, energy, and waste.⁸³

Haiti has a longstanding list of environmental laws, decrees, and order, however, has limited capacity to enforce environmental compliance on the national, regional, and local levels. These hundreds of laws include the following protections and considerations: Soil Resources, Water Resources, Trees and Forests, Fishing, Hunting, Protected Areas, Land Management, Energy and Mines, Natural Heritage and History, Agriculture, and Public Health. Haiti’s government effectiveness is ranked 0.09 out of 1 according to USAID’s Roadmap.⁸⁴ The civil unrest and economic challenges Haiti faced in 2018 and 2019 have further hindered the governments’ ability to improve development.⁸⁵

There are many institutions engaged in various ways with environmental management for projects in Haiti. However, for the purposes of the BHA projects, the two primary ministries with important environmental governance and oversight roles are the Ministry of Environment and the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR).

The Ministry of Environment (MDE), established in 1994, aims to reduce environmental vulnerability; promote sustainable development, increase community resilience to natural disasters and economic crises; improve housing, hygiene, and security, develop and implement environmental law.⁸⁶ The MDE is responsible for the management of the National Protected Area System, though the National Agency of Protected Areas which was created within the Ministry.⁸⁷ The Ministry of Agriculture, Natural Resources, and Rural Development (MARNDR) is responsible for developing and implementing policy related to the economic sector for the fields of agriculture, livestock, and renewable natural resources. MARNDR aims to train farmers; increase production and advance product processing techniques, develop and expand markets for producers, promote agricultural entrepreneurship; as well as create rural job opportunities more generally⁸⁸

In 2006, the Decree concerning the Environmental Management and Regulation of the conduct of citizens for Sustainable Development was issued. As Chapter 1 describes, “This Decree defines the national policy

⁸³ Haiti Constitution, 2012. https://www.constituteproject.org/constitution/Haiti_2012

⁸⁴ Haiti Journey to Self-Reliance: FY 2020 Country Roadmap
<https://selfreliance.usaid.gov/country/haiti>

⁸⁵ “2019 Investment Climate Statements: Haiti”, US. Department of State. <https://www.state.gov/reports/2019-investment-climate-statements/haiti/>

⁸⁶ “Ministry of Environment, Government of Haiti” UNDP, 2020. <https://www.adaptation-undp.org/partners/ministry-environment-government-haiti>; Programmatic Environmental Assessment, Feed the Future, Haiti, 2015.

⁸⁷ “Legal Framework for Marine Protected Area Enforcement in Three Bays National Park, Haiti: Challenges and Opportunities”, Environmental Law Institute, May 2018. <https://www.eli.org/sites/default/files/eli-pubs/legal-framework-mpa-enforcement-haiti-country-profile.pdf>

⁸⁸ “The Ministry of Agriculture”, Republic of Haiti, n.d. <http://agriculture.gouv.ht/view/01/?Le-Ministere#.XzP9kK-Sk2w>

on environmental management and regulates the conduct of citizens in sustainable development.”⁸⁹ This [Decree](#), managed by the Ministry of Environment, involves all levels of Haitian government, provides the authority for the creation of marine protected areas, and put in place a National Bureau of Environmental Evaluation.⁹⁰

Haiti created a national office for environmental assessment in 2015 called the Bureau National d’Évaluation Environnemental, BNEE. It is part of the Ministry of Environment and is gradually becoming operational, however to date it does not have any regional presence. While legislation establishing Environmental Evaluation requirements and procedures is still pending, the BNEE does provide guidance on the process that should be followed when further analysis is required.

Haiti has taken other significant policy strides over the next two decades including developing many strategic interventions and plans to which support the Intended Nationally Determined Contribution (INDC) include:

- The National Environmental Action Plan (NEAP) (1999) laid out major guidance for environmental management in Haiti, including strengthening the management of nationally protected areas and restoring ecological balance;⁹¹
- the Strategic Development Plan of Haiti (2010-2030), which contributes to the Sustainable Development Goals 2 and 17, and includes driving agribusiness and social safety nets;⁹²
- the National Adaptation Program of Action, as the implementation for the National Adaptation Plan (NAP), led by the Ministry of Environment, includes institutional capacity building for numerous climate change projects and vulnerability assessments;
- the National Climate Change Policy (PNCC) of 2017;⁹³
- the National Risk and Disaster Plan (NRDP) (2000) to reduce impact of disasters and strengthen capacity; and the Post-Disaster Needs Assessment (PDNA) developed after the 2010 earthquake;⁹⁴
- and Second National Climate Change Communication (2013), with the third prepared in 2018; and
- Haiti has also adopted the Strategic Plan for Biodiversity in 2011-2020⁹⁵ which has led to the increase in protected areas from three to 25.⁹⁶

⁸⁹ Programmatic Environmental Assessment, Feed the Future, Haiti, 2015.

⁹⁰ Decree concerning the Environmental Management and Regulation, Ministry of Environment, 2015. https://info.undp.org/docs/pdc/Documents/HTI/PID84835_PARC_Resume%20pr%20decideurs_cadre%20juridique%20EE.pdf

⁹¹ USAID & USDA Forest Service. 2010. Haiti Biodiversity and Tropical Forest Assessment. [https://usaidgems.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20\(1\).pdf](https://usaidgems.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20(1).pdf)

⁹² “National Adaptation Plans in focus: Lessons from Haiti”. UNDP, February 2018. https://www.adaptation-undp.org/sites/default/files/resources/haiti_nap_country_briefing_final_online.pdf

⁹³ “National Legislation and Policy Measures”, UNFCCC, n.d. <https://unfccc.int/resource/ccsites/haiti/ccweb/legislat/index.html>

⁹⁴ USAID & USDA Forest Service. 2010. Haiti Biodiversity and Tropical Forest Assessment. [https://usaidgems.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20\(1\).pdf](https://usaidgems.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20(1).pdf)

⁹⁵ Convention of Biological Diversity, n.d. <https://www.cbd.int/sp/>

⁹⁶ UN Biodiversity Lab, Haiti. <https://www.mapx.org/haiti-success/>

International Agreements

Haiti ratified the Paris Agreement on July 31, 2017, and is a member of CARICOM, and original member of WTO. In September 2015, Haiti submitted its [Intended Nationally Determined Contribution \(INDC\)](#) to the UNFCCC, with a goal to reduce GHG emissions by 31% by 2030.⁹⁷ This priority areas under this INDC are: 1) Integrated management of water resources and watersheds; 2) Integrated management of coastal zones and rehabilitation of infrastructure; 3) Preservation and reinforcement of food security, particularly through development of the bioeconomy; 4) Energy transition to reduce dependence on fossil fuels; and 5) Information, education, and sensitization.⁹⁸

According to the World Bank, Haiti is missing several processes to make its prioritization of the INDC reliable or its implementation of policies and actions to achieve targets attainable. These limits include a lack of ministry and parliament level decision to adopt the INDC, lack of previously adopted climate policies including LEDS, lack of private sector inclusion, and lack of identified barriers.⁹⁹

Haiti has signed and ratified a number of major international environmental agreements. Some of those most relevant to BHA projects are listed below.

- Party of the Convention on Biological Diversity;
- Party of the Convention on Fishing and Conservation of Living Resources of the High Seas;
- Party of the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter;
- Party of the United Nations Convention on the Law of the Sea;
- Party of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification;
- Signatory of the Cartagena Protocol;
- Signatory of the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean;
- Party of the United Nations Framework Convention on Climate Change; and
- Signatory of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

Despite the ratification of many agreements, conventions, and development of many important environmental policies and plans, Haiti is still facing significant threats to its environmental management. To effectively implement the actions needed to comply with these agreements and reach its environmental targets, Haiti must develop a stronger institutional framework and capacity, including to attain sufficient mechanisms to monitor and review its strategies.¹⁰⁰ Several environmental organizations within Haiti have

⁹⁷ "Haiti Submits its Climate Action Plan Ahead of 2015 Paris Agreement", UN Climate Change, 2015.

<https://unfccc.int/news/haiti-submits-its-climate-action-plan-ahead-of-2015-paris-agreement>

⁹⁸ "Nationally Determined Contributions", UNFCCC, 2015.

https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Haiti/1/CPDN_Republique%20d'Haiti.pdf

⁹⁹ "Haiti (Intended) Nationally Determined Contribution - (I)NDC", World Bank, 2016.

http://spappssecext.worldbank.org/sites/indc/PDF_Library/HT.pdf

¹⁰⁰ "Haiti - Main Details", Convention on Biological Diversity, 2020.

<https://www.cbd.int/countries/profile/?country=ht>

stated that the Ministry of Environment has been unable to enforce the majority of laws including the International Convention on Biological Diversity as well as the 2006 Decree on Environmental Management.¹⁰¹¹⁰²

IPs for Haiti are expected to understand and document their compliance with local environmental impact assessment (EIA) regulations in their Supplemental IEEs.

¹⁰¹ “Haiti - Environment : Call to declare the state of ecological emergency”, Haiti Libre, July 2020.
<https://www.haitilibre.com/en/news-30967-haiti-environment-call-to-declare-the-state-of-ecological-emergency.html>

¹⁰² USAID & USDA Forest Service. 2010. Haiti Biodiversity and Tropical Forest Assessment.
[https://usaidgems.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20\(1\).pdf](https://usaidgems.org/Documents/FAA&Regs/FAA118119LAC/Haiti_FAA_118-119_Dec_2010%20(1).pdf)

3.0 ANALYSIS OF POTENTIAL ENVIRONMENTAL RISK

This section includes analysis for three common activities of fumigation, (given that most BHA activities will use commodity fumigation to prevent the loss of food commodities), increased disinfectant/PPE use, and support for COVID-19-related SMEs. As noted above, these activities can be analysed at this level given the associated environmental impacts and climate risks are well-understood.

The COVID-19 pandemic has brought unprecedented risks to societies globally. USAID is highlighting environmental risks related to increased disinfectant use and waste management to ensure that responses to the pandemic do not introduce additional risks and challenges for beneficiary communities. Most BHA activities will be impacted by COVID-19.

However, the environmental impacts and climate risks of other BHA activities will depend on the specific context in which activities are implemented. Further, BHA activities are typically undefined at the RFA level, which makes the evaluation of potential environmental impacts and climate risks difficult. Therefore, analyses of the environmental impacts and climate risks of other activities need to be undertaken in the Supplemental IEE.

3.1 COMMODITY FUMIGATION

Environmental Impacts

Most BHA activities will carry out the storage and protection of commodities, either as US in-kind food assistance or as locally-procured food commodities. To prevent the loss of food commodity from pest infestations during storage, it is common practice to perform periodic fumigation of warehouses and/or the application of contact pesticides to warehouse surfaces.

As mentioned in the [Fumigation PEA](#), impacts of commodity fumigation must be considered, including:

- Use of the fumigant aluminum phosphide, and to a lesser extent magnesium phosphide, can potentially affect the health of applicators and other on-site workers and visitors.
- Use of the fumigant phosphine gas can affect the health of residents near warehouses being fumigated.
- Fumigation residuals could affect water quality, soil, and non-target organisms.
- Poor practices in transport, storage, application, and disposal of fumigants are a concern for human health.
- Improper disposal practices of rodents and birds killed by phosphine gas could affect human health.
- Phosphine may not completely control fungal contamination.

In addition, it is a USAID agency commitment that activities consider the procurement or promotion of pesticides as a last resort within an Integrated Pest Management (IPM) framework (see [USAID Special Topic Presentation on Pesticides](#)). Whichever their intended use may be, pesticides are potent killing agents and their use poses intrinsic dangers to applicators, households, communities and the environment. These risks include, but are not limited to:

- Use of chemical, non-organic compound-based, and biological or botanical-based pesticides can potentially affect the health of applicators, on-site workers and visitors.
- Poor practices in the transport, storage, application, and disposal of pesticides and pesticide containers are a concern for human and environmental health.
- Pesticides can negatively affect and/or eliminate non-target organisms in the environment, (i.e. predatory insects and pollinators, microorganisms beneficial to soil health, aquatic organisms, etc.)

thereby altering ecological food webs and potentially causing detriment to agricultural production systems.

- Chemical pesticides can contaminate surface and groundwater water, soils, and can bioaccumulate in surrounding ecosystems and organisms, posing a concern for health.
- Misuse or overuse of pesticides can result in pesticide-resistance.

Climate Risks

As noted in Section 2, Haiti will experience increasing temperatures. Droughts have become more frequent, especially in the northern areas. Due to model uncertainties, it is not possible to get a clear picture for precipitation change for Haiti under a future climate. However, it is clear that the future will increase climate variability and extreme events. The climate changes expected in Haiti could impact fumigation by changing herbivore and pathogen range and occurrence, which should also be considered during fumigation, and threatening the effectiveness of fumigation storage effectiveness.

TABLE 2: POTENTIAL ENVIRONMENTAL IMPACTS, AND CLIMATE RISKS, OF COMMODITY FUMIGATION

Commodity Fumigation	Potential environmental and social impacts	Potential climate risks
Warehouse treatment of bagged and bulk commodity	<ul style="list-style-type: none"> • Negative health impacts to applicators and on-site workers and visitors (including transporters) • Negative health impacts of residents near fumigation sites • Negative impacts to water quality, soil and non-target organisms if fumigant disperses from the site • Negative health impacts due to poor solid waste management (such as improper disposal of dead birds and rodents killed by fumigants) of fumigation residues/byproducts • Need for ancillary treatment of fungal diseases as Phosphine may not be effective in control of fungal contamination 	<ul style="list-style-type: none"> • Certified applicators unwilling to use personal protective equipment due to increased temperatures. • Increased temperatures and changes in rainfall patterns, changes occurrence of pests and pathogens and therefore fumigation requirements. • Warehouses where commodities are stored are in locations threatened by extreme weather, or in flood zones.

3.2 COVID-RELATED ACTIVITIES

Environmental Impacts

The COVID-19 pandemic and its response activities have both direct and indirect environmental and health impacts. For example, BHA response activities include increased disinfectant use, which can have negative impacts on human health without oversight, and increased PPE use and production which can lead to waste management challenges. Indirect impacts relate to coping mechanisms for beneficiaries whose livelihoods have been impacted by COVID-19. For example, deforestation rates are spiking in many areas of the world as a result of economic hardship related to COVID-19.

The anticipated environmental impacts of COVID-19 are both direct and indirect. COVID-19 response actions relate directly to Activity 2 (disinfectant use), and Activity 3 (COVID-19 PPE production for small and microenterprise support (SME) support). Indirect environmental impacts of COVID-19 pandemic are also described.

Environmental and human health impacts related to:

- Exposure to COVID-19 at gatherings, informational sessions, and during essential work;
- Exposure to disinfectants/germicides, and hazardous wastes (medical waste, pharmaceuticals, electronics) in health facilities, businesses, public spaces, and/or households; and
- Increased exposure to zoonotic diseases through wildlife trafficking.

Direct environmental and ecological impacts related to:

- Pollution/contamination from inappropriate use or management of disinfectants;
- Pollution/contamination from inappropriately managed Small and Medium Enterprises (SMEs), such as those producing PPE or sanitizer;
- Increase in infectious waste stockpiles, as PPE use increases; and
- Increase in the use of single-use plastics, as, in some cases, plastic bag bans are lifted to minimize the spread of the virus on reusable bags.

Indirect environmental and ecological impacts related to:

- Increased deforestation due to reduced policing of international timber exploitation and community member livelihood coping mechanisms (e.g., charcoal making, firewood); and
- Increased non-timber forest products (e.g., wildlife trafficking), and associated minerals exploitations (e.g., artisanal gold, tantalum, tin, bauxite, mining etc.).

Additional information on the connection between COVID-19 and the environment can be found at the following links:

- [Geneva Environment Network COVID-19 and the Environment Update](#)
- [Working with the Environment to Protect People: UNEP's COVID-19 Response](#)

Climate Risks

Climate and weather shocks and stressors can cause direct and indirect negative impacts to human health, such as heat waves leading to increased heat related illness, or changing temperatures and rainfall patterns changing the distribution of infectious diseases. These impacts may magnify the severity of COVID-19. Furthermore, climate and weather shocks and stressors may also weaken health systems, and these systems' ability to respond to COVID-19. The most vulnerable populations are usually the most impacted by climate and weather shocks and stressors, potentially putting more people at risk of serious illness due to COVID-19.

While it is still unknown how climate and weather impacts COVID-19 transmission, and more evidence is needed for decision making, there is some evidence to suggest that high temperatures and humidity may reduce the transmission of COVID-19.

3.3 OTHER BHA PROGRAM AREAS AND ELEMENTS

This RFA IEE cannot determine the reasonably foreseeable potential environmental impacts and climate risks of interventions within the BHA Activities and Sectors described in Section 1.3, as the scope and technical approach of these interventions have not yet been defined. These interventions will be refined and analyzed in Supplemental IEEs.

4.0 ENVIRONMENTAL DETERMINATIONS

4.1 RECOMMENDED ENVIRONMENTAL DETERMINATIONS

A **Positive Determination**, pursuant to 22 CFR 216.3(b)(1)(ii), is recommended for all commodity fumigation activities that use a restricted use pesticide, as registered by the USEPA. Please see additional information in Section 5 under Condition 6b.

A mid risk rating of a **Negative Determination** applies for the COVID-related activities:

- Support for increased use of disinfectants/germicides and PPE in response to COVID-19
- Support for small and medium enterprises (SMEs) responding to COVID-19

A **Deferral** is recommended for all other activity interventions that are not yet well defined in scope or technical approach pursuant to 22 CFR 216.3(a)(7)(iv). The **Deferral** for these interventions, must be resolved in the post-award Supplemental IEE, in which each intervention will be assigned a threshold determination: **Categorical Exclusion, Negative Determination with Conditions** or **Positive Determination**.

Most activities that previously qualified as a Categorical Exclusion (training, capacity building, meetings, etc.) now present a risk of transmission through workplace exposure, and hence are re-classified as a **Negative Determination**¹⁰³. This determination will remain in place until further notice from the BEO, contingent on approved vaccines and testing being widely-available and accessible.

4.2 CLIMATE RISK MANAGEMENT

The recommended climate risk rating for commodity fumigation is based on the anticipated likelihood and severity of climate risk, per 201mal. **Low, moderate** and **high** risk ratings were identified based on likely climate risks to commodity fumigation.

For COVID-19-related activities, support for increased use of disinfectants/germicides to minimize COVID-19 transmission receives a **moderate** climate risk rating, while support for increased use of PPE and support for PPE production to minimize COVID-19 transmission receives a **low** climate risk rating.

For all other BHA activities, the climate risk rating is postponed, to be assessed with the supplemental IEE analysis.

The following table summarizes the recommended determinations and climate risk ratings based on the environmental analysis conducted. Upon approval, these determinations become affirmed, per 22 CFR 216.

¹⁰³ Research activities, virtual meetings, and other activities that do not involve in-person meetings or gatherings still qualify as **Categorical Exclusion**.

4.3 ENVIRONMENTAL THRESHOLD DETERMINATIONS AND CLIMATE RISK RATINGS

TABLE 3: ENVIRONMENTAL DETERMINATIONS AND CLIMATE RISK RATINGS

Illustrative Interventions	22 CFR 216 Environmental Determination	Climate Risk Rating
Commodity Fumigation	Positive Determination	Low, moderate, and high (see CRM table)
Support for increased use of disinfectants/germicides to minimize COVID-19 transmission ¹⁰⁴	Negative Determination with Conditions	Moderate
Support for increased use of PPE and support for PPE production to minimize COVID-19	Negative Determination with Conditions	Low
Other BHA Activities	<p>Deferral for all other BHA Activities, to be assessed in the Supplemental IEE.</p> <p>Most activities that typically qualify as a Categorical Exclusion (training, capacity building, meetings, etc.) will no longer apply. Activities that would previously qualify for a low or no risk, or a Categorical Exclusion, but now present a risk of COVID-19 transmission through workplace exposure, must qualify as Negative Determination with Conditions.</p>	Postponed Assessment, Rating to be assessed along with Supplemental IEE analysis

4.4 CLIMATE RISK MANAGEMENT SUMMARY NARRATIVE

This climate risk management screening is conducted at the global level for BHA as part of the pre-award CRM process. The intention is to capture the climate risks that could affect activities anticipated under BHA awards. Given that the specific geographies (e.g., country, region, and coastal proximity), climate conditions, adaptive capacity, and other key characteristics that can shape risk are not yet defined at this level of analysis, the screening focuses on risks that can be broadly applied for a specific type of activity -- in this case, fumigation. Post-award, the partner will complete full screening once activity and geography details are defined. CRM must be provided for all activities, regardless of activity type. A critical resource used in identifying and assessing the climate risks was [USAID's Climate Risk Screening and Management Tool for Strategy Design + Annexes](#).

¹⁰⁴ As new COVID-19 safety protocols are established globally and implemented (e.g., social distancing, virus and antibody testing, contact tracing, etc), this determination may be subject to change.

5.0 CONDITIONS AND MITIGATION MEASURES

5.1 CONDITIONS

For applicants, USAID BHA environmental compliance at the time of activity design will be met through adherence to both 1) this RFA IEE and 2) completion of a stand-alone, Supplemental IEE, only upon USAID's indication of an intent to award. Once the Supplemental IEE, including the Environmental Mitigation and Monitoring Plan (EMMP), CRM screening, and IAP (including attendant budget), is finalized and approved by the BHA, the IEE is to be used to guide activity implementation. All mitigation measures contained in the Supplemental IEE must be implemented and monitored for effectiveness in reducing potential environmental impacts resulting from interventions.

Document Submission: Abacus

Please note that as soon as Abacus functionality allows, all RFSA Environmental Compliance documentation will be submitted through the Abacus system.

The following 11 conditions (explained in more detail in the sections that follow) describe awardees' environmental compliance, mitigation, monitoring and evaluation responsibilities throughout the life of award (LOA). Figure 2 below provides a visual schematic of the requirements over LOA.

- [Condition 1](#): Applicant to submit Environmental Safeguards Plan.
- [Condition 2](#): Awardee to develop Supplemental IEE for Mission and Washington clearance by the end of the R&I Year.¹⁰⁵
- [Condition 3](#): Implement environmental monitoring requirements. This includes development and alignment of Environmental Mitigation and Monitoring Plan (EMMP) and Climate Risk Management (CRM) with performance M&E systems.
- [Condition 4](#): Awardee to submit Environmental Status Reports (ESRs) annually before the Pipeline Resource Estimate Proposal (PREP). Additional reporting is reflected in the Annual Results Report (ARR).
- [Condition 5](#): Develop an Environmental Assessment for any actions with potential for significant impact to ecological habitats, as determined by USAID.
- [Condition 6](#): Plan for a Pesticide Evaluation Report and Safe Use Action Plan (PERSUAP), which includes for pesticide procurement and/or use (e.g. agriculture, livestock, public health, construction), and/or commodity fumigation mitigation requirements.
- [Condition 7](#): Support the Mission in the development of any Best Practice Review (BPR) for environmental safeguarding.
- [Condition 8](#): Ensure compliance with partner country environmental regulations, including COVID-19 local and international standards.
- [Condition 9](#): Plan for management of packaging waste associated with commodity distribution and increased waste streams due to COVID-19.
- [Condition 10](#): Include awareness of pandemic health risks of activities (e.g., irrigation, roads) that disrupt wildlife habitat, and are exacerbated by climate risks in the IEE.

¹⁰⁵ The Supplemental IEE is subsidiary analysis to the RFA-IEE, and may also be referred to as the "Activity IEE".

The environmental determinations in this IEE are contingent upon these general implementation and monitoring requirements, as well as [ADS 204](#) and other relevant requirement.

Figure 2. Overarching Environmental Compliance Flowchart for BHA Activities



5.1.1 PRE-AWARD STAGE

CONDITION 1: APPLICANT TO SUBMIT ENVIRONMENTAL SAFEGUARDS PLAN

USAID requires analyses which consider environmental risks across the Agency, using a set of defined procedures to meet USAID environmental requirements. Applicants are expected to design innovative approaches to promote environmental and climate risk management to improve and sustain food and nutrition security of vulnerable populations, as articulated in both SO1 and SO2 of the [USAID 2016-2025 Food Assistance and Food Security Strategy](#). Applicants must summarize these environmental approaches into a four-page Environmental Safeguards Plan.

This plan must summarize:

1. How strategies to reduce both environmental impacts of the activity and climate risks to the activity have been integrated into activity design, including management of packaging waste from commodity distribution¹⁰⁶;
2. How funds for environmental and climate risk management have been allocated in the detailed/comprehensive budgets and described in the budget narrative;
3. How staffing for oversight of environmental compliance requirements will be carried out over the life of the activity; and
4. How outcomes of the EMMP will inform performance as monitored through the Logical Framework and Indicator Performance Tracking Tables (IPTT) in M&E systems.

5.1.2 POST-AWARD STAGE

CONDITION 2: AWARDEE TO DEVELOP SUPPLEMENTAL IEE FOR MISSION AND WASHINGTON CLEARANCE BY THE END OF THE R&I YEAR

IEE Development

Upon receipt of the BHA award, implementing partners will be required to develop a Supplemental IEE¹⁰⁷, specific to the award. The Supplemental IEE will describe the environmental impact analysis for all interventions in the project's zone of influence, within the BHA geographies described in the RFA . In short, the Supplemental IEE must 1) summarize the technical design, 2) describe baseline environmental conditions in the BHA zones of influence 3) identify all reasonably foreseeable environmental impacts of interventions, and 4) recommend sound mitigation measures to prevent, reduce or compensate for environmental impacts.

Partners must provide sufficient site-specific information in the S-IEE in order to understand the specific baseline environmental conditions. The inclusion of maps, photos, and geographic coordinates is highly recommended. Further, partners must consider the cumulative impacts of activities occurring in their zones of influence, which can ultimately rise to a Positive Determination, requiring an Environmental

¹⁰⁶ See Condition 9A for more information on packaging waste

¹⁰⁷ A word version of the Supplemental IEE template can be found at a Google drive here: <https://drive.google.com/drive/u/1/folders/1CwBSuhORG54Ehe94KbpdecilwO52zGS8>

Assessment. For example, cumulative impacts could include over-withdrawal of water for irrigation and/or water point provision or increases in pollutant concentrations in a water body or in the soil or sediments.

In order for IEEs to include sufficient level of detail to describe to USAID the potential level of environmental risk, the IEE must include sufficient information about the scope, scale, and locations of anticipated activities. As always, if the partner does not have sufficient information to inform environmental and climate risk analysis at this stage, then the PVO must request Deferral, per [22 CFR 216.3.\(1\)\(iii\)](#)

COVID-19 IEE Implications

As noted above in Section 4.3, most activities that previously qualified as a Categorical Exclusion (training, capacity building, meetings, etc.) now present a risk of transmission through workplace exposure, and hence are re-classified as a Negative Determination. This determination will remain in place until further notice from the BEO, contingent on approved vaccines and testing being widely-available and accessible. Research activities, virtual meetings, and other activities that do not involve in-person meetings or gatherings still qualify as Categorical Exclusion. Despite receiving a Negative Determination, activities that previously qualified as a Categorical Exclusion but now present a risk of transmission can still proceed in the Refinement Year prior to IEE submission and approval.

IEE Timing

Partners must submit their S-IEEs towards the end of the refinement year (Year 1) when activities are better defined so IEEs contain sufficient details about the scope and scale of activities. For any adjustments to this timing the AORs must work with the BEO to determine what timing makes sense.

Box 1: Low-Risk Activities Allowed to Proceed in Refinement Year Prior to Supplemental IEE

Partners can proceed with low-risk activities that typically qualify as “Categorical Exclusion” during the refinement year prior to IEE submission and approval.

However, activities with moderate or unknown risks (“Negative Determination with Conditions”) must have an IEE in place before implementation. This includes any activities involving interventions of physical nature, or activities that involve pesticide procurement, use, or support, which trigger USAID pesticide procedures per 22 CFR 216.3(b). See Condition 6 below for more information on pesticides.

If a S-IEE must be developed during the refinement year for activities with a “Negative Determination”, all other activities, where scope and scale are still undefined, can receive a “Deferral” to be analyzed at a later point in an IEE-Amendment.

Per the RFA, Section C, Activity Design, activities commonly implemented during the refinement year include, but are not limited to the following six (6) activities:

Low-risk activities:

1. Re-implementation formative research and analysis that addresses evidence and knowledge gaps, and strengthens understanding of local context, and helps to prioritize behaviors the activity will address;
2. Meaningful community engagement to 1) enable two-way feedback and participation around the planned activity, interventions and refinement period, 2) enhance understanding of local needs, opportunities and aspirations, and 3) ensure mutual accountability, including in decision making processes.¹⁰⁸
3. Participatory stakeholder engagement for strengthened local partnerships, capacity development and coordination;
4. Refining the TOC and implementation plans; and
5. Preparation for implementation through hiring, staff training, and procurement of goods and services.

Potential moderate or unknown risk activities:

6. Small-scale operational research, piloting implementation strategies, and start-up of proven, evidence-based implementation strategies;

IEE Amendments

In the event that any new proposed interventions differ substantially from the type and/or agro ecological zone of interventions described in the Supplemental IEE, an IEE Amendment (IEE-A) will be developed, including a revised EMMP (and potentially revised IAP and CRM screening, as needed). Amendments must be sent to BHA and reviewed for approval by the BHA/BEO prior to implementation.

Some of the possible triggers for an IEE-A include, but are not limited to: modified or new interventions, new geographic zone, cost extension, and/or significant time extension, such as an additional year. Pursuant to 22 CFR 216.2(b), activities involving international disaster assistance or other emergency circumstances may be Exempt from these procedures. Emergency activities with Agreement Officer

¹⁰⁸ Community briefings and consultative processes should take place in every community, while more extensive community visioning sessions should be carried out in a robust subset of communities.

approval may be Exempt from environmental review, such as the transfer of food commodities pursuant to 22 CFR 211.

It is important to note, EMMP modifications do not require an IEE amendment or USAID approval. However, all EMMP changes and their rationale, should be reported in subsequent ESRs. EMMP revisions during the course of implementation, such as fine-tuning mitigation measures or including additional analysis for unexpected impacts, are encouraged as part of any activity's sound adaptive environmental management.

While BHA Operating Units do not anticipate implementing COVID-19 response activities outside the scope of existing Results Frameworks, USAID recognizes that the COVID-19 situation is changing rapidly and projects will have to respond accordingly. A/CORs must monitor the implementation of COVID-19 response activities for any actions outside of the existing scope assessed by office-specific IEEs. A/CORs must report these actions to the MEO and BEO for resolution on a case-by-case basis.

Sharing Relevant Documentation. Partners are encouraged to share with the BEO (via AORs) any documents developed during the pre-award and R&I period that could support the BEO's review and understanding of the environmental and climate risks associated with anticipated project activities (i.e., gender analyses, feasibility studies, etc.). Documentation sharing will help avoid undue burden and duplication of information by partners throughout the environmental compliance documentation review and clearance process.

Resources. There are important resources that partners can consult when developing Supplemental IEEs:

- For guidance on Environmental Impact Assessment (EIA), consult [USAID's EIA Tool](#).
- For a general introduction on how to develop an IEE, consult the [USAID IEE Assistant](#).¹⁰⁹
- Partners are advised to consult previous Supplemental IEEs to research common environmental concerns and solutions among BHA activities globally. Partners can utilize the [USAID Environmental Compliance Database](#) to search for USAID-approved IEEs.
- For technical guidance on environmentally sound design and management for USAID development activities, consult the [USAID Sector Environmental Guidelines](#).

EMMP Development

As a component of the Supplemental IEE, BHA applicants must complete an EMMP which serves as the implementation and monitoring plan for all required 22 CFR 216 compliance actions to be taken by a given activity. This RFA IEE provides a template for the EMMP in the annexes. Detailed guidance and best-practice considerations for the development of the EMMP is available on the [USAID Environmental Procedures Website](#). The effectiveness of the individual compliance mitigation measures to prevent or reduce environmental impacts must be monitored periodically throughout the life of the activity. The results of this monitoring should be described in the annual ESR. See information below.

CRM Screening

As a component of the Supplemental IEE, upon receipt of the award, the partners will develop a Climate Risk Management (CRM) screening for all activities. CRM is the process of assessing, addressing, and adaptively managing climate risks that may impact the ability of USAID programs to achieve their objectives. It is recommended that Climate Risk Management screening begin with the Supplemental IEEs

¹⁰⁹ Provides useful overall process information, but templates are out of date and should not be used.

under this RFA, with the exception of fumigation activities (See Annexes 5 & 6 for more details). Currently, the activity interventions for this RFA are not well defined in scope or technical approach, and therefore it is appropriate to begin Climate Risk Management screening when they are better defined, at the Supplemental IEE stage, pursuant to [Climate Risk Management for Projects and Activities. A Mandatory Reference for ADS 201](#). It is likely that many of these interventions will have **high and moderate climate risks** during implementation. When high and moderate climate risks are identified, Climate Risk Management screening for these activities must be resolved in the post-award Supplemental IEE, in which climate risks, and opportunities to integrate climate into programming, will be identified and addressed as outlined by [USAID policy](#) and BHA Climate Risk Management guidance (found in Annex 5 and also on the [Climatelinks Climate Risk Management website](#)). Furthermore, a Climate Risk Profile to identify [Climate Risks in BHA Geographies for Haiti](#)¹¹⁰ has been developed to assist with CRM screening under this RFA-IEE.

Additionally, RFSAs must integrate lessons learned from the COVID-19 pandemic into design considerations for future awards. Projects that involve potential ecological habitat loss (e.g., irrigation, road infrastructure) must include the additional risks related to zoonotic disease transmission risks and how climate risks may exacerbate the prevalence and spread.

As well, RFSAs will incorporate such infectious disease transmission risks associated with ecological disruption and climate stressors in ongoing oversight of existing Environmental Compliance and Climate Risk Management of activities. Such risks will be balanced with other more traditional climate risks and environmental impacts identified.

Institutional Arrangement Plan

As a component of the Supplemental IEE, the Institutional Arrangement Plan (IAP) describes the budget and staffing needs for IEE implementation. The IAP describes the implementing partner capacity for fulfilling the implementation conditions required by the Supplemental IEE, EMMP and CRM screening. The IAP is submitted with the Supplemental IEE, and is later updated with the annual ESR¹¹¹. A budget for the implementation of the IEE (which is attached to the IAP) must be transparently demonstrated in the Detailed and Comprehensive Budget and Budget Narrative for the award. The budget includes provisions for:

- internal staffing
- technical support
- training
- monitoring/reporting
- pesticide expertise
- environmental assessments, as needed

An IAP template can be found in [Annex 3](#) and at the following Google Drive: <https://drive.google.com/drive/u/1/folders/1CwBSuhORG54Ehe94KbpdecilwO52zGS8>

Budget Guidance. The budget for environmental compliance must not exceed the Total Estimated Cost (TEC) of the multi-year activity. Rather this compliance budget must be allocated from within the award TEC. Failure to do so in a transparent manner, will result in delays. The budgeting for environmental compliance is to be reviewed in the beginning of the activity, and annually with the Pipeline and Resource

¹¹⁰ Under development, will be posted on this webpage once final.

¹¹¹ *The ESR is similar to the Environmental Mitigation and Monitoring Report (EMMR) used elsewhere in USAID. However, the ESR meets both purposes of reporting and budget planning for environmental compliance.

Estimate Proposals(PREPs¹¹²). Refer to the [USAID Environmental Budgeting Toolkit](#) for step-by-step guidance for both budget developers and USAID budget reviewers. While the BEO can provide guidance on budgeting for environmental compliance, only the AO can authorize budget commitments.



Figure 3. Developing Activity Budgets for Environmental Compliance Requirements.¹¹³

**Note: It may be possible to combine Steps 3 and 4 into a single step, depending on the particular budgeting process. It is shown here as two separate steps for greatest clarity.*

USAID Clearances: The BEO Issues Letter

The BEO Issues Letter is a review memo that describes questions, concerns, or changes that should be made to the document before it can receive final BEO clearance. Issues Letter’s are prepared following submission of IP inputs, both post-award and throughout the project life-cycle (IEEs, ESRs, PERSUAPs, EAs, etc.). The BEO will solicit MEO input on the Issues Letter for a field perspective (and REA input, as relevant), as well as BHA technical team input (gender, WASH, engineering, etc.) as appropriate. In accordance with AOR advisement, IPs will need to respond to the Issues Letter and revise their documentation accordingly before re-submitting for BEO clearance. Upon final BEO and CIL approval, all environmental compliance documentation is subsequently shared with the implementing partner and uploaded to the publicly accessible [Environmental Compliance Database](#). Supplemental IEEs must be approved by the USAID BHA Bureau Environmental Officer (BEO) and Climate Integration Lead (CIL) prior to the implementation of medium-risk interventions (i.e., classified as a Negative Determination with Conditions as per 22 CFR 216).

¹¹² The PREP describes an awardee's resource needs and interventions for a specific upcoming period of time agreed to by the partner and the Agreement Officer’s Representative.

¹¹³ Source: Adapted from [Environmental Compliance Budgeting Toolkit](#), P.5.

Box 2: Drinking Water Quality-- Requirements and Additional Guidance

Per USAID regulations, implementing partners are required to monitor drinking water for arsenic and fecal coliform levels in the case of new construction or rehabilitation of drinking water infrastructure (Guidance Cable State 98 108651). USAID has developed a guidance tool for water quality, termed the [Water Quality Assurance Plan \(WQAP\)](#). This plan provides a template for partners to articulate a clear path for water quality assurance, as well as establish a corrective plan of action if contamination or exceedances are identified. Additional support for improved water supply systems can be found in the USAID [Visual Field Guide](#) which includes simple photo-rich monitoring tools in English and French. Water quality and quantity assurance is important for food security in Haiti. If DFSA applicants intend to directly or indirectly support the provision of potable water, partners should submit a plan for water quality assurance either through the WQAP or by incorporating the needed information in the EMMP. These WQAPs will also be shared with BHA WASH staff in Washington and/or the field.

Given the significant resource and capacity constraints within many BHA host countries, partners using the WQAP are strongly encouraged to tailor or modify this guidance to fit the context and to reflect a realistic plan for ensuring water quality. For example, if host government water quality labs are unavailable, partners could provide a plan for field monitoring of water quality that still strives to engage and build capacity of local officials or private operators.

CONDITION 3: IMPLEMENT ENVIRONMENTAL MONITORING REQUIREMENTS

Environmental monitoring is crucial to ensuring that environmental compliance and climate risk management requirements are being successfully implemented. Partners can use environmental monitoring systems and site visits (described below) to implement monitoring requirements. These methods should be incorporated into the project's wider M&E systems.

3A. DEVELOP ENVIRONMENTAL MONITORING SYSTEMS

EMMP Tools for Field Monitoring: Implementing Partners can develop EMMP tools (such as checklists) to assist in the integration of environmental management issues in the planning, design, implementation and monitoring phases. EMMP tools can be designed for rapid environmental diagnostic exercises, which aim to identify site-specific environmental conditions that may lead to the generation of localized impacts. This analysis can be used to determine the most appropriate environmental management strategies on a site-specific basis. For monitoring purposes, tools can also be designed to facilitate the data collection and monitoring of EMMP indicators. The environmental monitoring system that the partners use or develop should be described in the IAP, mentioned above under Condition 2.

One such example of site field monitoring tools is the [Visual Field Guides](#), which are intended to support field environmental monitoring of select interventions by development professionals, including those who are not environmental specialists. They are photo-based, simple yes-no checklists that identify the most typical, significant environmental design and management considerations by the development sector.

Another example of an environmental monitoring checklist system is the Go Green Strategy (GGS). This scorecard system provides environmental management information in a simple Yes/No checklist, which can be used as a monthly monitoring tool by field agents. USAID conducted a more detailed assessment of

the GGS through a field assessment, as described in the "[Examination of Environmental Foundations for Program Design Environmental Compliance Review and Go Green Strategy Snapshot](#)".

A new tool for use on phones, tablets and browsers is the [Nexus Environmental Assessment Tool \(NEAT+\)](#). NEAT+ is based in [Kobo Toolbox](#), open-source software for project level assessment of the current sensitivity of the local environment, highlighting any underlying vulnerabilities. NEAT+ is hosted on [EHA Connect](#) which is a portal to help environmental actors engage in the disaster space and humanitarians develop more resilient emergency management systems. The NEAT was developed with a broad range of humanitarian and environmental stakeholders as part of the [Joint Initiative](#) for the Coordination of Assessments for Environment in Humanitarian Action.

USAID Environmental Compliance Site Visits: As required by ADS 204.5.4, the AOR, in consultation with BHA Managers, Mission Environmental Officers (MEO) and/or the BHA/BEO will actively monitor and evaluate whether environmental consequences unforeseen under interventions covered by this current RFA IEE, and the Supplemental IEEs, arise during implementation and modify or end interventions as appropriate.

Implementing Partners should integrate environmental impacts and mitigation measures for any COVID-related activities.

3B. INTEGRATE ENVIRONMENTAL MONITORING, INCLUDING CLIMATE RISKS, INTO M&E SYSTEMS

A key component of environmental safeguards for USAID activities is to ensure the inclusion of climate risk and environmental considerations into activity performance monitoring systems. For BHA, to promote ongoing safeguards for environmental goods and services while supporting food security, applicants will need to integrate environmental considerations into the overall activity M&E systems.

The M&E workshops, held at the start-up of new BHA resilience food security activities, are designed to convey M&E requirements and to strengthen awardees' Logical Frameworks and Indicator Performance Tracking Tables (IPTTs). During these workshops, awardees have an opportunity to learn about environmental considerations with M&E experts to coordinate the IPTT with the EMMP.

Implementing Partners can also visit the [Food and Nutrition Technical Assistance \(FANTA\) III](#) website for additional tools that can assist with environmental monitoring, such as indicator guides. For more than 15 years, the FANTA project provided support to USAID in the development of methods and best practice guidance to support rigorous M&E systems.

As described in the [Policy and Guidance for Monitoring, Evaluation, and Reporting of Resilience Food Security Activities](#), awardees may make other additions to the Performance Indicator Reference Sheet (PIRS) to clarify the use of a BHA or Mission indicator in the activity's M&E Plan. For example, text may be added to the Rationale section to identify the indicator as part of the activity's EMMP and explain how the indicator is environmentally sensitive to the activity context (please see the [Recommended Performance Indicator Reference Sheet](#)). Clarifications inserted into the PIRs, like those described above, do not 'change' the BHA or Mission indicator; they simply add more information about how the indicator will be collected and which activities beneficiaries or outputs will be considered.

CONDITION 4: AWARDEE TO SUBMIT ENVIRONMENTAL STATUS REPORTS (ESRS) ANNUALLY BEFORE THE PIPELINE RESOURCE ESTIMATE PROPOSAL (PREP). ADDITIONAL REPORTING IS REFLECTED IN THE ANNUAL RESULTS REPORT (ARR).

Reporting on environmental compliance throughout the programming lifecycle assists BHA in understanding whether the DFSA is making adequate progress toward achieving results from the prescribed environmental safeguards and compliance with USAID regulations. Implementing partners report on USAID environmental compliance by developing Environmental Status Reports (ESRs) and integrating environmental and climate reporting into Annual Results Reports (ARRs).

Environmental Status Report (ESR)

ESRs¹¹⁴ must be completed by all BHA awardees on an annual basis to report on progress toward achieving environmental compliance. ESRs must be submitted along with the M&E plans in January, or at least three 1-3 months before the anticipated PREP submission by the partners. The ESR is designed to:

1. Document environmental safeguard staffing and budget for the upcoming implementation year, matching the budget narrative for the award; and
2. Identify progress towards achieving environmental compliance and reducing climate risks, including a report out on EMMP monitoring.

The ESR template¹¹⁵ provides instruction to awardees on what information must be included in the ESR. ESRs must include reporting on implementation of Environmental Compliance for any COVID response interventions.

Annual Results Reports (ARRs)

Awardees are required to submit an ARR for each FY during which interventions were implemented, regardless of when funding or food assistance commodities were provided. An ARR describes the performance results of interventions implemented during the reporting FY. The ARR should include the results of IPTT environmental and climate change indicators, environmental monitoring reports, assessments, action plans, and/or case studies related to the integration of environmental safeguards and climate change considerations. Please see the [USAID ARR Guidance](#) for more information.

CONDITION 5: DEVELOP AN ENVIRONMENTAL ASSESSMENT FOR ANY ACTIONS WITH POTENTIAL FOR SIGNIFICANT IMPACT TO ECOLOGICAL HABITATS, AS DETERMINED BY USAID.

Increasingly, BHA partners have been responding to the need to develop more significant physical infrastructure to meet food security demands. For activities with potential for significant environmental effect, USAID may require partners to complete a full environmental impact assessment.

A Positive Determination, pursuant to [22 CFR 216.3\(a\)\(2\)\(iii\)](#) or 22 CFR 216.5, may arise if an intervention determined as a Deferral by this RFA IEE is later identified as having the potential to cause significant environmental effect. Interventions that receive a Positive Determination will require further analysis, such as a [Scoping Statement](#) and [Environmental Assessment](#). The following classes of actions have been determined generally to have a significant effect:

¹¹⁴ Also known as Environmental Mitigation and Monitoring Reports (EMMRs) elsewhere in USAID.

¹¹⁵ A Word version of the ESR template can also be found at the following Google Site: and at the following Google Drive: <https://drive.google.com/drive/u/1/folders/1CwBSuhORG54Ehe94KbpdecilwO52zGS8>

- Programs of river basin development;
- Irrigation or water management projects, including dams and impoundments;
- Agricultural land leveling;
- Drainage projects;
- Large scale agricultural mechanization;
- New lands development;
- Resettlement projects;
- Penetration road building or road improvement projects;
- Powerplants;
- Industrial plants;
- Potable water and sewerage projects other than those that are small-scale.

Additionally, if the proposed activity will have the effect of jeopardizing an endangered or threatened species or of adversely modifying its critical habitat, the Threshold Decision is a Positive Determination.

Box 3. New from FY2020 Senate Statement of Managers Concerning Requirements for Parks and Protected Areas

To address the environmental and social risks of activities in parks and protected areas*, the [FY Senate 2020 Appropriations Act Statement of Managers](#) has four (4) requirements related to parks and protected areas:

1. That the implementing partner (IP) perform consultations and engagement with the project affected community and if that community includes indigenous peoples (as described in the USAID PRO-IP policy), that the level of engagement rise to the level of Free, Prior and Informed Consent (FPIC).
2. That the IP examines the impacts to land and use resources
3. That the IP train and monitor any park rangers or eco-guides or similar in performing their duties with a human rights focus
4. That the IP has a grievance and redress mechanism (GRM).

Risks to Parks and Protected Areas should be articulated by defining the baseline, assessing risks, and developing mitigation measures including training and monitoring of park rangers (or equivalent) as well as the establishment of an implementing partner grievance and redress mechanism.

**Parks and Protected areas are defined as the [6 protected area categories established by IUCN](#). Note that this includes Ramsar Wetlands.*

CONDITION 6: PLAN FOR A PESTICIDE EVALUATION REPORT AND SAFE USE ACTION PLAN (PERSUAP)

6A. PERSUAPS FOR PESTICIDE USE (E.G. AGRICULTURE, LIVESTOCK, PUBLIC HEALTH, CONSTRUCTION)

BHA partners must take note that pursuant to [22 CFR 216.3\(b\)](#), in the event that any interventions include the promotion, procurement, transport, storage or disposal of pesticides for agricultural or livestock interventions, vector control interventions, or construction material treatment, a PERSUAP for proposed pesticides must be approved by the BHA/BEO prior to the commencement of these interventions. PERSUAPs should be submitted with Supplemental IEEs (or as amendments to Supplemental IEEs). For more information on USAID environmental compliance policy requirements related to pesticides and PERSUAPs, see this [Special Topic Presentation](#).

Private Cost-Share

Please note that any use of a private cost-share by a USAID recipient for pesticide support, requires compliance with USAID Pesticide Procedures* to reduce potential harm to communities.

**22 CFR § 216.3(b)(1)(Project Assistance) states that the procedures in 22 CFR § 216.3 (b)(1)(i)-(v) apply to all proposed projects involving use of pesticides, assistance for their procurement, or both, unless one of the exceptions to the pesticide procedures identified in (b)(2) apply. 22 CFR § 216 does not make a distinction based on cost share.*

Tiering off of Existing Mission PERSUAPs. BHA encourages its awardees to tier off existing USAID analyses when possible, thereby reducing the need to carry out new and potentially redundant analyses, yet allowing for the appropriate consideration of the specific needs and context of each resilience food security activities. In this case, the BHA activity will need to develop a Safe Use Action Plan (SUAP). The SUAP provides a succinct, definitive stand-alone statement of compliance requirements, synthesized from the 12-factor analysis. It also assigns responsibilities and timelines for implementation of these requirements.

Haiti has a [Mission-Wide PERSUAP](#) which expires on April 30th, 2021. Partners will be able to tier-off from this PERSUAP with a project-specific SUAP. Partners should work with the AOR and MEO to ensure compliance with the most up-to-date information available on the authorization status of pesticides.

6B. COMMODITY FUMIGATION MITIGATION REQUIREMENTS, PER THE USAID PEA FOR PHOSPHINE FUMIGATION OF STORED AGRICULTURAL COMMODITY

USAID requires that the person/people carrying out commodity fumigation operations hold official certification to perform the fumigation, use fumigants according to the directions on the product label, and follow all listed directions, precautions, and restrictions. Fumigants will be used only for commodities and at sites specified by the product label.

USAID has developed an assessment of environmental and health risks in the fumigation of food assistance commodity entitled [USAID Programmatic Environmental Assessment \(PEA\) for Phosphine Fumigation of Stored Agricultural Commodity](#). The PEA includes a [Pesticide Evaluation Report and Safer Use Action Plan \(PERSUAP\) template](#), and a [Fumigation Management Plan \(FMP\) template](#). These tools are intended to assist in compliance with the Fumigation PEA's requirement for completion of an activity-specific PERSUAP and FMP reporting. The Fumigation PERSUAP should be developed as soon as the warehouse and fumigation service providers are identified, and in advance of the need for fumigation. It is preferred that this PERSUAP be submitted with the Supplemental IEE, if possible. Specific mitigation requirements for the fumigant phosphine are provided in the Fumigation PEA.

Please note that TOPS has released their [Warehouse Staff Safety Guide](#) (November, 2014) which is an excellent resource to assist awardees in the design of education campaigns for warehouse commodity storage. The Warehouse Safety Guide posters, which highlight best fumigation practices, are in compliance

with the findings of the Fumigation PEA, and complements the PEA with practical guidance, information, recommendations and tools to promote warehouse staff safety and prevent injury and illness. The materials include an 80-page manual, 7 Warehouse Staff Safety Posters, a 2-day Facilitator's Training Tool, and various other tools and checklists to help organizations adhere to minimum safety standards in the warehouse. The Guide was funded by USAID through a TOPS Program Micro-grant and developed by Project Concern International (PCI) and the TOPS Commodity Management Task Force. TOPs has also developed a [Facilitator's Guide to Integrated Pest Management and Fumigation Safety](#). This includes modules on pesticide compliance, integrated pest management, and phosphine fumigation.

6C. ALL BHA PROGRAMS INCREASING THE USE OF DISINFECTANTS AND GERMICIDES RELATED TO COVID-19 WILL NEED TO FOLLOW PERTINENT GUIDELINES PER USAID PESTICIDE PROCEDURES, PROVIDED HERE-IN.

There are a range of environmental health concerns related to increased disinfectant and germicide use¹¹⁶. Some non-medical-use germicides utilized for cleaning inanimate objects and surfaces (environmental surfaces) are classified by the US Environmental Protection Agency (USEPA) as pesticides. This definitional distinction does not suggest that non-medical disinfectants are more toxic than medical use disinfectants. For purposes of USAID environmental review, however, this USEPA definition triggers the Pesticide Procedures analysis found at [22 CFR 216.3\(B\)\(1\)A-L](#).

Partners must abide by the PERSUAP found in Annex B and the additional guidance found in Annex C:

- Annex B: COVID-Related PERSUAP
- Annex C: COVID-19 Prevention: Enhanced Cleaning and Disinfection Protocols

For the purposes of COVID-19 response activities, Annexes B and C satisfy the pesticide analysis requirements of [22 CFR 216.3](#). The most recent list of surface disinfectants approved by the USEPA for COVID-19 can be found here: [List N: Disinfectants for Use Against SARS-CoV-2 \(COVID-19\)](#)

Note that disinfectants/germicides are generally less dangerous than pesticides used for agriculture, fumigation/warehouse protection, or construction. The negative impacts of disinfectants used for health are widely understood and well-controlled globally (e.g., the use of aquatabs in humanitarian assistance activities).

However, given the extreme behaviors some have taken for COVID-19 eradication (i.e., ingesting disinfectants), guidance on safe disinfectant use is extremely important for partners and must be taken seriously.

CONDITION 7: SUPPORT THE MISSION IN THE DEVELOPMENT OF ANY BPR FOR ENVIRONMENTAL SAFEGUARDING

The Environmental Compliance Best Practice Review (BPR) was developed under the USAID Africa Bureau to enhance environmental management and oversight on USAID programming. Since 2008, over 20 BPRs have been conducted, principally in USAID's Africa and Asia regions. In 2015, USAID/AFR updated its BPR standard to account for updates to USAID Automated Directives System sections 201 and 204. Building from this updated USAID/AFR BPR standard, there has been a movement by other pillar

¹¹⁶ A germicide is an agent that can kill microorganisms, and includes antiseptics and disinfectants. Antiseptics are germicides applied to living tissue and skin and disinfectants are antimicrobials applied only to inanimate objects. Source: <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/introduction.html>

and regional bureaus to undertake similar reviews, including in BHA. The purpose of the BPR is to improve the effectiveness of Mission and Bureau compliance with USAID's environmental and CRM procedures and to better integrate compliance into Mission and Bureau operations. Examples of previous BPRs are available upon request.

Process: BHA BPR reviews are conducted via a mix of desk review, interviews, and field visits, and result in an action plan to correct gaps and weaknesses in environmental compliance and CRM processes during project design and implementation. BPR reviews are not audits, but voluntary gap analyses. IPs should coordinate with the BPR facilitators to determine the extent to which adequate environmental compliance and CRM procedures are integrated into all processes at the program and activity levels, as well as to identify any areas for improvement.

CONDITION 8: ENSURE COMPLIANCE WITH PARTNER COUNTRY ENVIRONMENTAL REGULATIONS, INCLUDING LOCAL AND INTERNATIONAL STANDARDS.

Implementation will in all cases adhere to applicable partner country environmental laws. The Supplemental IEE supports and strengthens the rule of law for systems of environmental governance in partner countries. In order to ensure environmental compliance, the status and applicability of the partner country's policies, programs, and procedures in addressing natural resources, environment, food security, and other related issues must be incorporated into each activity. This may include incorporating the national policies pertaining to environmental assessment or other policies related to the sector. Implementing partners must be aware of and ensure compliance with the country's regulations where their activity is located.

COVID-19. Activities unrelated to COVID-19 response actions may still be impacted. Therefore, in all project activities, BHA Operating Units must abide by the following:

- Interventions must build awareness, providing and requiring [training and capacity building](#) around best environmental and health and safety practices in the context of COVID-19 pandemic;
- Follow Agency and international guidelines for COVID-19 response (see Section 2.2 for examples);
- Ensure [access to technical expertise](#) for implementing sound environmental and health and safety practices for COVID-19-response and COVID-affected activities; and
- Comply with relevant host country and international standards regulations pertaining to COVID-19.

Approved IEEs from the same geographic areas may provide valuable guidance and be a beneficial resource for cross-checking information and developing a deeper knowledge of country-specific regulations and policies. These IEEs are available on the Agency's Environmental Compliance [Database](#).

CONDITION 9: PLAN FOR MANAGEMENT OF PACKAGING WASTE ASSOCIATED WITH FOOD AID COMMODITY DISTRIBUTION AND INCREASED WASTE STREAMS DUE TO COVID-19.

9A. PACKAGING WASTE MANAGEMENT

The waste management crisis is particularly acute for countries receiving humanitarian assistance (particularly Title II funding where food commodities are distributed), that often lack sufficient

infrastructure or management systems to handle the solid waste generated by this assistance. In the face of these challenges, humanitarian packaging waste, particularly plastic, is of critical environmental concern in humanitarian operations. The increased frequency and intensity of extreme precipitation and hurricanes due to climate change and the improper disposal of packaging waste will continue to lead to clogging of drainage and waterways, increasing risk of flooding and therefore increased flow of waste to coasts and waterways, as well as clogging of drainage canals, and negative human health implications.

USAID is facilitating a multi-institutional and multi-disciplinary effort to coordinate collective, impactful solutions in the humanitarian packaging landscape. Please note that in collaboration with NGO and UN partners, USAID has completed the first phase of scoping the issue of unmanaged packaging waste due to humanitarian assistance. The scoping phase includes perspectives on the magnitude of the issue, what partners are doing presently to address it, and next steps that USAID and partners will be taking to make further progress. These include collective roadmapping, assistance and institutional assessments, and pilots of technologies for reducing, reusing, and recycling packaging.

The Scoping Statement has been finalized, and is available [here](#).

As part of the follow-on to this scoping process, BHA, in collaboration with institutional partners central to the distribution and management of humanitarian assistance, are working with the Massachusetts Institute of Technology (MIT) Lincoln Labs on developing packaging recycling technologies for use at assistance distribution sites and connected with local recycling facilities.

For the next step in the process (the Environmental Assessment), USAID is working to strengthen coordination across stakeholders by facilitating a collaborative roadmapping process together with a group of core stakeholders working in packaging waste management. This collective planning exercise will identify priority areas of intervention and map a coordinated plan of action for collectively achieving improvements in humanitarian packaging. Following the roadmapping process, USAID and partners will work on designing and implementing co-created projects that minimize the damage caused by packaging to people and the environment while respecting the life saving imperative of humanitarian assistance. See more details in the Fact Sheet [here](#).

9B. INCREASED WASTE STREAMS DUE TO COVID-19

COVID-related response activities have the potential to generate significant amounts of additional plastic waste, much of it infectious, adding to the already manageable levels of waste. For example, PPE use for all activity types will increase. PPE is often plastic and billions of masks and gloves are being discarded around the world. Further, many plastic bag bans are temporarily lifted to reduce the risk of the virus spreading via personal reusable bags. Existing recycling initiatives will also be facing staffing challenges. Therefore, managing this waste stream is crucial now more than ever. Partners must work to ensure that all activities (including COVID response activities) have the appropriate waste management protocols in place to minimize the impact of this waste on human health and the environment.

During this time, waste that could potentially be contaminated with the COVID-19 virus needs to be treated as infectious medical waste. See guidance on waste management for COVID-19 response efforts here: <https://www.unenvironment.org/news-and-stories/press-release/waste-management-essential-public-service-fight-beat-covid-19>.

Additional mitigation measures can be found in the CRM table linked above.

CONDITION 10: INCLUDE AWARENESS OF PANDEMIC HEALTH RISKS OF ACTIVITIES (E.G., IRRIGATION, ROADS) THAT DISRUPT WILDLIFE HABITAT, AND ARE EXACERBATED BY CLIMATE RISKS.

Partners must integrate lessons learned from the COVID-19 pandemic into design considerations for future awards. Projects that involve potential ecological habitat loss (e.g., irrigation, road infrastructure) must include the additional risks related to zoonotic disease transmission and how climate risks may exacerbate the prevalence and spread.

In tandem, BHA will incorporate such infectious disease transmission risks associated with ecological disruption and climate stressors in ongoing oversight of existing Environmental Compliance and Climate Risk Management of activities. Such risks will be balanced with other more traditional climate risks and environmental impacts identified.

6.0 LIMITATIONS OF THIS INITIAL ENVIRONMENTAL EXAMINATION

The determinations recommended in this document apply only to interventions described herein. Other activities that may arise must be documented in either a separate IEE, if the activities are within the same activity an IEE amendment, or other type of appropriate environmental compliance document and shall be subject to an environmental review.

Other than activities determined to have a Positive Threshold Decision, it is confirmed that the activities described herein do not involve actions normally having a significant effect on the environment, including those described in 22CFR216.2(d).

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

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

7.0 REVISIONS

Per 22 CFR 216.3(a)(9), when ongoing programs are revised to incorporate a change in scope or nature, a determination will be made as to whether such change may have an environmental impact not previously assessed. If so, this IEE will be amended to cover the changes. Per ADS 204, it is the responsibility of the USAID AOR and awardees 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:

The Attachments of this BHA RFA IEE provide templates and guidance for various components of the environmental review that are helpful for implementing partners (IPs) to develop project-specific environmental and climate risk management documentation. These attachments are available on USAID's BHA Google Drive: <https://drive.google.com/drive/u/0/folders/1CwBSuhORG54Ehe94KbpdecilwO52zGS8>

ATTACHMENT 1: TEMPLATE FOR SUPPLEMENTAL INITIAL ENVIRONMENTAL EXAMINATIONS

ATTACHMENT 2: TEMPLATE FOR ENVIRONMENTAL MITIGATION AND MONITORING PLANS

ATTACHMENT 3: TEMPLATE FOR INSTITUTIONAL ARRANGEMENT PLAN

ATTACHMENT 4: TEMPLATE FOR ENVIRONMENTAL STATUS REPORTS

ATTACHMENT 5: GUIDANCE FOR CLIMATE RISK MANAGEMENT SCREENING

ANNEXES:

ANNEX A: ENVIRONMENTAL IMPACTS & MITIGATION MEASURES FOR COVID-RELATED ACTIVITIES

ANNEX B: PESTICIDE EVALUATION REPORT AND SAFER USE ACTION PLAN (PERSUAP) FOR APPROVED DISINFECTANTS

ANNEX C: CLIMATE RISK MANAGEMENT SUMMARY TABLE

ANNEX A: ENVIRONMENTAL IMPACTS & MITIGATION MEASURES FOR COVID-RELATED ACTIVITIES

TABLE 5: POTENTIAL ENVIRONMENTAL IMPACTS, AND CLIMATE RISKS, OF COVID-RELATED ACTIVITIES

Activity	Potential environmental and social impacts	Mitigation Measures
Support for the increased use of disinfectants/germicides to minimize COVID-19 transmission		
<p>Procurement, distribution, training, and use of germicides on surfaces</p> <ul style="list-style-type: none"> -in community setting -businesses -in private homes 	<p>Environmental and health risks of using germicides are dependent on the specific germicide used, method of application, and target, among numerous other factors. In the case of community use, applicators may be less knowledgeable of the risks, appropriate preparation (e.g., dilution) of the germicide. Additionally, they may inappropriately apply the germicide (e.g., not adhering to contact time requirements). Therefore, specific risks cannot be identified but a very general review of associated risks is presented below.</p> <p>Occupational and public exposure risks. Use of germicides by the public and community workers may increase the risk of these persons for developing respiratory illnesses (e.g., asthma) and contact dermatitis, especially when engineering controls (e.g., closed containers, adequate ventilation) and PPE (e.g., gloves) are not being used.</p> <p>Risks inherent to making homemade products. Where manufacturer products are not available, homemade germicides are sometimes prepared. Improper use of chemicals may cause allergic reactions and dermatitis, mixing some solutions, such as cleaning materials that contain ammonia and chlorine may form a deadly gas, some chemicals are irritating to eyes and to the respiratory system. Some of the chemical disinfectants are flammable and explosive.</p> <p>Ineffective treatment risk. Pathogens can be ineffectively treated if there is use of an inappropriate product (i.e., pathogens if intrinsically resistant), application of the product improperly (i.e., incorrect duration, concentration, pH, temperature), failure to remove inorganic debris (i.e., improper cleaning) prior to disinfection, insufficient contact of the disinfectant with the surface to be treated, insufficient concentration of active product.</p> <p>Environmental risks. Germicides are selected for their toxic properties and therefore these products may</p>	<p>Per USAID 22 CFR 216.3(b), pesticides must undergo further analysis. USEPA regulates germicides applied to objects and surfaces (but it does not regulate use of germicides in medical settings). Therefore use of disinfectants for non-medical purposes requires a 22 CFR 216.3(b)(1)(i)a-l analysis be completed for the selected germicides. Local authorities, host country health ministries, and international and US authorities must be consulted for a list of effective products for the particular pathogen of concern. The following resources are available, but may be updated or changed with the evolving context:</p> <ul style="list-style-type: none"> • CDC and USEPA recommended germicides for cleaning surfaces: https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html • https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2 <p>All support for increased use of disinfectants/germicides must abide by the PERSUAP analysis found in Annex B.</p>

	<p>harm beneficial microorganisms, plant and animal life. Some chemicals can contribute to pollution of air, water and soil and some may persist and bioaccumulate during their manufacture, use, or disposal.</p>	
<p>Procurement, distribution, training, and use of ULV or fogging germicides -in a community setting</p>	<p>ULV and fogging in public spaces, including city streets, public transportation, schools, community buildings, mosques and churches is typically conducted using ultra-low concentration sodium hypochlorite (dilute bleach); however, the active ingredient used may vary depending on the type of pathogen. The environmental and health risks associated with germicides are dependent on the specific germicide used, method of application, and target, among numerous other factors. Therefore, specific risks cannot be identified but a very general review of associated risk is provided in Sub-activity 4.1. ULVs in particular can pose respiratory threat to workers spraying and to certain sensitive populations, such as those with respiratory illness. Some skin sensitivity may also be possible in the general population. and patients if inappropriately conducted in the healthcare setting.</p>	
<p>Procurement, distribution, training, and use of germicides -on surfaces in a medical facility setting</p>	<p>See Sub-activity 4.1</p>	<p>a) For all manufactured and homemade products when selecting a disinfectant/germicide for a particular use, the user must be informed and take into consideration the human and environmental hazardous properties of the chemical and know how to use it properly. Safety Data Sheet (SDS) for all materials used and use instructions must be read and understood by all individuals, who will use the chemicals.</p>
<p>Procurement, distribution, training, and use of ULV or fogging germicides in a health facility setting</p>	<p>Environmental and health risks to germicides are dependent on the specific germicide used, method of application, and target, among numerous other factors. Therefore, specific risks cannot be identified but a very general review of associated risk is provided in Sub-activity 3.4.</p> <p>ULVs in particular can pose respiratory threat to workers and patients if inappropriately conducted in the healthcare setting. Older methods of fogging such as the use of formaldehyde, phenol-agents, and quaternary ammonium have shown adverse effects on health in facilities and many are no longer approved by EPA. Newer methods may not have entirely evaluated associated environmental risks.</p>	<p>and use instructions must be read and understood by all individuals, who will use the chemicals.</p> <ul style="list-style-type: none"> ● In the absence of local guidance, the IP must develop SOP/EHS manuals for the use of germicides or identify applicable SOP resources for disinfection.. See Sub-activity 3.1 for expectations of SOP/EHS contents. The appropriate references must be identified at the time of the outbreak. Two possible resources are: ● Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008 Update: May 2019 ● FDA-Cleared Sterilants and High-Level Disinfectants with General Claims for Processing Reusable Medical and Dental Devices ● General guidance is also provided in Annex 5 and 6 ● Where the IP is supporting use of training of germicides, the implicated staff must be

		<p>provided training on appropriate use of the disinfectant/germicide, PPE use, health and environmental risks of germicidal use, and appropriate waste treatment methods.</p> <ul style="list-style-type: none"> • Appropriate PPE must be provided to trainees or staff supported by the IP for use and training.
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Support for increased use of PPE and support for PPE production to minimize COVID-19 transmission

<p>Illustrative new SMEs responding to COVID-19 may include but not limited to:</p> <ul style="list-style-type: none"> -PPE production -Sanitizer production -Delivery services -Technology development -Use of UAVs to deliver samples/products 	<p>SMEs can cause significant environmental and related public health difficulties, which vary as broadly as the types of enterprises. SMEs can be more pollution-intensive than larger enterprises (per unit of production). When they are numerous and/or concentrated in particular areas, they can create environmental problems of alarming proportions.</p> <p>The adverse environmental impacts of SMEs can impose heavy social and economic burdens on their communities—degrading the ecosystem and food sources, undermining the health of neighbors and workers, and consuming fuel and resources beyond the point of renewability. These burdens in turn place significant costs upon not only the culpable SMEs but also other businesses—such as costs of procuring fuel, and costs of lost worker productivity due to sickness or injury.</p> <p>Environmental Problems caused by SMEs include:</p> <ul style="list-style-type: none"> • Chemical and hazardous waste • Air pollution and particulate dust • Water pollution • Soil erosion • Natural resource depletion • Solid waste • Odor • Noise • Health and safety risks <p>Many decisions made by SMEs have the potential to harm the environment and public health. Specific examples include:</p> <ul style="list-style-type: none"> • Location decisions • Purchasing decisions • Processing/manufacturing decisions • Housekeeping decisions • Waste disposal decisions <p>Overall, adverse impacts are often caused by poor</p>	<ul style="list-style-type: none"> a) Activities shall be conducted following principles of USAID small scale guidelines chapters: https://www.usaid.gov/environmental-procedures/sectoral-environmental-social-best-practices/sector-environmental-guidelines-resources#ms b) For support to banks, financial institutions, or small grants, activities will be screened to categorize the SME's work to the types and significance of environmental impacts they generate. c) Assistance for SME must comply with local, national, USAID, or its own organizational environmental policies. Yet, it is unreasonable to expect for IPs to conduct a detailed assessment of the impacts of every SME they work with. The goal of the screening phase is to determine quickly and easily assess if an assistance request from an SME (for a loan, business planning, accounting training, etc.) will need environmental review before it can be approved. d) With activities involving hazardous materials, such as disinfectants, the implementing partner must work with the business to develop a written plan to ensure appropriate procurement, storage, management and/or disposal of these materials. e) SMEs producing PPE must ensure consumers are aware of safe disposal options for these materials.
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<p>practices that go uncorrected because operators don't have the right technical information. Insufficient knowledge can lead to improper use of chemicals, inadequate treatment or disposal of solid and liquid waste, uncontrolled chemical air pollution, and production techniques that make intensive use of nonrenewable resources. Health and safety problems, in particular, are compounded by ignorance of industrial safety and environmental standards, as well as by lack of awareness of protective devices that are generally inexpensive and easy to obtain.</p>	
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ANNEX B: PESTICIDE EVALUATION REPORT AND SAFER USE ACTION PLAN (PERSUAP) FOR APPROVED DISINFECTANTS

PESTICIDE EVALUATION REPORT (PER) FOR APPROVED DISINFECTANTS AND 22 CFR 216.3(B)(1)A-L ANALYSIS

PURPOSE

The COVID-19 pandemic has brought unprecedented risks to societies globally. USAID is highlighting environmental risks related to increased disinfectant use and waste management to ensure that responses to the pandemic do not introduce additional risks and challenges for beneficiary communities.

USAID has developed this environmental impact and climate risk analysis for the COVID-19 response to ensure all Bureau for Humanitarian Assistance (BHA) partners take responsibility for mitigating direct and indirect environmental and climate risks resulting from the COVID-19 pandemic.

This annex provides BEO conditions and guidance on mitigating key risks related to COVID-19 impacted-activities and COVID-19 response activities.

ACTIVITY DESCRIPTION

This annex describes protocols for the following two (2) DFSA activities:

- Support for increased use of disinfectants/germicides to minimize COVID-19 transmission.
- Support for increased use of PPE and support for PPE production to minimize COVID-19 transmission.

Germicides: In order to prevent spread of the virus, it is expected that BHA partners will be relying on the increased use of germicides (e.g., disinfectants, sanitizers) to clean surfaces.

PPE: BHA partners will also be using or supporting the use of increased Personal Protective Equipment (PPE) to minimize the spread of the virus. USAID approved the use of program funds to finance the local production of medical-grade and non-medical grade personal protective equipment including (but not limited to) masks, gowns, face shields, protective eyewear, boot covers, linens, and gloves.

For the purpose of this document, uses of disinfectants (germicides) are divided into non-medical and medical uses. Some non-medical-use germicides utilized for cleaning inanimate objects and surfaces (environmental surfaces) are classified by the US Environmental Protection Agency (USEPA) as pesticides. This definitional distinction does not suggest that non-medical disinfectants are more toxic than medical use disinfectants. For purposes of USAID environmental review, however, this USEPA definition triggers the Pesticide Procedures analysis found at 22 CFR 216.3(B)(1)A-L.

Categorizations of Disinfectants/Germicides

USAID programs seeking to provide guidance to businesses, institutions and individuals in the procurement and use of disinfectants and sterilants on environmental surfaces (i.e., are not providing guidance on their use for medical purposes) must comply with conditions for non-medical Use of Disinfectants (see Part a) and seek guidance primarily from local authorities. USAID programs seeking to provide guidance for use of pesticides to medical facilities must comply with conditions for Medical Use of Disinfectants (see Part b).

a) **Conditions for Non-Medical Use of Disinfectants/Germicides**

For activities described below, use of disinfectants/germicides constitutes use of pesticides:

- Procurement and distribution of disinfectant/germicides by partners to all facilities, community health workers, businesses, public institutions, and households for cleaning and disinfection.
- ULV fogging and community-wide surface cleaning in non-medical facilities.
- Training and demonstration of disinfectant/germicide preparation and use as well as solid and liquid waste management.

This is because disinfectant/germicide use on non-medical surfaces is considered use of a pesticide and regulated by USEPA and therefore under 22 CFR 216.3(b)(1)(i) requires USAID Pesticide Procedures' "12-factor analysis."

As such, for these activities the following conditions will apply:

- Use only the following AIs as a sole ingredient and/or in combination of ingredients, that are registered and approved by USEPA and per the BHA COVID-19 PIEE for use of cleaning and disinfecting surfaces:
 - **Alcohols:** Ethanol, Isopropanol, Triethylene Glycol
 - **Salts:** Ammonium Carbonate, Ammonium Bicarbonate, Sodium Carbonate, Sodium Chlorite, Sodium Dichloro-S-Triazinetrione, Sodium Dischloroisocyanurate Dihydrate, Sodium Hypochlorite
 - **Acids:** Citric, Hypochlorous, Glycolic, L-Lactic, Octanoic, Peracetic, Peroxyacetic, Peroxyoctanoic, Phenolics
 - **Peroxides:** Hydrogen Peroxide, Peroxyhydrate
 - **Quaternary Ammonium** compounds
 - **Other ingredients:** Silver ions, botanical oil thymol
- Select products that contain active ingredients or mixture of active ingredients that are approved by this BHA COVID-19 PIEE listed above. For selecting which concentrations are effective, it is best to consult the [USEPA-approved list of products](#) and identify same or similar products.

- The partner must complete the disinfectant checklist for their planned interventions using disinfectants and retain the document with their EMMP.
- The A/COR and MEO must review and clear on the disinfectant checklist.
- Consult local authorities and follow host country established channels of communication when providing recommendations and procedures for use of disinfectants/germicides.

b) **Conditions for Medical Use of Disinfectants/Germicides**

For activities described below, use of disinfectants/germicides constitutes use of pesticides:

- Use of antiseptics/disinfectants/sterilant germicides on human body and medical **devices and in medical facilities on medical equipment.**

Best Management Practices, Health and Safety and Environmental Mitigation Measures specified by lead health organizations, such as CDC, must be applied to these uses and detailed in the EMMP. Recently developed references for COVID-19 in healthcare settings can be found at:

- CDC's [Information for HealthCare Professionals](#)
- CDC's [Information for Laboratories](#)
- CDC's [Rationale and Considerations for Chlorine Use in Infection Control for Non- U.S. General Healthcare Settings](#)

Mandatory 22 CFR 216.3(b)(1) - 12-Factor Analysis for Pesticides

The following 12-factor analysis meets the requirements mandated by 22 CFR 216.3(b)(1) for pesticide analysis is intended to assist and serve as a basis for SIEE development for implementing partners engaged in activities requiring use of germicides that fall under definition of pesticides as described above. Modifications and additions of relevant information can be made as appropriate.

A. U.S. Environmental Protection Agency (US USEPA) registration status of the proposed pesticides

Active ingredients (AIs) and combinations of AIs listed above are registered by USEPA.

B. Basis for selection of pesticides

These pesticides were recommended by USEPA as effective for treatment of environmental surfaces and are based on full product list provided by USEPA at:

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

C. Extent to which the proposed pesticide use is part of an IPM program

These AIs are recommended in combination with handwashing measures and recommendations to avoid touching face, eyes and mouth with unwashed hands. [The following site](#) provides links to both CDC recommended hand cleaning procedures: <https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html>

D. Proposed method or methods of application, including the availability of application and safety equipment

Methods of application of products are in accordance with the label and manufacturer instructions. For home made products follow strictly dosage instructions provided by relevant authorities.

E. Any acute and long-term toxicological issues with the proposed use, and measures available to minimize such hazards

All chemical disinfectants are, by their very nature, potentially harmful or toxic to living organisms. Like other toxic substances, the chemical disinfectants can enter the body through several routes, including absorption through skin or mucous membrane, inhalation and ingestion. Sometimes a chemical substance can enter through more than one of the routes. However, chemical disinfectants would be effective and safe tools when handled properly with the safety measures in place. If misused, they can be hazardous and harmful to people and the environment.¹¹⁷

Accidental exposure in high doses may result in acute toxic reaction such as skin irritation, dizziness or nausea, or they may be permanent: blindness, scars from acid burns, mental impairment and other adverse health effects. Acute toxicity is often seen within minutes or hours after a sudden, high exposure to a chemical. However, there are a few instances where a one-time high-level exposure causes delayed effects. Symptoms of exposures may not appear for several days.

As a general rule, chronic toxicity appears many years after exposure first began. The health effects may occur where exposure has taken place repeatedly over many years. For this activity, repeated exposure over the long term is not anticipated.

Disinfectants can pose physical/chemical risks and can be flammable or explosive. Products must be stored at temperatures designated by their labels/Safety Data Sheets.

All AIs and products must be accompanied by the label and, where available, a Safety Data Sheet. First aid instructions must be available to users and health workers.

All disinfecting products/AIs and their containers must be properly triple rinsed away from all water sources, punctured and properly recycled or disposed of, never reused.

F. Effectiveness of the requested pesticide for the proposed use

The AI approved by this IEE are contained in USEPA approved/recommended products for disinfection of environmental surfaces against COVID-19.

G. Compatibility of the proposed pesticide use with target and non-target ecosystems

¹¹⁷ <https://www.labour.gov.hk/eng/public/os/C/Disinfectants.pdf>

Disinfectants contribute to air and water pollution during their manufacture and use. Cleaning, sanitizing and disinfecting products can increase indoor air pollution. However, AIs identified by USEPA as effective against COVID-19 are recommended by this IEE.

H. Conditions under which the pesticide is to be used, including climate, geography, hydrology, and soils

AIs in products recommended will be used mostly indoors and surfaces around structures. These AIs/products must be used away from ambient environmental water sources and in a manner that prevents runoff.

I. Availability of other pesticides or non-chemical control methods

Only AIs/Products registered by USEPA are recommended. Other AIs, such as aldehydes that are approved by EU for disinfection, are not covered by this IEE.

J. Host country's ability to regulate or control the distribution, storage, use, and disposal of the requested pesticide

Many BHA-affiliated host countries have limited frameworks for regulation of pesticides and most do not satisfactorily regulate disinfectants for use on environmental surfaces. Regulation of disinfectants is a joint effort between Ministries of Health (MoH) and Ministries of Environment (MoE). Many BHA program regions have a network of health clinics and environmental quality directorates that can be instrumental for Training of Trainers (TOT) and promulgation of guidelines for use of disinfectants.

K. Provision for training of users and applicator

Guidelines, training materials and awareness built through Social Behavior Change Communication (SBCC) messaging must be developed for each country, translated to local languages, and distributed through MoH networks. These must also include a list of AIs, labels, SDSs, and instructions for first aid and environmental controls.

L. Provision made for monitoring the use and effectiveness of each pesticide

Use and effectiveness will be tracked through regular reporting by the partners supporting the actions involving germicides. Overall, monitoring effectiveness in limiting spread of COVID-19 will depend on numerous factors that are likely to be monitored as part of disease surveillance by host countries' Ministries of Health and their international donors.

SAFER USE ACTION PLAN (SUAP) FOR USE OF DISINFECTANTS

This annex flows from the Pesticide Evaluation Report (PER) analysis to provide conditions for safe use of disinfectants, including specific practices related to COVID-19. Together with Annex 3, the PER and SUAP

satisfy the requirements of 22 CFR 216.3(b)(1)(i). Since information and best practices are still evolving, users must frequently visit websites for updates and maintain contact with their local health authorities.

Disinfection Procedures

Disinfection at a household with a suspect or confirmed case of COVID-19:

A complete guide to disinfecting households with suspected or confirmed COVID-19 cases is available at: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cleaning-disinfection.html>

When using manufactured product for disinfection of inanimate objects:

- a) Select products that contain active ingredients or mixture of active ingredients that are approved by this IEE. For selecting which concentrations are effective, it is best to consult the USEPA-approved list of products and identify the same or similar products. A full list of products approved is available at: <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
- b) Always ensure that the product has a proper label. Labels of disinfectants must include the following information:
 - Product name
 - Company name and address
 - Net contents
 - Manufacturing/host country registration detail
 - Active ingredients statement
 - Child hazard warning
 - Hazard signal word
 - First aid instructions
 - Precautionary statements and requirements for use of PPE
 - Environmental hazards statements
 - Physical/chemical hazards statements
 - Directions for use and misuse statement
 - Storage and disposal instructions
- c) Always use products in accordance with the label. Strict attention must be given to the proper use of a product with regard to its application, effectiveness, and associated hazards (human, animal, and environment). Where possible, obtain the Safety Data Sheet that provides more extensive product detail.

Directions for use must specify:

- The surfaces, objects or inanimate environments intended for treatment (floors, walls, bathroom surfaces, etc.)
- The major areas in which the product is intended for use (hospitals, restaurants, homes, schools).
- The level of activity (e.g., Sanitizer, Disinfectant, Sporicide)
- Pathogens against which product is effective
- How the product must be applied

- Pre--cleaning steps
- Recommended use dilution and provide instructions for preparing it including the units of measure (milliliters, liters, ounces, quarts).
- Method of application
- Contact time
- How to remove the product from the surface after the recommended exposure time[1]

When using homemade products for disinfection of inanimate objects:

Natural household disinfectants may be less effective than commercial household disinfectants. It is important to be informed on hazards of AI(s) used for homemade product preparations. Where possible, SDS sheets must be obtained for AI(s) used in preparing homemade products. The SDS information and risk assessment will help determine, the PPE requirements, describe health hazards of unprotected exposure to people and animals, describe physical hazards such as flammability and explosion, and environmental hazards such as toxicity to aquatic organisms, provide hazard statements and first aid instructions and instructions for use, storage and disposal of chemical used in making of a disinfectant.

COVID-19 Categories of Disinfectants – Considerations for Safe Use

Bleach

Homemade disinfectants are most commonly made from household bleach. Chlorine containing bleach is a common household disinfectant.

Household bleach is usually a mixture of chemicals, its main active ingredient is a solution of ~3-6% sodium hypochlorite (NaOCl), which is mixed with small amounts of sodium hydroxide, hydrogen peroxide, and calcium hypochlorite. Unexpired household bleach will be effective against coronaviruses when properly diluted.

Bleach solution preparation recommended by CDC[1]:

Diluted household bleach solutions can be used if appropriate for the surface.

- Prepare a bleach solution by mixing:
 - 5 tablespoons (1/3rd cup) bleach per gallon of water or
 - 4 teaspoons bleach per quart of water
- Follow manufacturer’s instructions for application and proper ventilation.
- Check to ensure the product is not past its expiration date.
- Never mix household bleach with ammonia or any other cleanser.

Excessive use of bleach indoors, especially when mixed with some other cleaning agents, can release harmful chlorine gas. Inhalation and long term exposure can cause lung damage and respiratory illnesses.

Chlorine compounds found in bleach are unstable and react with a variety of chemicals and water when it is released into the environment. Because chlorine is so reactive, it is not normally detected in the environment except for very low levels. Bleach spilled into surface water may adversely affect aquatic organisms. Inhaling bleach fumes may cause eye, nose, throat irritation depending on dosage. The effects

will depend also on exposure duration. In general, people who suffer from respiratory conditions such as allergies or hay fever, or who are heavy smokers, tend to experience more severe effects than healthy subjects or nonsmokers. Spilling hypochlorite solution on the skin can produce irritation. The severity of the effects depends on the concentration of sodium hypochlorite in the bleach. Drinking small amounts of hypochlorite solution (less than a cup) can produce irritation of the esophagus. Drinking concentrated hypochlorite solution can produce severe damage to the upper digestive tract and even death. These effects are most likely caused by the caustic nature of the hypochlorite solution and not from exposure to molecular chlorine. Long-term exposure to small amounts of sodium hypochlorite has not shown to have significant impacts on human health.^[2]

Alcohols

Alcohols that are components of drinking beverages and rubbing alcohols are recommended for sanitizing, not for drinking. Alcohol products must be at least 70%. Most drinking beverages are below 48% alcohol and not appropriate for sanitizing.

Rubbing alcohol products that are at least 70 percent alcohol reportedly will kill viruses. When using rubbing alcohol, do not dilute it below 70%. Alcohol higher than 70% is not always better, and 70% alcohol is better than 91% because water plays a key role in protein denaturation. Consumer Reports says rubbing alcohol is safe for all surfaces but can discolor some plastics.

Although it has the word alcohol in its name, rubbing alcohol is completely different from the ethyl alcohol found in alcoholic beverages. Isopropyl alcohol, also referred to as isopropanol and IPA, is twice as toxic as ethanol. Swallowing just 8 ounces, or 240 milliliters, of rubbing alcohol can be fatal — but as little as 20 milliliters mixed with water can make a person sick.

Inhaling rubbing alcohol can also cause serious side effects, including headache, nausea, vomiting and irritation of the nasal passages and lungs. Inhaling isopropanol fumes can cause a loss of consciousness.^[4]

Hydrogen Peroxide

Hydrogen peroxide is typically sold in concentrations of about 3%. Hydrogen peroxide at this concentration must be able to neutralize the coronavirus. It is recommended to be left on surfaces for at least 1 minute. Hydrogen peroxide is not corrosive and can be used on metal surfaces. Similar to bleach, it can discolor fabrics. Hydrogen peroxide had minimal impact on the environment as it decomposes into oxygen and water.

Acids

Commercial products effective against Covid-19 often contain acids. Acids range from weak to very strong. Weak acids such as household vinegar are not likely to be effective against coronavirus (NOTE: Household vinegar (5% acetic acid) combined with hydrogen peroxide creates peroxyacetic acid. It's an EPA approved, environmentally friendly, disinfectant for coronavirus).

Concentrated industrial strength acids are not recommended as they can be extremely **corrosive** and can cause dangerous burns when not handled properly. Only acids approved by this IEE can be used in preparation of homemade products.^[5]

Quaternary ammonium compounds

The **quaternary ammonium compounds** (QAC) are widely used as surface **disinfectants** and are an active ingredient in household cleaning products. Health hazards of QACs include contact dermatitis, triggering of asthma symptoms in people who already have asthma or new onset of asthma in people with no prior asthma, eye and mucous membrane injuries from splashes or contact with mists, and oral and gastrointestinal injuries from swallowing solutions containing QACs.^[6] Some household products can be diluted with water but the correct dosage effective against Covid-19 must be established. ^[7]

Oils

Botanical oil thymol is an ingredient in some USEPA approved products effective against Covid-19. There is no evidence that other oils such as tea tree oil are effective.

ANNEX C: CLIMATE RISK MANAGEMENT SUMMARY TABLE

Table 4: Climate Risk Management Summary Table

DEFINED OR ANTICIPATED PROGRAM INTERVENTION	TIMEFRAME	GEOGRAPHY	CLIMATE RISKS	RISK RATING	CLIMATE RISK MANAGEMENT OPTIONS	HOW ARE RISKS ADDRESSED	OPPORTUNITIES TO STRENGTHEN CLIMATE RESILIENCE
Commodity Fumigation	Life of the award	Areas where commodity fumigation will occur. Likely country-wide.	Certified applicators unwilling to use personal protective equipment due to increased temperatures.	Low	Educate applicators on importance of wearing protective equipment	Educate applicators on importance of wearing protective equipment	Ensure that applicant training includes information on climate risks and emphasizes the importance of protective equipment
			Increased temperatures and changes in rainfall patterns, changes occurrence of pests and pathogens and therefore fumigation requirements.	Medium	Conduct review of relevant literature on how pests and pathogens will change in the area due to climate change and evaluate how that might impact commodity storage and fumigation. Ask local community members about observed changes in pathogen and pests over recent years, and use fumigation that is relevant for the current situation.	Conduct review of relevant literature on how pests and pathogens will change in the area due to climate change and evaluate how that might impact commodity storage and fumigation. Ask local community members about observed changes in pathogen and pests over recent years and use fumigation that is relevant for the current situation.	Consult relevant literature and local communities frequently throughout the life of project to understand how pests and pathogens could change due to climate change impacts and how that might impact commodity storage and fumigation. Consider climate change impacts when planning inspection times to ensure that any new pest species or increasing occurrences of pest infestations are identified as early as possible.
			Warehouses where commodities are stored are in locations threatened by extreme	High	During site selection evaluate if storage facilities are in areas that are exposed to	During site selection evaluate if storage facilities are in areas that are exposed to	During site selection evaluate if storage facilities are in areas that are exposed to extreme

			weather, or in flood zones.		extreme weather or regular flooding. Ensure that all pesticides stored in warehouses (as non-fumigants may also be stored in warehouses) are in locations safe from the impacts of extreme weather events (i.e., on raised platforms in the case of flood risk).	extreme weather or regular flooding. Ensure that all pesticides stored in warehouses (as non-fumigants may also be stored in warehouses) are in locations safe from the impacts of extreme weather events (i.e., on raised platforms in the case of flood risk).	weather or regular flooding. Improve early warning of climate and weather events, such as rainfall or flood, to improve preventative protection of commodities and stored pesticides
Increased use of disinfectants/germicides to minimize COVID-19 transmission	Life of the award.	Areas where COVID is present. Likely country-wide.	Disinfectant/germicide supply chain distribution interrupted due to extreme climate or weather events.	Low	Logistic and supply chain delivery plans and teams should consider alternative routes, be adaptive, and both plan ahead and be prepared for extreme climate and weather events both increasing demand, and interrupting supply chain delivery.	To be determined by partner based on local context and integrated into SIEE CRM Table.	Consider working with host country government to improve climate risk planning and resilience of supply chains.
			Effectiveness of disinfectants/germicides could be impacted by changing temperature ranges. Sunlight may also breakdown the active ingredients in bleach.	Low	Disinfectants with published temperature ranges appropriate for use should be prioritized. Consider UV ray exposure before spraying bleach outdoors, as it may be ineffective.		Consider raising awareness of climate risk's impacts to efficacy of disinfectants.
Increased use of PPE and support for PPE production	Life of the award	Areas where COVID is	Travel for training, capacity building, or other activities for SMEs producing Personal Protective Equipment	Low	When planning trainings and similar activities, partners must consider seasonal forecasts and		Consider integrating how climate contributes to pandemics and infectious disease

to minimize COVID-19 transmission		present. Likely country-wide.	(PPE) is interrupted due to extreme weather events.		rainy seasons when choosing dates. Partners should use contingency planning and consider virtual trainings as options.	To be determined by partner based on local context and integrated into SIEE CRM Table	occurrence during trainings.
			Locations where PPE is stored or produced may be impacted by extreme weather events or power availability.	Low	Partners should plan ahead and be prepared for extreme climate and weather events to avoid damage to PPE and PPE production facilities.		Consider working with host country government to improve climate risk planning and resilience of PPE production and storage facilities.
			PPE supply chain distribution interrupted due to extreme climate or weather events.	Low	Logistic and supply chain delivery plans and teams should consider alternative routes, be adaptive, and both plan ahead and be prepared for extreme climate and weather events both increasing demand, and interrupting supply chain delivery.		Consider working with host country government to improve climate risk planning and resilience of supply chains.
			Improper disposal and waste of PPE, clogging drainage and waterways, increasing risk of flooding due to heavy rainfall events.	Moderate	Ensure sufficient waste management collection and disposal systems are in place to accommodate increased PPE waste, away from known at-risk flooding zones.		Consider working with local waste management authorities to plan for and minimize waste runoff associated with extreme weather events and flooding.