



Ghana's National Adaptation Plan Framework

October 2018



Led by Environmental Protection Agency [EPA] in partnership with the National Development Planning Commission and the Ministry of Finance



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Foreword

Historical observations on temperature and precipitation—as well as recent extreme weather events in Ghana—indicate that climate change is happening faster than previously thought, and that the women, men and children of Ghana will continue to experience the impacts of dramatic climate change in the future. Climate models predict high but differentiated variability in rainfall patterns across all ecological zones in Ghana. These changes will have wide-ranging implications for every facet of society, from small-scale farmers to business owners, from industry to central and local governments. The adverse effects of climate change and variability on the climate-sensitive sectors of Ghana’s economy threaten the country’s continued development progress and its attainment of the Sustainable Development Goals.

These risks, and the country’s vulnerability to climate change, underscore that the Government of Ghana cannot continue to address development challenges as business as usual, but must work to ensure that, going forward, climate change is fully integrated into economic, environmental and social decision making. The National Adaptation Planning (NAP) process is a key effort by the Government of Ghana to address climate change impacts from a more integrated, coordinated and sustainable manner.

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Preface

Ghana's vulnerability to the impacts of climate change necessitates that we consciously plan for current and future climate change. Adaptation planning is happening at different levels and is being led by various actors of the adaptation community in Ghana, including the national government, sub-national authorities and sectoral leaders. However, current adaptation efforts are disjointed and mostly reactive. The National Adaptation Plan (NAP) Framework has been developed to guide and advance Ghana's NAP process in a way that addresses the medium- and long-term adaptation needs of the country in a coherent and coordinated manner.

Conscious planning and implementation of adaptation actions will, in the long-term, result in savings, greater security and health for society, less damage from disasters, new jobs, new business opportunities and greater security of investments. This will allow Ghanaians to take full advantage of the opportunities that climate change presents.

The Ministry of Environment, Science, Technology and Innovation (MESTI), through the Environmental Protection Agency (EPA) and in collaboration with the Ministry of Finance and the National Development Planning Commission (NDPC), is proud to be coordinating the NAP process in Ghana.

I am very optimistic that this NAP Framework will guide various stakeholders and players to address adaptation planning in a manner that will provide maximum benefit to the larger interest of Ghanaian society.

An electronic version of this framework is available to the public on the website of the EPA at www.epa.gov.gh.

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Any opinions stated herein are those of the author(s) and do not necessarily reflect the policies or opinions of the NAP Global Network, funders or Network participants.

Executive Summary

Recognizing the implications of climate change for its national development and in response to international commitments, the Government of Ghana has taken various actions to support climate change adaptation planning, with a number of climate change-related policies and strategies already in place. Under the leadership of the Environmental Protection Agency (EPA), and with support from the United States In-Country Support Program (managed by the International Institute for Sustainable Development [IISD], host to the NAP Global Network Secretariat), the Government of Ghana has prepared this National Adaptation Plan Framework to guide and advance its National Adaptation Plan (NAP) to address medium- and long-term adaptation needs in a coherent and coordinated manner.

The purpose of this document is to provide an overall framework to guide the country in developing, coordinating and implementing its NAP process. This framework serves to describe the benefits of the NAP process in the context of Ghana, and to ensure that the NAP does not unnecessarily add to the proliferation of national planning processes and related documents. Specifically, the objectives of this NAP Framework are to:

- Clarify the country's approach to its NAP process. This will include an articulation of the country's vision of climate change adaptation, its adaptation objectives and principles, the roles played by stakeholders within the national government, and priority adaptation actions to be undertaken. It will also provide a reference point for bringing together various adaptation planning efforts from different sectors, sub-national structures and scales of decision making.
- Align the NAP process with existing policies, strategies, programs and adaptation research.
- Serve as a basis for stakeholder engagement.

The methodology for this framework consisted of a thorough desk-based review of existing climate change data, information and relevant national policies, laws and strategies; extensive stakeholder consultations with both public and private institutions; and a national stakeholder workshop. Although this framework represents the first stage in Ghana's NAP process, there have been several important efforts to date by the Government of Ghana on climate change adaptation. These include the development of the National Adaptation Strategy (2012), the National Climate Change Policy (2013), the Nationally Determined Contributions (NDCs) (2015) and the National Climate Change Master Plan Action Programmes for Implementation (2015–2020).

This NAP Framework proposes a more sectoral-based approach to climate change adaptation planning in Ghana, with the EPA coordinating the development of an overarching NAP, and with adaptation priorities identified for key sectors such as agriculture, forestry, water, energy, gender and health.

The institutional structure for the NAP process in Ghana is described in detail in the framework. The process will involve multiple sectors and agencies, working at national and sub-national levels. Consequently, stronger collaboration and coordination among the different institutions and ministries will be required to reduce overlaps and duplication of adaptation efforts at different ministries and institutions. In addition, the framework highlights the need to engage the private

sector in the NAP process, and to ensure that it is gender-responsive. The NAP process will also adopt community-based and ecosystem-based approaches, and work to ensure that it delivers multiple co-benefits in relation to sustainable development, poverty reduction and climate change adaptation.

The framework also outlines the alignment between existing national, regional and international policies and legal frameworks. Climate change affects different sectors and communities differently. Thus, the framework highlights the need to ensure greater, meaningful participation by different stakeholders and socioeconomic groups, including youth and women. This will ensure a greater buy-in and ownership for the NAP process by relevant stakeholders.

Finally, fundamental to the success of the NAP process in Ghana will be: i) addressing capacity gaps and weaknesses; ii) identifying and appraising adaptation options at the sectoral, sub-national and national levels; iii) creating an enabling environment for effective institutional functioning and capacities for adaptation; iv) designing a coherent approach to fund mobilization for effective climate change adaptation; v) developing innovative approaches for engaging the private sector; and, vi) developing an effective monitoring and evaluation scheme to facilitate implementation.

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Abbreviations

CIDA	Canadian International Development Agency
CoP	Conference of Parties
CSOs	Civil Society Organizations
EPA	Environmental Protection Agency, Ghana
FC	Forestry Commission, Ghana
GCF	Green Climate Fund
GoG	Government of Ghana
GMet	Ghana Meteorological Agency
GSGDA	Ghana Shared Growth and Development Agenda
IDRC	International Development Research Centre, Canada
MELR	Ministry of Employment and Labour Relations
MESTI	Ministry of Environment, Science, Technology and Innovation
MLNR	Ministry of Land and Natural Resources
MDAs	Ministries, Departments and Agencies
MMDAs	Metropolitans, Municipal and District Assemblies
MoF	Ministry of Finance
MoFA	Ministry of Food and Agriculture
MoGCSP	Ministry of Gender, Children and Social Protection
MoH	Ministry of Health
MWRWH	Ministry of Water Resources, Works and Housing
NADMO	National Disaster Management Organization
NAP	National Adaptation Plan
NCCAS	National Climate Change Adaptation Strategy
NCCP	National Climate Change Policy
NDCs	Nationally Determined Contributions
NDPC	National Development Planning Commission
NGOs	Non-Governmental Organizations
RCC	Regional Coordinating Council
SDGs	Sustainable Development Goals
UK DfID	United Kingdom Department for International Development
UNFCCC	United Nations Framework Convention on Climate Change
WRC	Water Resources Commission

1.0 Introduction

1.1 Context

Recognizing the implications of climate change for its national development, the Government of Ghana has taken various actions to support climate change adaptation planning, with a number of climate change-related policies and strategies and institutional arrangements for climate change already in place. The government is now mobilizing support to formally start its National Adaptation Plan (NAP) process.

The NAP process was initiated under the United Nations Framework Convention on Climate Change (UNFCCC) in 2010 to address medium- and long-term climate adaptation needs in developing countries. It is an iterative, country-owned planning process that allows countries to identify, address and review their evolving adaptation needs.¹ The objectives of the NAP process are: i) to reduce vulnerability to the adverse impacts of climate change by building adaptive capacity and resilience; and, ii) to facilitate the integration of climate change adaptation into fiscal, regulatory and development policies, programs and activities (UNFCCC, 2012). Overall, the NAP processes seek to support the coordination of climate change adaptation actions at the national level (between and among ministries and between the government and its development partners) and to accelerate strategic investments in climate-resilient development.

In Ghana, the NAP process seeks to provide the enabling framework for the planning and implementation of adaptation actions as enshrined in the National Climate Change Policy (2013), the National Climate Change Adaptation Strategy (2012) and the Nationally Determined Contributions (NDCs) (2015), all done within the context of sustainable development. Improving adaptation planning through the NAP process will help build local adaptive capacity to address climate change (SDG13), which will reduce poverty (SDG1), thereby enhancing livelihood opportunities (SDG1) and improving gender equality (SDG5).

1.2 Purpose and Objectives of the NAP Framework

This document seeks to provide an overall framework to guide the country in developing, coordinating and implementing its NAP process by clarifying the overarching vision and structure for the process and its added value. The document will serve to describe the benefits of the NAP process in the context of Ghana, and to ensure that the NAP does not unnecessarily add to the proliferation of planning processes and related documents. As such, the purpose of this document is not to prioritize climate change adaptation actions in the medium and long term; that will be the focus of the NAP process itself, rather than this framework.

¹ See: <https://unfccc.int/index.php/topics/adaptation-and-resilience/workstreams/national-adaptation-plans>.

Specifically, the objectives of this NAP Framework are to:

- Clarify Ghana’s approach to its NAP process. This will include an articulation of the country’s vision of climate change adaptation, its adaptation objectives and principles, the roles played by stakeholders within the national government, and priority adaptation actions to be undertaken. It will also provide a reference point for bringing together various adaptation planning efforts from different sectors, sub-national structures and scales of decision making.
- Align the NAP process with existing policies, strategies and adaptation research.
- Identify specific themes that are particularly relevant and/or unique to the country context.
- Serve as a basis for stakeholder engagement.

Box 1: Key concepts

NAP

The NAP process emerged from the 16th Conference of the Parties (CoP) to the United Nations Framework Convention on Climate Change (UNFCCC) in Cancun in 2010, where Parties affirmed that “adaptation must be addressed with the same priority as mitigation” (UNFCCC, 2010, p.3). The NAP process is a “continuous, progressive and country-driven process that seeks to align national priorities and sustainable development objectives” (Least Developed Countries Expert Group [LEG], 2012).

NAP Framework

The NAP Global Network defines a NAP Framework as a guiding document aimed at clarifying the overarching vision and structure for the NAP process and its added value in a country (Dazé, Price-Kelly, & Rass, 2016).

Nationally Determined Contribution

The Nationally Determined Contribution (NDC) under the Paris Agreement details the various adaptation and mitigation actions communicated by Parties to the UNFCCC Secretariat to address climate change depending on their particular national circumstances.

Gender-responsive NAP process

This approach examines and actively addresses gender norms, roles and inequalities (WHO, 2009). Gender-responsive approaches go beyond sensitivity to gender differences, seeking to actively promote gender equality (WHO, 2009). This differs from a gender-sensitive approach, which responds to “the different constraints and needs of individuals based on their gender” (UNFCCC, 2015, p. 16).

Mainstreaming

The integration of (adaptation) objectives, strategies, policies, measures or operations such that they become part of the national and regional development policies, processes and budgets at all levels and stages (Lim & Spanger-Siegfried, 2005).

1.3 Methodology for Developing the NAP Framework

The approach used in gathering the information for this framework involved three interlinked phases: a desk-based review, stakeholder consultations and a national validation workshop. In Phase I, an extensive desk-based review of key documents on climate change in Ghana was conducted, including the National Climate Change Policy (NCCP) (Ministry of Environment, Science, Technology and Innovation [MESTI], 2013), the National Climate Change Adaptation Strategy (NCCAS) (2012), and Ghana's Nationally Determined Contributions (NDCs) (2015) and related pertinent literature.

Phase II involved consultations with key stakeholders, selected through a mapping exercise in May and June, 2018. Stakeholders were drawn from sectors and ministries relevant to climate change adaptation, including food and agriculture, environment, science, technology and innovation, water, finance, forestry, health and gender.² National agencies such as the National Development Planning Commission (NDPC) and the EPA were also consulted. The private sector, representing both private enterprises and private financiers including the Private Enterprise Federation and the Sustainable Banking Principles Committee, as well as civil society organizations were also consulted (see Appendix I for the list of stakeholders consulted). All consulted stakeholders have longstanding and comprehensive expertise in climate change adaptation in Ghana. The objectives of the stakeholder consultations were to: (i) explain the NAP process to stakeholders and get buy-in for implementation; (ii) solicit stakeholder views on how to enhance climate change adaptation planning and implementation in Ghana; and, (iii) discuss what important approaches, principles and structural issues need to be addressed in this framework. The stakeholder consultations raised issues pertaining to coordination between and among key actors working on advancing climate change adaptation, and how to establish strong learning and accountability mechanisms on climate adaptation.

In Phase III, a national stakeholder validation workshop to present and review the NAP Framework was held in Accra, Ghana, on August 1, 2018. A total of 32 experts and stakeholders drawn across different sectors and ministries were present, including from the ministries of agriculture, environment, gender, transport, forestry and health. A cross-section of NGOs and civil society actors, including the Private Enterprise Federation and the National Council for Civic Education, also attended the workshop (see Appendix II). The national validation workshop presented the NAP Framework that resulted from the desk-based review and the stakeholder consultations and solicited feedback from key stakeholders.



² These sectors have been identified as priority sectors in Ghana's National Determined Contribution (NDC) submitted to the UNFCCC secretariat (Republic of Ghana, 2015).

2.0 The NAP Process in Ghana: Background

2.1 Goals of Ghana's NAP Process

Ghana's NAP process will seek to:

- Identify priority climate adaptation actions in the medium and long terms
- Facilitate institutional coordination around climate change adaptation
- Accelerate the mobilization of funds for climate change adaptation

Proper institutional planning and enhanced capacities are fundamental to ensuring integration or mainstreaming of climate change adaptation into Ghana's development agenda.³ As such, a major focus of Ghana's NAP Readiness Proposal submitted to the Green Climate Fund (GCF) is to address capacity constraints across different levels of institutions (ministries, departments, agencies, districts and private sector) for the effective planning and mainstreaming of adaptation into the nation's development agenda. Building these capacities is crucial to the NAP process, and the development of a guiding NAP document.

2.2 Mandate for the NAP Process in Ghana

The policy starting point for Ghana's NAP is the 2013 National Climate Change Policy (NCCP). The NCCP is designed to provide strategic direction and coordination on climate change issues in Ghana, including climate adaptation. The three objectives of the NCCP are; (i) effective adaptation; (ii) equitable social development; and (iii) mitigation. The NCCP aims at integrating climate resilience, climate-compatible development and low-carbon strategies into all ministries, departments and agencies (MDAs). In addition, the 2012 National Climate Change Adaptation Strategy (NCCAS), developed for the period 2010–2020, has the primary goal of “enhancing Ghana's current and future development to climate change impacts by strengthening its adaptive capacity and building resilience of society and ecosystems” (Government of Ghana, 2012). Ghana's NDC also prioritizes adaptation actions to address climate change. Together, the NCCP, NCCAS and the NDC provide the foundation for initiating the NAP process in Ghana.

2.3 Status of the NAP Process in Ghana

The current approach to climate adaptation planning in Ghana encourages ministries, departments and agencies to integrate adaptation into policies, programs and plans. In the long term, the government's vision is also to mainstream adaptation into districts' medium-term development plans.⁴ A National Climate Change Committee (NCCC), hosted by the Ministry of Environment, Science, Technology and Innovation (MESTI), and a Climate Change Unit, under the

³ A limited number of capacity development initiatives in the area of adaptation planning have been implemented in Ghana, notably the Africa Adaptation Programme in Ghana (supported by UNDP) but these have typically been time-limited and the policy and planning activities have not been continued post-project.

⁴ Based on interviews with focal persons for climate change at the EPA, Ghana

Environmental Protection Agency (EPA), have been established. Climate change units have also been established in other key ministries, departments and agencies, including energy, forestry and agriculture.

Ghana submitted its NAP Readiness Proposal to the GCF in October 2017, seeking support to advance its climate adaptation planning efforts in a coherent and coordinated manner. The main objective of the Readiness Proposal is to enhance institutional coordination and strengthen the capacity of Ghana's government at all levels to implement a NAP process, including planning and budgeting for adaptation. This will be done in the spirit of the decision 5/CP.17 (UNFCCC, 2012) and in line with the UNFCCC NAP Technical Guidelines, developed by the Least Developed Countries Expert Group (LEG) (2012). The key outcome for the Readiness Proposal will be to launch the NAP process, which will produce a costed adaptation strategy for the country and provide the tools, mechanisms, systems and information with which to update the NAP process at regular intervals and to mainstream adaptation into sector and district development plans. The Readiness Proposal will also help in the development of a NAP document for climate change adaptation in the country.



3.0 Approach and Structure for the NAP Process Going Forward

Ghana is currently using a hybrid approach⁵ to integrating climate adaptation considerations in policy and planning, with different planning processes happening in parallel: adaptation is simultaneously being considered at the national level, in some sector-specific planning and to a lesser extent in selected local development plans.

Going forward,⁶ the government has proposed to pursue a more sectoral- and district-focused adaptation planning and mainstreaming process⁷ (GoG, 2017a). The EPA will coordinate the development of an overarching national adaptation plan with adaptation priorities identified in key sectors such as agriculture, forestry, water, energy, gender and health, while the National Development Planning Commission (NDPC) will coordinate the district-level adaptation planning and mainstreaming. Sectoral priorities will be identified through the development of climate change vulnerability assessments for key sectors, and local adaptation priorities will be identified through the process of developing stand-alone adaptation plans for 10 districts. The district-level adaptation plans will be piloted based on climate change vulnerability and geographical considerations.

Mainstreaming climate change adaptation into sectoral policies, strategies and plans for implementation, as well as the development of a few stand-alone sectoral adaptation plans, covering sector-specific adaptation issues, will form a key component of the NAP process. Similarly, the NAP process will include mainstreaming climate change adaptation into district-level medium-term development plans. The proposed long-term vision is to develop stand-alone adaptation plans at the sector and district levels.

Specific details on private sector engagement, horizontal and vertical integration, gender responsiveness, community-based adaptation, ecosystem-based adaptation and harmonizing time frames for the NAP are found below.

3.1 Engaging the Private Sector

A successful NAP process will require leveraging the private sector in climate change adaptation.⁸ However, stakeholder consultations revealed that in Ghana there is currently limited private sector involvement in climate change initiatives in general—and adaptation in particular.⁹ In Ghana, the private sector consists of: i) private financiers, including private commercial banks, microfinance institutions and private insurance companies, who provide direct financing for the implementation of climate actions; and ii) private enterprises, such as privately owned small-scale enterprises, who undertake activities that support climate change adaptation. Such activities include integrating climate risks into business operations or developing and distributing non-financial products and

⁵ That is, the use of both horizontal and vertical integration approaches.

⁶ As per GCF NAP Readiness proposal submitted by the MoF in October, 2017.

⁷ A sectoral-based approach is overwhelmingly supported by stakeholders, as this approach allowed various sectors and ministries to own the implementation of the national adaptation plans.

⁸ The NAP includes a strategy for influencing private sector investment into climate resilient technologies and production methods, thereby increasing the investment of adaptation in the country beyond public sector financing.

⁹ The EPA is currently engaging the private sector in its Resilience to Climate Change in Northern Ghana programme.

services that support climate change adaptation. The private sector can contribute to climate change adaptation in Ghana in two broad ways: i) minimizing climate impacts to business delivery and markets; and ii) creating markets in technologies and services that are beneficial to adaptation (Dazé et al., 2016). For the former, reducing the risks posed to business by climate change is in the interests of private sector actors. Framing climate change as a development issue, rather than an environmental issue—a transition already underway in Ghana—will help further build private sector support for adaptation action. This can in turn help build political leadership on climate change.

Current government efforts to influence and involve the private sector in climate change adaptation focus on stand-alone initiatives such as the Ghana Climate Innovation Centre.¹⁰ To expand this participation, the NAP process should include the mainstreaming of climate change adaptation into regulations and work programs relating to the private sector. It must also build a conducive business environment that enables the private sector to take the initiative on climate change adaptation. For instance, private companies could be given tax incentives to invest in climate change adaptation measures. Furthermore, an environmental certification system could be developed to reward companies that apply credible climate resilience principles to business.

The limited involvement of the private sector in climate change to date has been attributed to an unfriendly business environment, including high interest rates and a lack of capacity within the private sector to write bankable proposals for funding.¹¹ In addition, returns on investment for adaptation projects are not immediate, and such projects can be risky, making them difficult to pitch. The NCCP (MESTI, 2013) recognizes the risk of climate change to business and private enterprises and highlights several areas where the private sector can further engage, including product and service innovation and diversity, business capacity building and market integration, infrastructural investment, market information and access as well as agriculture insurance.¹² To increase private sector involvement, climate change should be presented as a business risk to the private sector. This, perhaps, could spur increased, active involvement of the private sector.



The NAP process will also develop an inventory of private sector groups in Ghana that are relevant to investments in climate adaptation, their vulnerability to climate change and any contributions they might make to strengthening national adaptation. Innovative engagement strategies will also need to be developed to target national business networks such as the “Club 100.”¹³

¹⁰ The Ghana Climate Innovation Centre is a business incubator with a focus on developing entrepreneurs in Ghana’s Green Economy. The Centre supports transformational ventures that pioneer adaptation solutions for climate change in Ghana.

¹¹ There was consensus during the stakeholder consultations that the messaging to the private sector needs to be repackaged. Messaging in most cases has been that “investing in climate or environment in general is a social obligation.”

¹² The National Climate Change Policy (MESTI, 2013) also recognizes other challenges confronting CSOs and NGOs including weak technical capacity in climate change, inadequate funding and poor coordination.

¹³ This is an annual compilation of the top 100 companies in Ghana.

Recognizing the dangers posed by climate change to business sustainability, the banking sector in Ghana has established the Sustainable Banking Principles Committee (SBPC),¹⁴ which aims to develop sustainable banking principles to ensure that banks and its clients are in alignment with the Sustainable Development Goals (SDGs), particularly SDG13. Another key engagement strategy will involve working with the SBPC to develop due diligence requirements that are in line with national, sectoral and district adaptation priorities.

3.2 Gender-Responsive Approach

Gender equality is a universal human right, and, as a signatory to the 1979 Convention on the Elimination of All Forms of Discrimination against Women, Ghana is obliged to ensure it is promoted nationally. Ghana's National Gender Policy (2015) and SDG 5 highlight the need to address gender inequality. This is particularly important within the realm of climate change, given the disproportionate impact it has on women (CARE, 2010). Women and men are likely to be affected by climate change differently. This is due to gender inequalities of economic, political and social opportunities, such as formal employment, access to credit and technologies, and education and public participation. There are differing gender dynamics across Ghana. Women in northern Ghana are particularly vulnerable to the adverse impacts of climate change, which could partly be attributed to extreme poverty and sociocultural factors including land tenure insecurity that can limit women's capacity to adequately respond to climate change.¹⁵

To promote a gender-responsive NAP, women and men will be equally engaged and their concerns fully reflected in the NAP development and implementation process. Gender needs will be prioritized in all the different phases of the NAP including, the "iterative cycle of planning, implementation and monitoring and evaluation" (Dazé & Dekens, 2017, p. 3). This is in line with Ghana's climate change policy and the national climate change adaptation strategy. A gender-responsive approach will allow Ghana's NAP to address issues of social norms and inequalities that may further exacerbate the vulnerability of women to climate change. Ghana's Ministry of Gender, Children and Social Protection will help to ensure that equity and equality for women and related issues are integrated into sectoral plans. In addition, the particular needs of the disabled and the elderly should also be addressed in the NAP process.

3.3 Horizontal and Vertical Integration

Ghana uses a combination of horizontal and vertical integration for its adaptation planning processes, which will be both applied to the NAP. Vertical integration is the "process of creating intentional and strategic linkages between national and sub-national adaptation planning, implementation, and monitoring and evaluation" (Dazé et al., 2016, p.4). This links to the decentralization process in Ghana and highlights the need to integrate climate change adaptation into national and sub-national structures, including district development plans. Information sharing and capacity building will be critical for successful vertical integration, and should be planned for accordingly (Dazé et al., 2016). As previously mentioned, both the NCCP and the NCCAS highlight the need to integrate climate change adaptation horizontally across government functions. Ministries, departments and agencies (MDAs) are already required by the National Development Planning Commission to integrate climate change adaptation into their development plans. This kind of horizontal integration will be similarly critical to the success of the NAP process.

¹⁴ This committee has representations from the Ghana Association of Bankers, the EPA and the Bank of Ghana.

¹⁵ See Antwi-Agyei, Dougill & Stringer (2015) on how land tenure arrangements can influence adaptive capacity of marginalized groups.

3.4 The Community-Based Adaptation Approach

Closely linked to vertical integration are community-based adaptation (CBA) practices. This approach places local communities at the centre of adaptation planning and seeks to empower local people by building resilience and adaptive capacity into their livelihood systems. CBA is important because it takes place in the communities where the adverse impacts of climate change are being acutely experienced and where adaptive capacity must be built to respond to climate change (Ayers & Forsyth, 2009). CBA provides the opportunity for local people to be involved in adaptation planning in a participatory and collaborative manner, and acknowledges the prevailing values systems in order to improve livelihood assets and security as well as addressing inequalities through the merging of scientific and local knowledge (Ayers & Forsyth, 2009). CBA should also harness the traditional authority structure in Ghana to promote climate change adaptation. By promoting the involvement of local communities in the planning and implementation process, CBA is in line with the Forest and Wildlife Policy (2012), which similarly encourages community involvement in protecting forest resources.

3.5 Prioritization of the Ecosystem-Based Adaptation Approach

The NAP process will also adopt an ecosystem-based approach (EBA) that place ecosystems at the centre of adaptation planning, to strengthen ecosystems while conserving biodiversity (Scarano, 2017). Both the NCCP and the NCCAS highlight that ecosystems including marine, aquatic and forest resources provide diverse environmental services, economic opportunities and related livelihoods to many communities in Ghana (MESTI, 2013). The impacts of climate change on marine ecosystem is well documented (Hoegh-Guldberg & Bruno, 2010).

Protecting and improving the country's marine, aquatic and forest ecosystems through prudent environmental management practices will improve the economic gains and ecological services derived from Ghana's natural resources (MESTI, 2013). This could substantially enhance the adaptive capacity of communities (SDG13), especially for marginalized households whose livelihoods are predominately dependent on the ecosystem (SDG2) (Appendix III). Despite their significance, forest resources in Ghana have experienced marked deterioration closely linked to illegal production of logs for export, illegal mining, fuel wood extraction, charcoal production, bush fires and agriculture. Both the NCCP and the NCCAS acknowledge the deterioration of Ghana's natural resources and emphasize the need for more resilient ecosystems to support holistic national development.

Adopting an EBA approach to climate adaptation delivers multiple socioeconomic and cultural co-benefits to local communities,¹⁶ and will align the NAP with a number of other policies, initiatives and commitments in Ghana (CBD, 2009; Scarano, 2017). For instance, Ghana is a signatory to the Convention on Biological Diversity (CBD), and therefore adopting an ecosystem approach will align Ghana's NAP process with CBD. The CBD advocates the use of biodiversity and ecosystem services as an overall adaptation strategy for local communities in addressing the adverse impacts of climate change on their livelihoods (CBD, 2009). Finally, promoting an ecosystem-based approach will also align the NAP with the National Biodiversity Strategy and Action Plan (2002) as well as the National Forest Plantation Development Programme (2001).

¹⁶ Social benefits include the provision of safety nets to local communities when climate variability causes crop failures. The cultural benefits include the "non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences" (Millennium Assessment, 2005, p.4). Cultural benefits inspire "deep attachment" in communities, and thus act as important entry points to build wider public support for ecosystem protection.

3.6 Harmonizing Timeframes

Consistent with international guidelines, the NAP will adopt a long-term view of climate change adaptation to address the country's medium- and long-term development concerns. Addressing the adverse impacts of climate change in Ghana has sometimes assumed an ad hoc approach that focuses on current vulnerability without adequate consideration of future and potential vulnerabilities closely linked to climate change. This has sometimes resulted in massive damage to ecosystems and infrastructure, as short-term adaptation measures have not anticipated future concerns. A lack of appreciation for the long-term impacts of climate change can lead to maladaptive outcomes¹⁷ that have the potential to reduce the adaptive capacity of communities, thereby exacerbating their vulnerabilities (Antwi-Agyei, Dougill, & Stringer, 2018; Juhola, Glass, Linner, & Neset, 2016). The NAP will instead focus on integrating climate change adaptation into Ghana's medium and long-term development priorities and strategies, an approach to timelines that is further supported by the NCCP (2013).

¹⁷ Maladaptation refers to "actions or inactions that may lead to increased risk of adverse climate-related outcomes, increased vulnerability to climate change, or diminished welfare, now or in the future" (Noble et al., 2014, p. 857).

4.0 Guiding Principles

The key principles underlying the NAP process should conform with and be informed by those of the NCCP and NCCAS, as well as those of existing national policies and development agendas, including the Agenda for Jobs (2018) and the Ghana Shared Growth and Development Agenda I & II (GSGDA 2010 -2017). These principles include:

4.1 Involving Youth in Climate Change Adaptation

Ghana's National Youth Policy (Ministry of Youth and Sports, 2010) indicates that one of the key challenges confronting young people in Ghana is their inadequate involvement in activities aimed at conserving the environment to ensure sustainable future. The NCCP (MESTI, 2013) also recognizes the unique vulnerability of youth to climate change. Youth, who form a significant proportion of Ghana's population, will bear the adverse impacts of climate change much longer. Therefore, they are important stakeholders in the climate change adaptation process (MESTI, 2013). Part of this vulnerability is linked to employment opportunities; many of the jobs for young people in agriculture, forestry and tourism will be greatly affected by the adverse impacts of climate change. As such, the youth should be given greater opportunities to participate in the design and implementation of activities under the NAP. Achieving this will require proactive engagement from the government. During the national consultations, there was a consensus among the youth NGOs focusing on environment and climate change issues that the participation of youth in climate change adaptation has been quite limited to date, contributing to low levels of awareness among this demographic.

4.2 Ensuring Participatory Decision Making Involving Relevant Stakeholders

Climate change is cross-sectoral and multidisciplinary in context and approach. Different levels of actors and stakeholders are key to the decision-making process in adaptation action in Ghana, and should be involved in the NAP planning and implementation. These include the executive, parliament, ministries, departments and agencies (MDAs), metropolitan, municipal and district assemblies (MMDAs), traditional authorities, community leaders, the private sector, gender constituencies, youth organizations, civil society organizations (CSOs), development partners, religious organizations, and other recognized and identifiable groups in Ghana. The NAP process in Ghana will add considerable value to past initiatives by involving broader stakeholders in adaptation planning and decision making.

4.3 Harmonizing Climate Change Adaptation Responses by Treating Climate Change as a Cross-Cutting Developmental Issue

Climate change is a cross-cutting developmental issue that will have disproportionate effects on different sectors, with particularly high impacts on agriculture, health, water, forestry and energy. There is a thin line between development and climate change adaptation; the two must positively reinforce the other. Ghana's climate change policy fundamentally promotes climate-compatible development, and the NAP process in Ghana will be guided by this same principle. Different sectors of the economy are engaged with various adaptation interventions; bringing these different sectors together through horizontal integration will help ministries and agencies harmonize their adaptation efforts to achieve sustainable development.

4.4 Ensuring an Integrated, Multidisciplinary and Complementary Approach, Building Upon Relevant Existing Plans

The adaptation landscape in Ghana is wide and broad, as different actors and sectors engage in adaptation actions in ways that vary temporally and spatially. This has often led to overlaps and duplication of adaptation efforts at different national and sub-national government levels. The NAP process will seek to draw on existing policy and institutional space to ensure complementarity and coherence of adaptation planning and implementation in Ghana.

4.5 Ensuring and Maximizing Multiple Co-Benefits in Relation to Sustainable Development, Poverty Reduction, and Climate Adaptation (Delivering “Triple Wins”)

Ghana has recently signed the Paris Agreement, the Sustainable Development Goals (SDGs) and the Sendai Framework. The country is subsequently developing bottom-up pro-poor action plans that will lead to the successful implementation of these international agreements at the country level. Adaptation is local, as it seeks to address climate vulnerabilities and impacts in specific geographical space. The NAP process in Ghana must ensure that adaptation planning and actions have the medium- and long-term objective of reducing extreme poverty (addressing SDG 1) and enhancing livelihood opportunities for local people (SDG 2) while building resilience to climate change (SDG 13) for vulnerable populations across different regions of the country. The adaptation commitments documented in Ghana's NDC already provide entry points for meeting many of the SDGs that can deliver the triple wins of ensuring climate adaptation, sustainable development and reducing poverty.¹⁸

¹⁸ Antwi-Agyei et al. (2018) detail the various opportunities in using nationally determined contributions in addressing the SDGs, including poverty reduction and climate change adaptation.

4.6 Managing Potential Trade-offs

Achieving “triple wins” with the NAP process will involve some trade-offs, particularly between the SDGs and the NDCs. For instance, the increased use of biofuels as an energy source (as indicated in Ghana’s NDC) could adversely affect food production, resulting in increased food insecurity. Similarly, while increasing irrigation through the construction of small dams could boost agricultural productivity, these small dams may have negative consequence on health by serving as breeding grounds for mosquitoes (Antwi-Agyei et al., 2018). It is vital to address the trade-offs in a transparent and participatory way that will promote the needs of all stakeholders.

The NAP process risks perverse adaptation outcomes if trade-offs are not adequately addressed in a coherent manner. Identifying the trade-offs requires appropriate tools and techniques, including the use of multi-criteria analysis (MCA) based on stakeholder prioritization to evaluate alternative adaptation pathways for various sectors. As part of the MCA, a strategic environmental assessment (SEA) can be used at the sector level to examine the socio-environmental impacts of the various adaptation practices or pathways, to minimize trade-offs and maximize potential synergy from such practices.

4.7 Improving Social Equality and Ensuring a Gender-Responsive NAP

There are vital interconnections between gender and social equality, the environment and development. Climate change impacts will differ across social groups: women and men, rich and poor, specific ethnic and age groups, people with disabilities, etc. Patterns of adaptation actions and development that neglect the needs of specific groups of people can exacerbate disparities, stratifying people into losers and winners and in turn worsening living conditions and creating unjust outcomes. A deliberate focus on gender and social equality in development can help achieve more inclusive benefits, and enhance human and environmental well-being. Ghana’s NAP process must recognize these social disparities and should take concrete steps in adaptation planning and implementation to give equality and equity the attention it requires.

4.8 Flexible and Iterative Response to Ensure the NAP Process Can Withstand Future Climatic and Non-Climatic Shocks

The NAP process in Ghana must be a continuous and flexible process, to ensure that feedback is continuously integrated into planning and implementation. This will help ensure its continued relevance and ability to withstand future—and at times unexpected—climate and non-climate shocks.

4.9 Evidence-Based Climate Change Adaptation Process

The NAP seeks to create opportunities to bring evidence into the policy process, bridging the academic and scientific communities and policy practitioners. For an effective NAP process, it is important that opportunities are created that will allow academia to contribute through empirical and theoretical research.¹⁹ This will help ensure robust decision making based on the

¹⁹ Suggestion from stakeholder consultation.

best available science. Recognizing that uncertainties surround climate projections and how adaptation can be implemented within complex socio-ecological system and processes, Ghana's NAP process should adopt a "no regret adaptation option" to address existing and future climate vulnerabilities.

4.10 Incorporating Local Indigenous Knowledge to Ensure Effective Adaptation

Local indigenous knowledge and best practices should be encouraged within the NAP process. Households and communities in Africa have often employed traditional or indigenous knowledge to cope with the adverse impacts of climate change. For instance, those in dryland farming and pastoral systems have often used complex traditional models of the climate to understand the changes in their environment. They employed such models to provide early warning signs for climate forecasting. It will be critical that this knowledge is blended with available science to ensure a holistic approach to climate change adaptation in Ghana. The mandate for this exists: both the national climate change policy and national climate change adaptation strategy recognize the importance of traditional knowledge. For instance, the NCCP states: "traditional knowledge has been critical in conserving natural resources, protecting the environment, making farming decisions, predicting weather, managing health and coping with extreme climate variability. It is important to document indigenous knowledge into early warning systems and research and to establish its potential for scaling up" (MESTI, 2013, p.11). The NCCAS also stresses the fact that the application of indigenous knowledge in addressing the adverse impacts of climate change is relatively cheaper than the use of foreign technology and, therefore, should be explored.

4.11 Communication Strategy of Adaptation Efforts

For an effective NAP process, it is imperative that an efficient communication strategy is put in place. Ghana, since becoming a party to the UNFCCC, has initiated and undertaken a number of policies and programs aimed at addressing climate change issues at different levels across different spectrums of society. Despite these initiatives, the level of awareness and understanding of climate change issues among stakeholders still remains low at all levels. This can partly be attributed to the lack of a national climate change communication strategy to enable effective communication of climate change knowledge. The NCCP (2013) stresses the need to develop a more comprehensive approach to communication. The NAP process will ensure that adaptation efforts are properly communicated to all stakeholders using acceptable and user-friendly communication channels. Different audiences should be targeted with different communication channels. For instance, local communities can be reached using local dialects while policy briefs are used to target policy-makers.

5.0 Alignment of the NAP Framework with Existing National Policies and Planning Processes, as well as Regional and International Frameworks

Recognizing the socioeconomic impacts and the development challenge arising from climate change, the Government of Ghana has resolved to mainstream climate change into the country's development agenda and its key planning processes at the national, regional and local levels. The NCCP provides clearly defined pathways for dealing with the challenges of climate change and identifies the opportunities and benefits associated with the shift to a green economy. The NCCP is the country's integrated response to climate change, and its underlying vision is "to ensure a climate-resilient and climate-compatible economy while achieving sustainable development through equitable low-carbon economic growth for Ghana" (MESTI, 2013, p. ix). The NCCP was developed from the National Climate Change Policy Framework (NCCPF) and the Ghana Goes for Green Growth (G4) discussion document.²⁰ The NAP process will be guided by the NCCP as well as the National Climate Change Master Plan Action Programmes for Implementation (2015–2020), focusing on agriculture, energy, health, ecosystems, infrastructure, communities, tourism, water, gender and migration (MESTI, 2015). The NAP process will also be aligned with the three National Communications submitted to the UNFCCC in 2000, 2011 and 2015 respectively. Furthermore, it will align with other relevant national policies and strategies including the National Climate Change and Green Learning Strategy (2016), the Agenda for Jobs (2018) and Ghana's Migration Policy (2016).

In terms of Ghana's international obligations, the NAP process will be aligned with Ghana's Nationally Determined Contribution (NDC), which details Ghana's mitigation and adaptation commitments under the Paris Climate Agreement, signed in December 2016 (Republic of Ghana, 2015). In addition, the NAP process must also align with the Sustainable Development Goals and the Sendai Framework (on disaster risk reduction), as well as regional frameworks such as the ECOWAS Agricultural Policy (2009) and Agenda 2063 that seeks to, among other things, improve socioeconomic and ensure inclusive growth and sustainable development on the continent (Africa Union Commission, 2015).

It emerged from the stakeholder consultations that many of the key sectors, including forestry and gender, have not yet identified, prioritized and costed climate change adaptation. The NAP process should address this important gap.

Coordination between and among key actors working on advancing climate adaptation is a prerequisite to support coherence and cohesion of efforts related to climate adaptation, to make efficient use of capacities and resources, and to support the scaling up of actions. Coordination is needed at all levels: a) among ministries, department and agencies; b) between national and sub-national governments; c) among development partners; and, d) between development partners

²⁰ The G4 document has already been accepted by Cabinet and has been subjected to extensive stakeholder consultation in both the northern and southern regions of the country over a two-year period between 2010 and 2012.

and government. However, there are overlaps in terms of projects by different sectors on climate change adaptation. The EPA should be adequately empowered to play the key coordination role, to help ensure the efficient utilization of scarce resources to achieve climate change adaptation in Ghana.



6.0 Proposed Institutional Arrangements for Ghana's NAP Process

There are a number of existing national institutions and private organizations in Ghana whose mandates and activities touch on climate and climate change issues. These include government, the private sector, the research community and civil society, as well as bilateral and multilateral donor partners. The NAP process will be anchored in the country's existing institutional and legal framework to avoid proliferation and duplication of structures for addressing climate change in Ghana (Appendix IV). Figure 1 highlights the proposed institutional arrangement for the NAP in Ghana.²¹

The National Climate Change Committee (NCCC)/MESTI: The NCCC was formed in 2012 as a strategic body to coordinate the planning, implementation and monitoring of climate change policies and programs at the highest level. The NCCC has its Secretariat at the Ministry of Environment, Science, Technology and Innovation (MESTI). The NCCC will play the overall strategic supervisory role for the NAP process in Ghana. The NAP Project Steering Committee will report to and take guidance from the NCCC through the Executive Director of the EPA.

The Environmental Protection Agency (EPA): The EPA is responsible for the coordination of UNFCCC-led policies and programs on behalf of the MESTI. It is the technical arm of MESTI responsible for environmental protection and climate action in Ghana. With rich experience in international reporting and coordination, the EPA will coordinate the entire NAP process to ensure that the various actors, including the MDAs, MMDAs, the private sector and CSOs perform their given roles and achieve their mandates, with respect to the NAP process in Ghana, in a timely and effective manner.

Ministries, Departments and Agencies (MDAs) and Metropolitan, Municipal and District Assemblies (MMDAs): Climate change is cross-sectoral in nature and requires a collaborative effort to address it. Many sector ministries and departments and many other sector institutions have diverse roles to play in the coordination, planning, implementation as well as the monitoring phases of the NAP process in Ghana. These include the MESTI, the Ministry of Food and Agriculture (MoFA), Ministry of Water and Sanitation, Ministry of Lands and Natural Resources, the National Disaster Management Organization (NADMO), Ministry of Finance (MoF), Ministry of Local Government and Rural Development (MLGRD), the Forestry Commission (FC), the Energy Commission (EC), Water Resource Commission (WRC), the Ghana Meteorological Agency (GMet), and various academic and research institutions. Although the National Development Planning Commission is part of the MDAs, it has a special role in coordinating adaptation planning and mainstreaming at the district level.²² The local government system already has an existing, well-defined and decentralized structure in place through the district assembly system, which can facilitate the effective and coordinated mainstreaming of climate change adaptation. The NAP process will use this existing structure for district-level action, community engagement and feedback. The strategy is to also use the MDAs and MMDAs to engage development partners, the private sector and civil society organizations for adaptation financing and outreach.

²¹ There was a consensus agreement among key stakeholders that the proposed institutional arrangements will work. This arrangement will allow the EPA and MESTI to play an overarching coordination of the NAP in Ghana.

²² The NDPC coordinates the medium-term plans of the various districts and regions in the country.

Technical Working Groups: The development of the NAP in Ghana will use a cross-sectoral policy approach to ensure a robust and efficient output. This approach is also anticipated to generate the buy-in needed for effective implementation of the NAP. The government proposes to establish four technical working groups,²³ or cross-sectoral planning groups (CSPGs), focusing on health, water, infrastructure and the land, energy and agriculture nexus, each consisting of a dozen representatives from government and academia—an approach that has already been piloted in Ghana for the development of the national communications to the UNFCCC.

The Private Sector: The NAP process in Ghana will harness the potential of the private sector to drive adaptation and climate risks reduction, recognizing the relevant role the private sector plays and will continue to play in both achieving Ghana’s sustainable development agenda and realizing its nationally determined contributions (NDCs) to the Paris Agreement.

Civil Society Organizations (CSOs): The Government of Ghana sees CSOs as strategic partners for development. The NAP process in Ghana will actively engage the CSO community in planning, advocacy, education and awareness raising, evidence-based research as well as monitoring and evaluation of adaptation efforts at various levels in the country.

Development Partners: International collaborations and partnerships are key to successful adaptation actions in any country. Ghana’s NAP process recognizes the role of the international community, especially development partners, as critical for resource mobilization, capacity development and technology development and transfer for current and future adaptation action. Specifically, Ghana will harness support from multilateral agencies, bilateral donors and south-south cooperation for in-country adaptation action and resilience building.

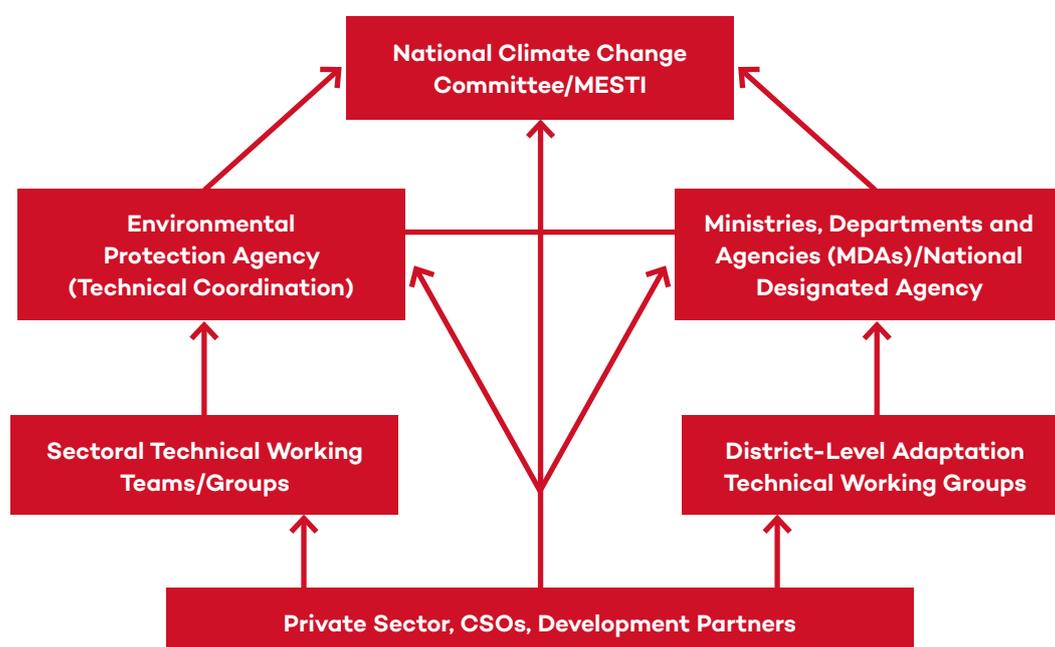


Figure 1: Proposed institutional arrangement for Ghana’s NAP

²³ As per the Readiness Proposal submitted to the GCF.

7.0 Monitoring, Evaluation and Learning

The National Development Planning Commission is responsible for monitoring and evaluation (M&E) in Ghana. The national M&E system “provides the basis and data for the analysis of the relationships between inputs, the activities that lead to the delivery of public goods and services (outputs) and their associated outcomes and impact” (GoG, 2017b, p. 142). Articles 86 and 87 of the 1992 Constitution of the Republic of Ghana, the National Development Planning System Act, 1994 (Act 480), and the National Development Planning (System) Regulations, 2016 (LI. 2232) provide the legal framework for M&E in Ghana and these enjoin every government implementing agency to undertake monitoring and evaluation of their respective policies, programs and projects. The National Medium Term Policy Framework and the Sector and District Planning Guidelines, which spell out the national indicators, baselines and targets, guide the national M&E system. Ghana’s Nationally Determined Contributions, the NCCP and NCCAS all prioritize M&E as part of ensuring effective climate change adaptation in Ghana.

District and Sector Annual Progress Reports are also prepared each year, which in turn feed into the National Annual Progress Report. At the district level, each district assembly has an M&E plan, which also covers the sub-district level. As part of the process, the NDPC issues guidelines to the districts to prepare their plans. There is no specific M&E for climate change adaptation; however, the NDPC guidelines include various indicators for climate change, the SDGs, Agenda 2063 and green economy issues. Climate change issues have been mainstreamed in the district medium-term development plans and therefore it is required of all MDAs and MMDAs to monitor and evaluate the performance of the indicators and targets.

An appropriate M&E system should be constituted to monitor and evaluate the NAP process. The NCCC shall be responsible for overall monitoring and evaluation of the process. In terms of reporting, quarterly and biannual reports will be produced and submitted to UN Environment, using the format they have provided. Annual Performance Reports shall be produced within 60 days of the end of the reporting period for the Green Climate Fund (GCF); the GCF fiscal year end on December 31. A final report shall be submitted within three months of the project completion by the Executing Entity, detailing the outputs and the activities taken under the project, lessons learned and any recommendations to improve the efficiency of similar activities in the future, using the format to be provided by UN Environment.



8.0 Climate Finance Resource Mobilization

As part of the NAP process the Government of Ghana should devise a coherent and comprehensive resource mobilization strategy for the necessary funds needed to implement the NAP process. Currently, the key funds for climate change adaptation in Ghana are coming from donor agencies (Appendix V). To ensure successful implementation of the NAP, funding will have to come from both domestic and international, public and private sources (Parry & Brossmann, 2017). In particular, the private sector will need to be harnessed to support the financing of climate change adaptation. The NDC submitted under the Paris Agreement stresses the importance of international funding for implementing the various actions outlined in the NDC. The GCF is particularly important for the development of the NAP and should be explored.

Ghana is also currently formulating national legislation for the set-up of a “Ghana Green Fund.” The objectives of the Ghana Green Fund are to: i) raise funds to implement the environment and climate change policies; ii) leverage private sector finance; and, iii) develop capacity for project preparation.²⁴ Innovative funding mechanisms involving the private sector (private enterprises and financiers) will also be quite critical for sustainable funding of NAP planning and implementation. The private sector should be empowered through proposal writing workshops and training to enable them to write bankable proposals to secure funding for climate change adaptation.²⁵ To attract both local and international private finance in climate change adaptation, the government should make the business climate more competitive and transparent through appropriate policy reforms. In terms of domestic funding, efforts should be made to integrate climate change adaptation into national and sectoral budgets, as well as improving the capacities of budget officers to integrate and manage climate financing.²⁶

²⁴ According to the Readiness Proposal submitted to the GCF.

²⁵ Suggestion from a stakeholder during the stakeholder consultations.

²⁶ See Asante et al. (2015).

9.0 Moving the Process Forward: Next steps and milestones

The proposed steps to advance Ghana's NAP process are:

Initiating and launching the NAP process: Within three months of the approval of the Readiness Proposal by the GCF, and as a first step, the EPA together with MESTI and the NDPC should officially launch the NAP process in Ghana. This will include conducting awareness-raising workshops and sessions for policy-makers and decision-makers on climate change issues to ensure political support and buy-in for the NAP process. As part of the launching, policy briefings may be conducted where policy-makers will be updated on climate change adaptation challenges and opportunities and how the NAP process could address these challenges. MESTI and EPA should establish cross-sectoral policy groups to develop the NAP by seeking nominations for participation from a range of ministries, agencies and non-state actors, including civil society and the private sector.²⁷ Civil society organizations, including youth NGOs, should also be actively involved in the awareness-raising workshops.

Stocktaking: This step involves identifying available information on climate change impacts, vulnerability and adaptation, and assessing gaps and needs of the enabling environment for the NAP process. Within nine months of the initiation of the NAP process, there will be the need to take stock of ongoing and past adaptation activities to identify the strengths and weaknesses regarding the capacity, data and information, and resources required to effectively engage in the NAP process (LEG, 2012). This step will include an assessment of the potential barriers to the planning, design and implementation of adaptation activities. The Project Management Team should coordinate this aspect of the NAP process.

Enabling environment for effective institutional functioning and capacities for adaptation: There are multiple institutions, agencies and ministries involved in climate change adaptation in Ghana. These include both governmental and non-governmental agencies that function at different levels (including local, district, regional and national). While this presents opportunities to ensure a more multi-sectoral approach, it presents challenges for effective coordination of these diverse institutions. Hence, it is essential that an enabling environment be created for the effective functioning of these institutions, agencies and ministries, with stronger collaboration and coordination between the different institutions and ministries to reduce overlap and duplication of adaptation efforts. This will also involve effective information sharing among the various institutions, agencies and ministries. The EPA, in its capacity as the UNFCCC national focal point and technical coordination institution for climate change in Ghana, should lead this important coordination process.

Addressing capacity gaps and weaknesses in undertaking the NAP process at the sector and district levels: Within 12 months of the initiation of the GCF project, the NAP process should develop capacities for adaptation planning at the district and sectoral levels. This requires that the local government, including MMDAs and MDAs, be empowered to integrate climate change adaptation into their development plans. Efforts should build on existing capacity and where necessary improve the skills of local governments to undertake key adaptation functions, such as monitoring and evaluation of climate change adaptations. The ultimate objective of integrating (or "mainstreaming") climate adaptation into national, sectoral and local development planning

²⁷ See the Readiness Proposal.

and budgeting processes is to increase the NAP's impact by shifting the integration of climate adaptation from solely the project level (i.e., often short term, implemented in silos and on an ad hoc basis) to the entire development planning system (i.e., more long-term and systemic, coordinated focus). To achieve this, the NAP process should involve developing and enhancing enabling institutional and technical capacity for undertaking adaptation planning.

Assessing climate vulnerabilities at the sector, sub-national, and national levels: One of the key areas of consensus emerging from the stakeholder consultations was the need to understand the level of climate change vulnerability in the various sectors. To this end, within 12 months of the formal launch of the NAP process, vulnerability assessments should be conducted of the key sectors of Ghana's economy, including agriculture, water, health, energy and forestry.²⁸ This will include downscale sectoral climate change risk and vulnerability scenario analysis, including socioeconomic modelling developed for the different climate zones. To address priority vulnerabilities, a multi-scalar assessment of vulnerability and adaptation options should also be identified and categorized (LEG, 2012). The EPA, with support from the Ministry of Finance, should lead this step.

Identification and appraising adaptation options at the sector, sub-national, and national levels: It also emerged during the stakeholder consultations that many key sectors have not yet costed climate change adaptations. It is, therefore, important that following the vulnerability assessment the key adaptation options for the various priority sectors be identified as part of the NAP process. This requires an appraisal of the individual adaptation options within each sector, and assessing their economic, ecosystem and social costs and benefits by adopting a bottom-up approach. The process should also identify any possibilities for unintended (positive and negative) impacts of adaptation measures that have the potential to lead to maladaptation.



Creation of a virtual knowledge platform for knowledge sharing among different stakeholders:

Knowledge sharing on climate change adaptation practices is quite critical in addressing the challenges posed by climate change. However, it emerged from the initial analysis of relevant literature and stakeholder consultations that Ghana lacked a common knowledge platform where best practices and lessons on climate change adaptation can be shared with other stakeholders, including governmental and non-governmental agencies working on climate change adaptations in Ghana. Although a climate data hub has already been created to facilitate knowledge sharing, information and data on adaptation action is virtually non-existent, so it will be prudent to expand the hub to include adaptation specific information and data. This will greatly improve adaptation planning across the various sectors and help to better coordinate adaptation efforts. The creation of the virtual knowledge platform should capture the best international practices and experiences.

²⁸ These are key sectors identified in Ghana's NDC and the NCCP.

Development of national strategies for financing NAP implementation and engaging with the private sector: The government should develop a pragmatic financing mechanism for the NAP implementation that will involve both domestic and international public and private funding sources. As outlined in Section 3.1, innovative approaches should be explored to actively engage the private sector in Ghana for the NAP process. For instance, an inventory of private sector groups in Ghana that are relevant to investments in climate adaptation can be developed.

Effective monitoring and evaluation scheme to facilitate implementation: An appropriate M&E system needs to be designed, capacitated and implemented once the NAP is launched. Weak monitoring and evaluation has been one of the key challenges confronting local governments across the country. The National Climate Change Policy (MESTI, 2013, p.15) states: “monitoring and reporting are essential to ensure the effectiveness and accountability of climate change actions for development in Ghana.” This could be linked to a “Measurement, Reporting and Verification” (MRV) system that will help in monitoring the success of various adaptation activities within the NAP process. This requires the establishment of appropriate indicators and baselines. Developing appropriate baseline and indicators will help track success of adaptation initiatives across the various district, sub-national and national levels. The NDPC, in collaboration with the EPA and MESTI, should be given the needed logistics to lead the monitoring and evaluation efforts.

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Appendices

Appendix I. List of stakeholders for national consultation

SN	Institution	Name	Position
1	National development Planning Commission	Winfred Nelson	Deputy Director
2	Ministry of Finance	Robert Mensah	GCF NDA Office, Ministry of Finance and Economic Planning
3	Environmental Protection Agency	Kyekyeku Oppong-Boadi	UNFCCC Focal Point, EPA
4	Environmental Protection Agency	Amoah Antwi-Bosiako	Principal Programme Officer (Adaptation, Climate Change Unit, EPA)
5	Environmental Protection Agency	Emmanuel Tachie-Obeng	Chief Programme Officer, (Education, Capacity & Awareness, Climate Change Unit)
6	Environmental Protection Agency	Daniel Tutu Benefor	Principal Programme Officer (Climate Change Unit, EPA)
7	National Disaster Management Organization	Charlotte Norman	Chief Disaster Control Officer, Climate Change Unit, NADMO
8	National Disaster Management Organization	Frank Aggrey	Deputy Chief Disaster Control Officer, Climate Change Unit, NADMO
9	Ministry of Environment, Science, Technology and Innovation	Peter Derry	Deputy Director (Policy) (MESTI)
10	Ministry of Food and Agriculture	Kingsley K. Amoako	Head, Climate Change Desk, MoFA

SN	Institution	Name	Position
11	Ministry of Gender and Social Protection (Department of Gender)	Sabia Kpekata	Desk Officer, Gender and Climate Change, Ministry of Gender and Social Protection
12	Ministry of Lands and Natural Resources (Forestry Commission)	Rosalyn Adjei	Acting Head, Climate Change Unit, Forestry Commission
13	Ghana Health Service (MoH)	Karl Osei	Lead, Climate Change Unit
14	ActionAid Ghana	Azumi Mesuna	Project Coordinator, Promoting Opportunities for Women Empowerment and Rights Project
15	CARE International	Peter Clausen	CSO Coordinator and Policy Advisor
16	University of Ghana	Abu Mumuni	Lecturer (RIPS)
17	Private Enterprise Federation	Wisdom Avongo	Senior Project Officer
18	Sustainable Banking Principles Committee	Stanilaus Deh	Head of Structured Products, Stanbic Bank, Ghana & Member, Sustainable Banking Principles Committee
19	Youth Volunteer for the Environment and Africa Youth Initiative for Change	Sandra Cobblah	Executive Director
20	Greener Impact International	Kassim Gawusu-Toure	Executive Director
21	African Response to Climate Change	Ebenezer Abuaku	Executive Director

Appendix II. List of participants at National Stakeholder Validation Workshop

SN	Name	Organization
1	Antwi-Boasiako Amoah	EPA, ACCRA
2	Alec Crawford	INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT
3	Philip Antwi-Agyei	KNUST
4	Boahen Kingsley	EPA, ACCRA
5	Danso Isaac Kwabena	EPA, ACCRA
6	Sabia Kpekata	DEPARTMENT OF GENDER
7	John A. Pwamang	EPA
8	Robert Mensah	MOF
9	Ebenezer Abuaku	ARCC INTERNATIONAL
10	Eva Bommo	ARCC INTERNATIONAL
11	Foster Gyamfi	MOF
12	Thomas Kankam Adjei	PEF
13	Faustina Sakyiwaah	EPA
14	Raymond Sakyi	FC
15	Abdul Razak Saad	USAID/IRRP
16	Ebenezer Appah-Sampong	EPA
17	Juliana Bempah	EPA
18	Mumuni Abu	RIPS, UG
19	Kingsley Amoako	MoFA
20	Chibeze Ezekiel	CSO-SDG 13 PLATFORM
21	K. Oppong-Boadi	EPA

SN	Name	Organization
22	Rosemary Boahy	EPA
23	Kassim Gawusu	GREENER IMPACT INT.
24	Winfred Nelson	NADPC
25	Henrietta A. Sarpong	NCCE
26	Raymond Kasei	WSS
27	Jennifer Atana	WAID GHANA
28	Peter Clauseu	CARE-INT.
29	Michael Kissi Boateng	NDPC
30	Daniel Benefo	EPA
31	Wisdom Adongo	PEF
32	Emmanuel Tachie-Obeng	EPA

Appendix III. The United Nations Sustainable Development Goals

SUSTAINABLE DEVELOPMENT GOALS



Appendix IV. Key legal and policy frameworks for climate change adaptation in Ghana

Name of the policy, strategy, plan	Status (released)	Timeframe covered	Responsible institution	References to climate adaptation (yes/no)	Climate adaptation actions (yes/no)		
					identified	prioritized	costed
NATIONAL DEVELOPMENT							
40-Year Socio-Economic Transformational Plan	2015	2018–2057	NDPC	Yes	No	No	No
Ghana Shared Growth and Development Agenda I & II	2010	2010–2017	NDPC, MoF	Yes	Yes	Yes	No
National Planning and Budgeting Guidelines	2014	2014–2019	MoF, NDPC	Yes	No	No	No
Sector and Districts Guidelines on Mainstreaming Climate Change	2013	n/a	MESTI, DA, NGOs, RCC	Yes	Yes	Yes	No
National Climate Change Policy	2012	2012–2020	MESTI	Yes	Yes	Yes	Yes
National Climate Change Master Plan	2015	2015–2020	MESTI	Yes	Yes	Yes	No
Nationally Determined Contributions	2015	2020–2030	MESTI	Yes	Yes	Yes	Yes
National Climate Change Adaptation Strategy	2010	2010–2020	EPA	Yes	Yes	Yes	No
Draft Climate Change Bill	2004					Not sure	Not sure
Agenda for Jobs: Creating Prosperity and Equal Opportunity for All	2018	2018–2021	NDPC	Yes	Yes	Yes	No

Name of the policy, strategy, plan	Status (released)	Timeframe covered	Responsible institution	References to climate adaptation (yes/no)	Climate adaptation actions (yes/no)		
					identified	prioritized	costed
Local Governance Act	2016	N/A	MLGRD	Yes	Not sure	No	No
National Climate Smart Agriculture Food Security Action Plan	2016	2016–2020	MOFA	Yes	Yes	Yes	No
National climate Change and Green Economy Learning Strategy	2016	N/A	MESTI	Yes	Yes	Yes	Yes
National Migration Policy	2016		MoI	Yes	Yes	Not sure	Not sure
SECTORAL DEVELOPMENT							
Ghana Forestry Development Master Plan	2016	2016–2036	FC	Yes	Yes	Yes	No
National Ghana Forest and Wildlife Policy	2012		MLNR	Yes	No	No	No
National REDD+ Strategy	2016	2016–2035	FC	Yes	Yes	Yes	No
Food and Agricultural Sector Development Policy	2012		MoFA	Yes	No	No	No
Ghana's Medium-Term Agriculture Sector Investment Plan	2009	2009–2015	MoFA	No	No	No	No
National Environment Policy	2014		MESTI	Yes	No	Yes	No
National Water Policy	2007		MWRWH	Yes	Yes	Yes	No
National Health Policy	2007	2010–2013	MoH	No	No	No	No

Name of the policy, strategy, plan	Status (released)	Timeframe covered	Responsible institution	References to climate adaptation (yes/no)	Climate adaptation actions (yes/no)		
					identified	prioritized	costed
CROSS-CUTTING THEMES							
National Gender Policy	2015		MoGCSP	No	No	No	No
Ghana Plan of Action for Disaster Risk Reduction and Climate Change Adaptation (2011–2015)	2011	2011–2015	NADMO	Yes	Yes	Yes	Not clear
District Medium Term Development Plans	2014	2014–2017	NDPC	No	No	No	No
Ghana Poverty Reduction Strategy	2003	2003–2005	NDPC	No	No	No	No
Environmental Fiscal Reform Policy			MESTI, MoF	Yes	No	No	No

CIDA – Canadian International Development Agency; CSOs – Civil Society Organizations; DA – District Assemblies; EPA – Environmental Protection Agency; DA – District Assemblies; FC – Forestry Commission; GFC – Green Climate Fund; GMet – Ghana Meteorological Agency; IDRC – International Development Research Centre, Canada; MELR – Ministry of Employment and Labour Relations; MESTI – Ministry of Environment, Science, Technology and Innovation; MLNR – Ministry of Land and Natural Resources; MoF – Ministry of Finance; MoFA – Ministry of Food and Agriculture; MGCSP – Ministry of Gender, Children and Social Protection; MoH – Ministry of Health; MoI – Ministry of Interior; MWRWH – Ministry of Water Resources, Works and Housing; NADMO – National Disaster Management Organization; NDPC – National Development Planning Commission; NGOs – Non-Governmental Organizations; RCC – Regional Coordinating Council; SADA – Savannah Accelerated Development Authority; UK DFID – United Kingdom Department for International Development; WRC – Water Resources Commission

Appendix V: Selected current and planned projects/programs on climate change adaptation in Ghana

Name of the program	Funder(s)	Implementing agency/ies	Duration (start and end dates)	Priority sectors (if any)	Geographical focus ^a
Africa Risk Insurance Initiative		MoF ^b , MOFA, NADMO	Four years (2016–2020)	Agricultural finance?	Regional
Increased Resilience to Climate Change in Northern Ghana through the Management of Water Resources and Diversification of Livelihoods – The Adaptation Fund Project	Adaptation Fund	MESTI, EPA, WRC, FC, MoFA, NADMO, SADA, CSOs	Four years (2016–2020)	Water Catchment protection and soil water conservation	The 3 Northern regions
Community Resilience through Early Warning (CREW) project	Government of Norway	NADMO/GMet	Five years (2012–2017)	Disaster Risk Reduction (DRR)	
Sustainable Land and Water Management project	CIDA	MESTI/EPA	Five years (2011–2016)	Restoration of degraded lands and soil water conservation	The 3 northern regions
Integrated Resource and Resilience Planning (IRRP) Project	USAID	ICF	Three years (2016–2018)	Resilient energy infrastructure and coastal communities	National
National Adaptation Plan Readiness Program	GCF	EPA	Planned for three years	Adaptation Planning	National
Climate change and Cities Project	IDRC	University of Ghana	Three years (2016–2019)	Flood adaptation	Greater Accra region
Science for Weather Information and Forecasting Techniques (SWIFT)	UK DFID	KNUST	Four years (2017–2021)	Climate information for adaptation in Agriculture, water, energy and transport sectors	National
Deltas, vulnerability and climate change; migration and adaptation	IDRC	University of Ghana	Four years (2015–2019)	Climate adaptation in coastal areas	

^a National, regional, subnational

^b CIDA – Canadian International Development Agency; CSOs – Civil Society Organizations; DA – District Assemblies; EPA – Environmental Protection Agency; DA- District Assemblies; FC- Forestry Commission; GFC - Green Climate Fund; GMet – Ghana Meteorological Agency; IDRC – International Development Research Centre, Canada; MELR – Ministry of Employment and Labour Relations; MESTI – Ministry of Environment, Science, Technology and Innovation; MLNR – Ministry of Land and Natural Resources; MoF – Ministry of Finance; MoFA – Ministry of Food and Agriculture; MGCSP – Ministry of Gender, Children and Social Protection; MoH – Ministry of Health; MWRWH – Ministry Of Water Resources, Works and Housing; NADMO – National Disaster Management Organization; NDPC – National Development Planning Commission; NGOs – Non-Governmental Organizations; RCC – Regional Coordinating Council; SADA –Savannah Accelerated Development Authority; UK DFID – United Kingdom Department for International Development; WRC – Water Resources Commission.



United States In-Country National Adaptation Plan (NAP) Support Program

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