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USAID'S INTEGRATED HEALTH PROGRAM

Climate Risk Mitigation Plan

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ACRONYMS AND ABBREVIATIONS

COP	Chief of Party
COR	Contracting Officer's Representative
CRMP	Climate Risk Mitigation Plan
DCOP	Deputy Chief of Party
DHIS2	District Health Information System 2
DRC	Democratic Republic of the Congo
FP	Family Planning
GBV	Gender-Based Violence
GDRC	Government of Democratic Republic of the Congo
GIS	Geographic Information System
IHP	Integrated Health Program
IR	Intermediate Result
MNCH	Maternal, Newborn and Child Health
MOH	Ministry of Health
PAD	Project Appraisal Document
RH	Reproductive Health
SBC	Social and behavior change
TB	Tuberculosis
USAID	United States Agency for International Development
WASH	Water, sanitation, and hygiene

CLIMATE RISK MITIGATION PLAN

The goal of USAID's Integrated Health Program (USAID IHP) is to strengthen the capacity of Congolese institutions and communities to deliver high-quality, integrated health services that sustainably improve the health status of the Congolese population. The program builds on previous investments in health in the Democratic Republic of the Congo (DRC), USAID's Country Development Cooperation Strategy and related Government of the DRC (GDRC) strategies and policies.

The program will provide support to empower health zones and sustainably improve the ability of the DRC health system to deliver quality services in reproductive health and family planning (RH/FP); maternal, newborn, and child health (MNCH); nutrition; tuberculosis (TB); malaria; water, sanitation, and hygiene (WASH); and supply chain services. Cross-sector areas of program focus include gender equity, gender-based violence (GBV), climate change, social and behavior change (SBC), and innovation. Targeted institutions are the province directorates, the health zones, the facilities and the health committees and local civil society organizations. The program targets strengthening of both facility-level and community-level primary health care platforms. USAID IHP will operate in nine provinces, operationally grouped in three regions of Eastern Congo (South Kivu and Tanganyika), Katanga (Haut Katanga, Komeni, and Kolwezi), and Kasai (Kasai Central, Lomami, Sankuru and Kasai Oriental).

For all projects, the Project Appraisal Document (PAD) narrative must contain a summary of the climate risk assessment methodology and the main results of the assessment. These results must include:

1. Summary of the most significant climate risks to the project (including all those that are moderate or high);
2. Discussion of how the project addresses those risks;
3. Rationale behind the acceptance of any climate risks; and
4. Summary of how the climate risk management process will continue at the activity level (including risks to be addressed through activity design and/or implementation as well as further risk analysis to be conducted, if any).

Summary of the climate risk assessment methodology

Environmental expert Mr. Peter Chandonait of Abt Associates Inc., conducted this climate risk assessment for USAID IHP using resources from USAID's Climate Risk Management pilot training program (provided by the Training Resources Group, Inc., in Arlington, VA on July 24, 2018), and information from USAID's Climatelinks website. In addition, Mr. Chandonait performed general research using internet resources, including USAID's DRC Climate Vulnerability Profile. Finally, Mr. Chandonait evaluated the programmatic and activity plans of USAID IHP to assess the impact that climate change and environmental factors may have on the program's objectives, and their potential effects on the target populations.

Mr. Chandonait carefully studied USAID IHP's objectives and the required Intermediate Results (IRs) to understand its planned activities, and the facilities, infrastructure, and resources required for their successful execution. USAID IHP's Chief of Party (COP) and Deputy Chief of party (DCOP) briefed Mr. Chandonait on the context of the program, its challenges, and the adaptive capacity of the DRC within the program's intervention areas.

Mr. Chandonait studied potential impacts that climate change could have over the lifetime of the program and beyond. USAID IHP used a 20-year time horizon of climate projections, as the program is expected to have a lasting impact on the intervention areas. The COP, DCOP and home office team brainstormed methods of addressing potential impacts to minimize their effect on the program's success. This process included an analysis of potential synergies and cross-sectoral benefits that could be attained by working with other projects (e.g., in agriculture) or stakeholders (e.g., the Ministry of

Transportation). We also recommend linking community activities that USAID IHP undertakes to include dialogue on the connections between climate change and health, to enhance citizens' understanding of climate change and its health and economic impacts.

For identified risks, we have provided at least one mitigation action that can be incorporated into the program work plans. Fortunately, some of the mitigations—such as improvements to WASH facilities, and expanding the number and capabilities of health centers—fall into the objectives and IRs for this program. Other mitigation efforts may require outreach to different stakeholders, such as agriculture and transportation officials or projects, and some may be beyond the scope of this program to influence.

USAID IHP's component on nutrition must consider the effect of climate change on agriculture, given the obvious links between the two sectors. Malnutrition is often already a problem in the program's focus area, and rainfall is predicted to decrease in some areas and increase in others, further exacerbating the situation. Changes in agricultural patterns, loss of production due to seed not adapted to new weather cycles, and deforestation may all play a role in reducing food availability. Other circumstances affecting nutrition could include reduced or changed healthy food availability, seed stock to accommodate changing growing seasons and rainfall that might differ from traditionally favored consumer varieties, and new cropping timing and practices.

These changes would require education about different or modified sources of nutrition. USAID IHP will modify our nutritional education packages and work with the MOH to include awareness-building of possible changes to healthy food availability and how to handle such changes while improving nutrition. Where possible, the program may cooperate with various agricultural stakeholders (farmers, farmer groups, government extension workers, etc.) and other projects or government programs to incorporate these messages into their programming, including nutritional education forums.

The major climate change risk is the threat to the DRC's already poor transportation infrastructure, which could have an increasingly negative impact on beneficiaries' access to health centers and hospitals, and on the delivery of medicines and supplies to the health centers. Alternate routes are seldom available. Improving transportation infrastructure is well beyond the scope of USAID IHP. However, the program will look to establish alternative delivery and transportation methods, such as using drones or water transportation where feasible. Though USAID IHP has limited capacity to address physical and natural constraints, it can help raise awareness of climate risks and mitigating options, and help build skills at various levels to confront these risks using national policy and international recommendations on the role of individuals, civil society, government institutions, and government to address these challenges.

Future actions in support of climate risk mitigation relating to the program will include 1) all-staff review of the work plan once approved by USAID to include discussion of identified climate risk and those that may emerge in a discussion of the work plan, and 2) as part of the quarterly report preparation, address emerging or previously identified risk factors and discuss activities that could be developed to ease their effects. Subsequent annual work plans will also include an updated Climate Risk Mitigation Plan (CRMP).

DRC CLIMATE PROFILE SUMMARY

DRC’s vast territory—including inland lakes, mountains, grassland savanna, and tropical and highland forests—spans multiple climate classifications that can be grouped into three zones, as shown below.

DRC Climate Zones

Zone 1: North and South Kivu, Ituri, northern portions of Kasai, Central Kasai and Tanganyika	Tropical rainforests along the Congo River and its tributaries characterized by two rainy seasons (March-May and September-December), followed by two short dry seasons (June-August and January-February)	Averages range from 24-25°C; limited variability throughout the year
Zone 2: Kinshasa, southern Kasai and southwestern Kasai Central	Mountainous terraces and dense grasslands with predominantly tropical wet and dry climates and a dedicated rainy season (July-August)	Averages range from 24-25°C; limited variability throughout the year
Zone 3: Southeastern Kasai Central, Kasai Oriental, Haut Katanga and southern Tanganyika	Subtropical climates of savannas in the south and southeast with a single rainy season between December-February	Slightly lower but consistent temperatures range from 22-23°C

HISTORICAL CLIMATE

Observations since the 1960s indicate:

- Increased temperature extremes; warmest day of the year increased by about 0.25°C per decade.
- Increased frequency of intense rainfall events.
- Increased temperatures of deep waters in Lake Tanganyika by 0.2-0.7°C.

FUTURE CLIMATE

Projected* changes include:

- Temperature increase of 1-2.5°C by 2050 and of 3°C by 2100.
- Rise in minimum temperatures will exceed rise in maximum temperatures.
- Continued increased frequency of intense rainfall events and prolonged dry spells.
- Possible decreases in dry season rainfall (June-August and September-November) in southern region of the country by 2050.

**Meteorological observations across DRC are scarce, providing limited information on future rainfall levels. Some models project significant decreases in rainfall while others project increases. Nevertheless, although annual total precipitation amounts might not change dramatically, rainfall is projected to become substantially more variable.*

PROGRAM CRM TOOL OUTPUT MATRIX: CLIMATE RISKS, OPPORTUNITIES, ACTIONS

Defined or Anticipated Program Elements	Timeframe	Geography	Climate Risks	Adaptive Capacity	Risk Rating	Opportunities	Risk Management Options	How Risks are Addressed	Next Design/ Implementation Steps	Accepted Risks
<p>Program Goal:</p> <p>Strengthen capacity of Congolese institutions and communities to deliver quality, integrated health services for sustainable improvement of Congolese population's health status.</p>	0-20 years	Eastern Congo, Kasai, Katanga	Climate changes projected to change or expand geographic area and population susceptible to some vector- and water-borne diseases. Health facilities may have low capacity or are remote.	Medium DRC has experience in rapid response to epidemics (e.g. after Ebola)	Moderate	Adapt geographic coverage by adding service delivery points or use temporary and mobile services	Establish land- and water-based mobile health units Establish new health centers, hire and train clinicians/staff. Establish community-based emergency transport systems.	Involve provinces and health zones to address risks in their emergency preparedness plans Inform communities of climate-related risk and direct toward trusted weather information	Use input from MOH and DHIS2 /GIS data to determine where new / upgraded health centers are needed. Explore feasibility of mobile health units.	None
			Projected change in rainfall (decrease) may impact crop production and worsen malnutrition and disease susceptibility. Health systems may be over-burdened.	Low. Already prevalence of malnutrition.	High	Installation of irrigation wells to maintain crop productivity; use of drought-tolerant crops; water storage infrastructure.	Research water diversion and storage systems. Explore irrigation well installation. Encourage drought-tolerant crop use.	Water diversion and storage systems; Roof-top rainwater collection and treatment systems at health facilities; irrigation wells; encourage drought-tolerant crop use.	Explore possible agricultural linkages to improve and protect crop production.	None
			Projected decrease in rainfall may stress WASH infrastructure and water supply, leading to disease from contaminated drinking water.	Low. WASH facilities are limited.	High	Improve WASH infrastructure at health facilities; rooftop rainwater collection and treatment systems.	Improve WASH infrastructure at health facilities; rooftop rainwater collection and treatment systems.	Improve WASH infrastructure at health facilities; rooftop rainwater collection and treatment systems.	Develop designs for WASH facilities at health centers and design rooftop collection and treatment systems.	None
<p>Program Goal:</p> <p>Strengthen capacity of Congolese institutions and communities to deliver quality, integrated health services for sustainable improvement of Congolese population's health status</p>	0-20 years	Eastern Congo, Kasai, Katanga	Decrease in rainfall results in long distances to water and extended hours to collect water, especially for women, which may exacerbate inequalities experienced by women.	Medium	Moderate		Adapt activity hours to accommodate women who have to travel long distances to look for clean water and other resources.	Develop inclusive-resilient climate financing options. Inform communities of climate-related risk and direct toward trusted weather information	Identify opportunity from the activity to leverage other activities (e.g. environmental and social activities better equipped to address the risk) Create awareness and disseminate climatic information (early warning systems), helping participants plan for anticipated events	None

Service Delivery Objective Increase access to quality, integrated health care services in target health zones.	0-20 years	Eastern Congo, Kasai, Katanga	More seasonal flooding may damage transport infrastructure, limit access to health facilities in emergencies.	Low capacity to repair damaged transport infrastructure. Alternate routes unavailable generally.	Moderate	Establish land- and water-based emergency transport systems; monitor rainfall, entomological, and epidemiological data to detect patterns; build climate-smart WASH infrastructure at health centers.	Establish land/water-based mobile health units to service remote pops. Build new health centers, hire and train staff, establish emergency transport systems.	Establish land/water-based mobile health units to service remote pops. Build new health centers, hire and train staff, establish emergency transport systems.	Establish linkages with national and provincial MOH and Transport officials to determine possibilities for upgraded facilities in target areas, alternate transport mechanisms; establish data-sharing and response mechanisms to track disease trends	None
			Shifting and expansion of disease transmission zones to new areas; altered seasonality; increased activity of vectors that transmit diseases (malaria, dengue fever, etc.).	Limited storage choices. DHIS2 can help with trends and predict needs. Capacity for improving WASH infrastructure is limited.	LOW		Monitor rainfall, entomological, and epidemiological data to detect patterns.	Monitor rainfall, entomological, and epidemiological data to detect patterns.		None
			More seasonal flooding may damage WASH and storm water infrastructure, leading to increased disease transmission.		High		Build climate-smart WASH infrastructure.	Build climate-smart WASH infrastructure.		None
Health Systems Objective Improve logistics (quantification, procurement, storage, and distribution of medicines and supplies)	0-20 years	Eastern Congo, Kasai, Katanga	More seasonal flooding and/or extreme events may damage transport systems leading to medicine/supply distribution failures.	Low capacity to repair damaged transport infrastructure. Alternate routes unavailable generally. Limited storage choices. DHIS2 can help with trends and predict need for infrastructure and logistics for medicines/supplies.	High	Employ flood early warning systems to prepare and pre-position medical supplies. Use DHIS2 to observe and predict health trends. Possible use of drones for delivery of medical supplies.	Establish land/air/water-based transport systems to provide goods and services to remote pops. Community-based emergency transport systems.	Establish land/air/water-based transport systems to provide goods and services to remote pops. Community-based emergency transport systems.	Establish linkages with national and provincial MoH and Transport officials to determine possibilities for upgraded facilities in target areas, alternate transport mechanisms; establish data-sharing and response mechanisms to track disease trends	None
			Extreme events may flood storage facilities, leading to damage and/or loss of medicine and supplies.		Moderate		Choose facilities that are not in a flood zone. Convert 40 ft. shipping containers to storerooms or elevate on concrete blocks.	Establish facilities not in a flood zone. Convert shipping containers to storerooms.		None
			Shifting and expansion of disease transmission zones; altered seasonality; increased vector activity may confound quantification, leading to stock-outs, over supply, expiration of medicine.		Low		Use DHIS2 health data to track trends. Best practice training for storekeepers. Centralize data from remote locations and transfer stock as needed.	Use DHIS2 health data to track trends. Best practice training for storekeepers. Centralize data from remote locations and transfer stock as needed.		None

<p>Health Systems Objective</p> <p>Improve WASH infrastructure and service facilities at health centers.</p>	0-20 years	Eastern Congo, Katanga	Increased flooding may damage or overwhelm WASH infrastructure, leading to contamination of drinking water supplies.	Low capacity for infrastructure improvement.	Moderate	Investigate possibilities for water diversion and storage such as reservoirs, cisterns, rain barrels. Install rooftop rainwater-collection systems with cisterns at health facilities.	Build climate-smart WASH infrastructure.	Build climate-smart WASH infrastructure.	Develop plans and designs for WASH facilities at health centers.	None
			Programmed decrease in rainfall will affect water availability.		High		Build water collection, treatment, and storage systems (e.g. rooftop collection and cistern storage at health centers)	Build water collection, treatment, and storage systems (e.g. rooftop collection and cistern storage at health centers)		None
<p>Behavior Change Objective</p> <p>Increased practice of priority health behaviors at the individual, household, and community levels.</p>	0-20 years	Eastern Congo, Kasai, Katanga	Increased flooding may damage or overwhelm WASH infrastructure, leading to contamination of drinking water supplies.	Low capacity for improvement. Existing WASH infrastructure is limited.	High	Build manufacturing capacity for simple, economical, home-based water filtration systems. Train homeowners on their use.	Build weather-resistant WASH infrastructure at health centers. Build manufacturing capacity for simple, economical, home-based water filtration systems.	Build weather-resistant WASH infrastructure. Build manufacturing capacity for simple, economical, home-based water filtration systems.	Develop and implement designs for WASH facilities at health centers. Explore possibilities for establishing water filtration system manufacturing.	None
			Changes in rainfall patterns and temperatures may change ecology vector behavior and modify expose beneficiaries to new health threats							
			Changes in rainfall patterns and temperatures may require changes in agricultural practices and outcomes.	High	Design and deliver materials to educate beneficiaries on the impacts of climate change.	Design and deliver materials to educate beneficiaries on the impacts of climate change.	Design and deliver materials to educate beneficiaries on the impacts of climate change.			

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