

# USAID/GUINEA COUNTRY DEVELOPMENT COOPERATION STRATEGY

## CLIMATE ANALYSIS

### SUMMARY OF CLIMATE RISK ANALYSIS

#### Two Key Findings

- **Climate risks across sectors are related.** For example, flooding impacting vulnerable populations impacts almost all sectors, especially youth, where USAID/Guinea proposes programming.
- **Integrate results into the program cycle.** Many climate risks are already being addressed and considered by USAID/Guinea. To ensure risks are addressed during implementation, climate risk management, including the findings of this analysis, should be integrated into program design, solicitation language, and work plans as appropriate.

#### Introduction And Context

This annex provides details about how USAID/Guinea's Development Objectives and Programs may be at risk from climate shocks and stresses, and how to potentially limit the impacts of those risks. Given the high level at which this annex has analyzed climate risk (i.e., the CDCS level), more detailed analyses will be necessary at the project and activity levels for some programmatic areas with high or moderate risks. For low risk programs additional analysis is not required and may not be necessary. In addition, this analysis identifies sources of greenhouse gas (GHG) emissions in Guinea, and how USAID programming can limit emissions.

This climate risk screening was conducted to help identify and prioritize risks that should be considered in order to promote resilient development and ensure the effectiveness of USAID's investments. While it is not a full climate vulnerability assessment, this screening helped identify potential programmatic areas that may require further assessment when designing projects and activities. Just as important, it also helped identify those programmatic areas that are at a low risk from climate, thus further analysis and consideration are not required at later stages of the program cycle.

#### Method For Climate Risk Screening

For the screening process, USAID/Guinea selected an approach similar to option I as articulated in the ADS Mandatory Reference for Climate Change in USAID Strategies. This approach included USAID/Guinea virtually hosting a climate expert from USAID/Washington in

August-October 2020. USAID/Guinea's Program Office and Climate Integration Lead (CIL) worked closely with the climate expert to meet with and engage with all technical teams in the Mission to complete the climate risk screening tool and draft the content of this annex. The technical basis of the assessment was partly informed by the information outlined in the following resources:

[Guinea climate risk profile](#) (USAID)

[Guinea Intended Nationally Determined Contribution](#) (Government of Guinea)

[Guinea climate knowledge portal](#) (World Bank)

[Guinea greenhouse gas emission factsheet](#) (USAID)

Other technical documents developed by the Government of Guinea, other donors, and academics were also consulted.

This information was complemented by the extensive knowledge and expertise of the technical staff within USAID/Guinea. In-person consultations with the technical teams ensured the assessment incorporated their expert perceptions of climate risks to their objectives and programs, helped identify areas where climate may need to be considered further in current and future programs, and built buy-in to and understanding of the importance of climate risk management to facilitate sustainable development and improve Guinea's journey to self reliance. This participatory approach also helped identify areas for potential collaboration between technical teams to address broad climate risks (e.g., decrease cross sectoral impacts caused by flooding) and areas where adaptation efforts by one technical team could alleviate challenges faced by another team.

### **Climate Variability and Change in Guinea**

Most of Guinea has a tropical climate with a long rainy season of eight months (April–November), a relatively uniform annual temperature (23°C to 29°C), and high humidity. Annual rainfall, which peaks in July–August, varies between 1,500 mm and 4,500 mm. Annual rainfall is highest in the Forest Region and along the coast, decreasing inland of the country. Coastal and southern Guinea have a monsoon climate with rainfall exceeding 100 mm per month, a shorter dry season, and smaller temperature range than the interior. Northern or Upper Guinea has higher temperatures (closer to a Sahelian climate), greater temperature ranges, a shorter rainy season, and a longer dry season (December–May). The arrival of the migratory Intertropical Convergence Zone (ITCZ) brings the heaviest rainfall of the wet

season. As the ITCZ shifts southward in November, the hot, dry wind known as the Harmattan blows from the northeast off the Sahara during the dry season, when rainfall is limited.<sup>1</sup>

Below is a summary of historical climate and future climate projections for the country<sup>2</sup>:

Historical climate since 1960:

- Average annual temperature increased by about 0.8°C.
- Decrease in average annual precipitation by 5.3 mm per month per decade.
- A 100 mm decrease overall in the March–May precipitation (measured by the Kankan Station, 1981–2013).
- Increase in the number of hot nights and decrease in the number of cold nights.

Future climate

- Increase in annual average temperatures of 1.1°C –3.0°C by 2060, with more marked increases in the interior and north.
- Increase in number of “hot” days by 21–52 percent by the 2060s.
- Increased variability of rainfall (changes in frequency and distribution); increased rainfall during rainy season in most regions; decrease in rainfall in the north.
- Increase in frequency of heavy rainfall events. Increased drought risk due to rising temperatures and more variable rainfall.
- Rise in sea levels of 0.4 m to 0.7 m by 2100

There may be a need for USAID/Guinea to access regional or sub regional climate information. The Prep Data website (<https://prepdata.org/>) provides an example of regional historical and future climate information visualized via maps, combined with socioeconomic factors to help determine local vulnerability.

## Climate Risks

Guinea, with a population of approximately 13 million people, is an emerging democracy whose economy is still recovering after the 2014–2015 Ebola outbreak and recent commodity price decreases. The country’s GDP increased by 6.6% in 2016, primarily due to increased mining production and the agriculture sector. Approximately 70% of Guineans earn their living in the agriculture sector, which is extremely vulnerable to climate change, variability, and extreme weather shocks. In addition, Guinea’s highlands are home to the headwaters of the Gambia, the Niger, and the Senegal, and forests cover 26% of the country.

---

<sup>1</sup> Information taken directly from the [Guinea Climate Risk Profile](#).

<sup>2</sup> Information taken directly from the [Guinea Climate Risk Profile](#).

Historical and future climate in Guinea is outlined above in the previous section. Many extreme weather events, such as flooding, which Guinea already experiences during the rainy season, are likely to be worse as a result of climate change and variability. In addition, sea level rise, saltwater intrusion due to coastal flooding, and rising ocean temperatures changing coastal ecosystems, will impact coastal communities' livelihoods. Flooding and increased temperatures may also cause an increase or change in the spread of infectious diseases, which is especially relevant in a country where malaria is responsible for 30% of all child deaths under 5 years old. Drought and interruption of the rainy season will also impact most sectors, especially the agriculture sector. For further sector specific information, please refer to the [Guinea Climate Risk Profile](#).

### **Risk Screening for the CDCS**

At the CDCS level it is important to examine how climate risks extend across sectors, and can have secondary impacts. In many instances climate resilience is already built into sectoral programs. For example, several standard practices in USAID programs for malaria control, vaccination campaigns, and strengthening of health systems already integrate responses to existing climatic challenges. Cold chains are set up to deal with intermittent power outages, health systems are supported to deal with childhood diarrhea, and bednet distribution is an effective response to malaria transmission regardless of how rainfall patterns affect mosquito populations. In this sense much of the “core” of current interventions will not drastically change in response to climate change. However, there are still increased risks to many programs due to climate change and variability, which are identified in the matrix and should be considered during activity design and implementation. In the health sector some next steps identified to strengthen climate resilience to programs include:

- Integrate consideration of climate risk into solicitation and activity design where appropriate.
- Build in opportunities to educate around climate variability and change in health-related interventions, particularly those that may be impacted by climate (for example, malaria programs).
- Incorporate climate information into monitoring efforts, especially for zoonotic diseases.
- Support detection and surveillance efforts for climate-related health impacts. For example, UN/FAO works with building and innovating labs. USAID could follow needs arising from those surveys, and/or build programs to conduct surveillance on the edge of where infectious diseases are likely to happen.

For governance and economic growth programs some next steps to strengthen climate resilience include:

- Integrate consideration of climate risk into solicitation, and activity design, and work planning where appropriate.
- Engage in MEL and other learning opportunities to explore how climate shocks and stressors are impacting key areas of economic growth in the country.
- Promote diversification of climate-smart agriculture. Also, consider impacts of climate on transport/supply chains.