ADAPTATION TO CLIMATE CHANGE IN GHANA

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# POLICY BRIEF


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# INTRODUCTION

Ghana is one of the most ethnically and biologically diverse countries in West Africa, acting as a unique reservoir of indigenous, cultural and ecological knowledge for all. With a GDP growth rate of around 7% in 2019, and with some of the highest levels of democratic freedom in the African continent, Ghana is also one of the most prosperous and promising for the emergent world economy (World Bank Overview, n.d.). However, increasing inequality, a high reliance on agriculture and livestock, and its geological and geographical characteristics position it under significant risk from climate change, despite only contributing 0.07% of global greenhouse gas (GHG) emissions (MFAN, 2018).

Ghana signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and has been proactive in the adoption of climate change mitigation and adaptation measures through the Kyoto Protocol and the Climate Paris Agreement. It has passed four laws, set twenty six climate targets, and implemented 5 policies to tackle climate change at a national scale, amongst which are its National Climate Change Adaptation Strategy (NCCAP, 2012) and its National Climate Change Policy (NCCP, 2013), but without an additional USD 16 billion in international support throughout the 2020-2030 period, Ghana will not be able to meet its conditional climate target of 45% reductions in GHG from business-as-usual (BAU) baseline by 2030. This document aims to offer a clear rational as to why contributing to Ghana's climate change adaptation efforts is beneficial for both investors and the Ghanaian population alike.

# CLIMATE CHANGE RISKS

Whereas in some regions of the world the effects of climate change are not expected to threaten livelihoods until mid-century, Ghana is already experiencing climate-related disruptions across its social, environmental, and economic dimensions. Scientific evidence from multiple sources including USAID and the World Bank concur that temperatures and sea levels have already started rising at alarming rates, rainfall is dangerously declining, and extreme weather events are occurring much more frequently (USAID, 2017).

Agriculture and water systems will be the most affected by climate change. Increasing temperatures are predicted to cause desertification and soil degradation and erosion, and the increased frequency of extreme weather events, along with longer dry seasons, flash floods, unpredictable rainfall patterns, and the salinization of aquifers (especially in the eastern coastal region) will inevitably lead to crop failure and food insecurity (Asante, & Amuakwa-Mensah, 2015; MFAN, 2018).

## QUICK FACTS

### HISTORICAL CLIMATE TRENDS

- Increase in average annual temperatures of ~1°C since 1960
- Rise in sea level of 63 mm over the past 30 years
- Average coastal erosion of 1.13 m/yr

### PROJECTED CLIMATE TRENDS

- Increase in average temperatures between 1.4-5.8°C by 2080
- Changes in rainfall of -15% to +16% by 2100
- Sea level rise of 75-190mm by 2100
- Average coastal erosion and shoreline loss of 0.38 m per year

Given that approximately one third of Ghana's GDP comes from agriculture and that the sector employs over half of its population and provides over 70% of its national food requirements (WBCCKP, n.d.), a failure to swiftly adapt to climate change severely threatens the livelihoods of over 15 million Ghanaians in the coming decades.

Other significant risks of climate change include (i) energy insecurity, as currently 80% of Ghana's energy supply comes from a single hydro-generating dam which is already running at just 60% capacity, (ii) outbreaks of human and animal diseases such as measles, malaria, cholera, cerebro-spinal meningitis and other water related diseases (Asante & Amuakwa-Mensah, 2015), (iii) destruction of property and infrastructure, (iv) displacement of human populations, and (v) trans-boundary climate-related conflict with Burkina Faso, as Ghana heavily relies on water flows from the Volta River (MFAN, 2018).

## ADAPTATION STRATEGIES

Ghana has made significant strides to implement adaptation and mitigation policies for climate change, despite having contributed just 0.07% of global greenhouse gas emissions. These policies have focused on development plans in agriculture, transportation, energy, infrastructure, health, and employment.

Among other climate-relevant conventions, Ghana ratified the UNFCCC in 2001, the Kyoto Protocol in 2011, and the Paris Agreement on climate change in 2016. With support from the UNEP and UNDP via the CC-DARE project, the Ministry of the Environment developed Ghana's first National Climate Change Adaptation Strategy (NCCAS, 2012), which was followed by a National Climate Change Policy (NCCP, 2013) and National Environment Policy (NEP) in 2013. These, along with Ghana's National Climate Change Master Plan (2015-2020), outline most of the strategies required to tackle the country's major vulnerabilities to climate change, including developing climate resilient agriculture, infra-structure and communities, minimizing impacts on access to water and sanitation, addressing gender inequalities, increasing carbon sinks and limiting GHG emissions (MFAN, 2018). Furthermore, Ghana set emission goals of 15% reductions in GHG emissions below its BAU baselines by 2030, or 45% if it receives international support, as stated in its intended nationally determined contributions (INDCs) under the Paris Agreement.

## NATIONAL STRATEGIES

- Economic and social development policy (2014-2020)
- United Nations Framework Convention on Climate Change (2001)
- Ghana National Climate Change Adaptation Strategy (2012)
- National Action Program to Combat Drought and Desertification (2012)
- Ghana National Climate Change Policy (2013)
- Ghana's Intended Nationally Determined Contributions (2015)
- National REDD+ Strategy (2015)

# FINANCIAL AND INSTITUTIONAL GAPS

Despite Ghana's proactiveness to adapt to climate change, the implementation of policies has been slow and there is still a substantial lack of institutional and financial support to enact adaptation targets. The main gaps include:

1. **Data and information gaps.** These include satellite imagery and mapping of coastal areas to develop early warning systems and better inform disaster management response, as well as the establishment of data management systems to support decision-making in vulnerable sectors.
2. **Institutional gaps.** Existing institutions should be strengthened, and new ones established in relevant areas. This includes public research groups which can account for climate uncertainty through multi-sector approaches (WBCCKP, n.d.), as well as institutional frame-works at the local, regional and national level to ensure that adaptation measures reach all regions, and especially vulnerable rural populations (Asante & Amuakwa-Mensah, 2015).
3. **Financial gaps.** Ghana has been the recipient of a Climate Investment Fund (CIF)/Forest Investment Program grant (USD 66 million), as well as several Adaptation Funds (USD 18 million), and has also received over USD 90 million for sustainable land and water management programs from the World Bank and the Netherlands. However, as indicated in its INDCs, the funding is not sufficient to achieve its adaptation goals (MFAN, 2018).

Without additional external funding, Ghana risks not only missing its 45% emissions reduction goal, but also leaving its most vulnerable populations at risk of the unavoidable impacts of climate. As one of the most promising economies in the African continent, and one of the largest and most bio-diverse carbon sinks in West-Africa, it is imperative that we act soon to support its adaptation efforts.

# RESOURCES


Asante, F., & Amuakwa-Mensah, F. (2015). Climate Change and Variability in Ghana: Stocktaking. Climate, 3(1), 78-99. https://doi.org/10.3390/cli3010078

Foundation for Environmental Security and Sustainability. (2013). Climate Change and Conflict in West African Cities: A Policy Brief on Findings from Lagos, Nigeria and Accra, Ghana. U.S. Agency for International Development.

Ministry of Foreign Affairs of the Netherlands (MFAN). (2018). Climate Change Profile: Ghana. The Netherlands.

National Climate Change Adaptation Strategy. (2012).

National Climate Change Policy. (2013).

USAID. (2017). Climate Change Risk Profile.

World Bank Climate Change Knowledge Portal (WBCCKP). (n.d.) Climate-knowledgeportal.worldbank.org. Retrieved 11 October 2020,

World Bank Overview. (n.d.) Retrieved 11 October 2020.