



CLIMATE CHANGE

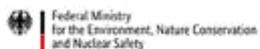
GENDER ACTION PLAN



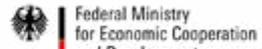
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Climate Change Gender Action Plan

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Ministry of Gender, Children and Social Protection

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Foreword

The adverse effects of a changing climate continue to overly burden the poorest and the most vulnerable, especially poor women. Despite growing recognition of the differential vulnerabilities as well as the unique experiences and skills women and men bring to development and environmental sustainability efforts, women still have fewer economic, political and legal opportunities. As a result, women are less able to cope with, and are more exposed to, the adverse effects of climate change.

Even though women across the globe face numerous existing structural and sociocultural barriers, they are powerful agents of change and continue to make increasing and significant contributions to sustainable development. As Ghana makes a conscious effort to meet her commitments (adaptation and mitigation) under the Paris Agreement as well as meeting its national development agenda, it is imperative that gender equality and women's empowerment continue to influence, shape and drive the collective climate and socio-economic development efforts.

Ghana's Nationally Determined Contributions (GH-NDCs) outline 31 programmes of action (consisting of 20 mitigations and 11 adaptations) spread across seven economic sectors namely; energy and industry, health, transport, agriculture and forestry, waste, water and gender/the vulnerable. Conscious of the relevance of making Ghana's NDC actions gender sensitive, the Government of Ghana has developed this Climate Change Gender Action Plan (CCGAP) to provide space for proper integration of gender issues into Ghana's climate action for the next 10 years.

The overall goal of the CCGAP is to facilitate the integration of gender considerations into policies, programmes and strategies related to climate change to provide equal opportunities to both women and men and enable them to have access to, participate in and benefit from climate change initiatives across the NDC priority sectors of the economy. This is consistent with the National Climate Change Policy (2013) that seeks to "ensure the integration of gender equality principles in all social policies such as education, health, water and sanitation". It is also evident that reducing gender inequalities and empowering women and girls is fundamental to making progress across all the Sustainable Development Goals.

The CCGAP is seen as a living document and is open to regular updates to take on board emerging issues on climate change and gender.

It is my fervent wish that this Action Plan will serve its intended purpose by connecting all actors to the issues of climate change and gender to ensure all-inclusive, socio-economic development in Ghana.

Dr. Kwaku Afriyie

Minister, Ministry of Environment, Science, Technology and Innovation

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Special acknowledgement goes to the diverse civil society organizations and the private sector for their immense contributions and participation during the stakeholder consultations for this Action Plan.

We are particularly grateful to the United Nations Development Programme (Accra), which facilitated and provided technical support for the success of the process. We are indebted to the Government of Germany for the generous financial support it provided to develop this Action Plan.

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Acronyms

CC	climate change
CCGAP	Climate Change Gender Action Plan
CONIWAS	Coalition of NGOs in Water and Sanitation
CPESDP	Coordinated Programme of Economic and Social Development Policies
CSIR	Council for Scientific and Industrial Research
CSO	civil society organization
CWSA	Community Water and Sanitation Agency
EPA	Environmental Protection Agency
FAO	Food and Agriculture Organization of the United Nations
FBO	farmer-based organization
GDP	gross domestic product
GFU	Gender Focal Unit
GH-NDC	Ghana Nationally Determined Contribution
GMet	Ghana Meteorological Agency
GNFS	Ghana National Fire Service
GSS	Ghana Statistical Service
HSD	Hydrological Services Department
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
MDAS	ministries, departments and agencies
MESTI	Ministry of Environment, Science, Technology and Innovation
MIMR	Ministry of Information and Media Relations
MLGRD	Ministry of Local Government and Rural Development
MLNR	Ministry of Lands and Natural Resources
MMDAs	Metropolitan, Municipal and District Assemblies
MoC	Ministry of Communication
MoF	Ministry of Finance

MoFA	Ministry of Food and Agriculture
MoFAD	Ministry of Fisheries and Aquaculture Development
MoGCSP	Ministry of Gender, Children and Social Protection
MoSWR	Ministry of Sanitation and Water Resources
NADMO	National Disaster Management Organisation
NCCE	National Commission for Civic Education
NCCP	National Climate Change Policy
NDC	Nationally Determined Contribution
NDPC	National Development Planning Commission
NGO	non-governmental organization
NHIS	National Hospital Insurance Scheme
OHLGS	Office of the Head of Local Government Service
SDGs	Sustainable Development Goals
STEM	science, technology, engineering and mathematics
TFR	total fertility rate
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
WHO	World Health Organization
WRC	Water Resources Commission

Executive summary

Climate change presents significant challenges to socio-economic development, especially for countries in sub-Saharan Africa where the majority of the economies depend on climate-sensitive sectors, including agriculture and forestry. Climate change is also expected to worsen existing poverty and exacerbate inequalities, especially for those disadvantaged by gender, age, race, class and disability. It is widely acknowledged that women are more vulnerable to the often devastating effects of climate change due largely to their limited access and control over productive and economic assets and resources that could help them to address the threats posed by climate change. Gender inequalities remain among the deepest and most pervasive of all forms of inequalities and, in fact, greatly hinder development efforts. The Intergovernmental Panel on Climate Change identifies gender as one of the socio-economic factors that influence the capacity to adapt to changing environmental and economic conditions. Nonetheless, women are not just helpless victims but powerful agents of change, with critical local knowledge and livelihood strategies useful for the management of climate risks.

Ghana is projected to suffer intense drought and increasing rainfall variability, which will adversely affect the attainment of the Sustainable Development Goals (SDGs) as well as the commitments under the Nationally Determined Contributions (NDCs). This will present serious developmental challenges for the country's economy, which is heavily dependent on climate-sensitive sectors, including agriculture and forestry. The 1992 Constitution of Ghana, particularly Article 17(1) and (2) guarantees gender equality and freedom of women and men, girls and boys from discrimination based on social or economic status, among other attributes. The Constitution also guarantees the human rights of all citizens of the country, including those of women and children and vulnerable and other disadvantaged groups of individuals.

At the national level, Ghana's National Climate Change Policy (NCCP, 2013) emphasizes the need to address gender concerns in climate change. One of the key policy objectives of the NCCP is to "promote equal opportunities and affirmative action for women and vulnerable groups in climate change adaptation and mitigation through mainstreaming gender issues into national and sub-national climate-change-related policies". The National Gender Policy aims to mainstream gender equality and women's empowerment into the nation's development effort. The policy hopes to achieve this by emphasising the need for improvement of social, political, economic, civic, legal and sociocultural conditions of the entire populace with a special focus on children, the vulnerable and people with special needs.

As a member of the United Nations, Ghana has signed several international and regional conventions and agreements including the Convention on the Elimination of All Forms of Discrimination against Women, the International Covenant on Civil and Political Rights, the Beijing Declaration and Platform for Action, the Commonwealth Plan of Action for Gender Equality and the African Women's Protocol. Others include the Maputo Protocol on Gender, the African Charter on Human and People's Rights and the Economic Community of West African States Gender Policy. The country has also signed and ratified the three Rio Conventions – the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention on Biological Diversity and the United Nations Convention to Combat Desertification.

Adopting a bottom-up approach, the Paris Agreement requires all Parties to the UNFCCC to put forward their best efforts through NDCs and to strengthen these efforts in the years ahead. The NDCs are at the heart of the Paris Agreement and detail the commitment and efforts by each UNFCCC country to reduce national emissions of greenhouse gases. The NDCs reflect each country's ambition for reducing emissions, within the context of its domestic priorities, circumstances and capabilities. The Paris Agreement calls on parties

to promote gender equality and the empowerment of women when taking actions to address climate change. It also calls on parties to implement gender-responsive adaptation and capacity-building actions. Ghana submitted its NDCs (GH-NDCs) to the UNFCCC Secretariat in September 2015. The Parliament of Ghana ratified the Paris Agreement in 2016, indicating the country's readiness and commitment to implement the NDCs. GH-NDCs outline 31 programmes of action (consisting of 20 mitigations and 11 adaptations) spread across seven economic sectors, namely: energy and industry, health, transport, agriculture and forestry, waste, water and gender/the vulnerable. The uniqueness of the GH-NDCs is that gender was submitted as a thematic area and a cross-cutting issue within the other sector actions.

The overall goal of the Climate Change Gender Action Plan (CCGAP) is to facilitate the integration of gender considerations into policies, programmes and strategies related to climate change to provide equal opportunities for both women and men and enable them to have access to, participate in and benefit from climate change initiatives across the NDC priority sectors of the economy. This is consistent with the NCCP (2013) that seeks to “ensure the integration of gender equality principles in all social policies such as education, health, water and sanitation”. It is also evident that reducing gender inequalities and empowering women and girls is fundamental to making progress across all the SDGs.

The formulation of the CCGAP involved two methodological approaches, including a gender analysis and stakeholder consultations. Sector policies and strategic documents were reviewed to provide context analysis of the gender issues within the GH-NDC priority sectors – health, water, waste, transport, energy, agriculture, and disaster risk and climate services.

The CCGAP, which covers the seven priority focal sectors based on GH-NDCs, is arranged per sector, with each section having sub-sections on situational analyses on the gender issues in the respective sector and a table of actions. The Action Plan provides a set of objectives, the necessary actions to be taken, the indicators of success and the institutions responsible for implementation.

The CCGAP concludes by providing a description of the key institutional arrangements that are needed to ensure the successful implementation of the various actions outlined under each priority sector. Key issues highlighted under the institutional arrangements include funding arrangements, coordination, monitoring and evaluation, and policy alignment.

“ The overall goal of the Climate Change Gender Action Plan is to facilitate the integration of gender considerations into policies, programmes and strategies related to climate change to provide equal opportunities for both women and men and enable them to have access to, participate in and benefit from climate change initiatives across the NDC priority sectors of the economy. ”

1 Chapter One:

CONTEXT AND METHODOLOGY

1.1 Overview

Climate change continues to present a significant challenge to the socio-economic development of Ghana, largely because of the country's heavy dependence on climate-sensitive sectors, including forestry and agriculture. Rain-fed agricultural systems provide the source of livelihoods for millions of households in Ghana, and this makes the country even more vulnerable to the adverse effects of changes in climate.

Climate change impacts men and women differently, given their different roles and responsibilities at the household and community levels. Women are mostly treated as victims of climate change because they are less able to adapt and suffer disproportionately from the effects of changes in climatic conditions. Women's vulnerability is partly attributed to their high representation in informal employment or in economic activity, which is based on natural resources or agriculture, as well as their lower education level. They also experience greater financial and resource constraints, lower levels of access to information, and less decision-making authority in their homes and community (World Bank, 2012; Food and Agriculture Organization of the United Nations [FAO], 2011). Nonetheless, women possess considerable local knowledge that is often pertinent for adaptation and mitigation in climate change. In relation to climate change and sustainable development, women's local and environmental knowledge and survival strategies are major ingredients for recovery and resilience (United Nations Development Programme [UNDP], 2010).





Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, while recognizing the variety of different groups of women and men. The World Bank (2012) reported that gender equality is a core contributor to better development outcomes, including poverty reduction and increased sustainability. Women's equality and empowerment is one of the 17 Sustainable Development Goals (SDGs) and integral to all dimensions of inclusive and sustainable development. In short, all the SDGs depend on achieving Goal 5, which seeks gender equality.

To address the challenges presented by climate change, the Government of Ghana has initiated a number of programmes and signed several international conventions, frameworks and protocols. The 1992 Constitution of Ghana, particularly Article 17(1) and (2) guarantees gender equality and freedom of women and men, girls and boys from discrimination based on social or economic status, among other attributes. The Constitution also guarantees the human rights of all citizens of the country including those of women and children, the vulnerable and other disadvantaged groups of individuals. Ghana's National Climate Change Policy (NCCP) 2013 emphasizes the need to address gender concerns in climate change. One of the key policy objectives of the NCCP (2013) is to "promote equal opportunities and affirmative action for women and vulnerable groups in climate change adaptation and mitigation through mainstreaming gender issues into national and sub-national climate-change-related policies."

1.2 Rationale for integrating gender in climate action

Climate change is expected to worsen existing poverty and exacerbate inequalities; this is because climate change impacts are not only economic and physical, but also social. Because of gender differences in sociocultural and economic roles and responsibilities, climate change affects women and men in different ways and often women more harshly. The 2011 Human Development Report cautions that gender inequalities intersect with climate risks and vulnerabilities, concluding that climate change is likely to amplify existing patterns of gender

disadvantage. Women's historic disadvantages, their limited access to and control over decision-making, environmental and economic resources, and restricted rights make them more vulnerable to climate change.

The disproportionate burden of climate change on women can be countered by empowering women and recognizing them as the important actors of change that they are. Women have essential roles as primary land, water, and natural resources managers and are powerful agents of change in formulating responses to climate change. Women are part of the solution. Through their leadership, coping strategies on adaptation are developed. Women are also fundamental in mitigation, largely due to their critical role in energy efficiency, their receptiveness to greener sources of energy, as well as their power to change consumption patterns. Incorporating a gender perspective successfully and effectively requires that men and women understand the process of climate change and that information on counteracting its negative impacts is shared on an equal basis with both women and men. It is important that women have equal access to knowledge, awareness, capacity-building, resources and technology, which are prerequisites in influencing climate change. Likewise, it is fundamental that women participate more actively in decision-making and policy development at all levels.

1.3 Goal of the Climate Change Gender Action Plan

The overall goal of the Climate Change Gender Action Plan (CCGAP) is to facilitate the integration of gender considerations into policies, programmes and strategies related to climate change to provide equal opportunities for both women and men and enable them to have access to, participate in and benefit from climate change initiatives across the Nationally Determined Contributions (NDC) priority sectors of the economy. This is consistent with international, regional and national commitments for addressing climate change and achieving gender equality and women's empowerment. For example, the NCCP (2013) seeks to "ensure the integration of gender equality principles in all social policies such as education, health, water and sanitation".

To achieve this goal, various objectives have been set under the action plans proposed for each of the priority sectors. In addition, the activities and corresponding monitoring indicators have also been provided for each of the CCGAP objectives, grouped into six main objectives, which run through many of the sectors:

- Build capacity of staff on climate change and gender in all the sectors
- Increase the participation of women and men at all levels of management
- Support staff of the various sectors to mainstream gender into programme delivery and operations
- Increase awareness of climate change and gender considerations at all levels
- Increase access to resources for both women and men
- Promote gender-responsive budgeting, monitoring and reporting

1.4 Enhancing gender-responsive implementation of climate change plans

Meeting the goal and objectives as outlined above are critical in enhancing the gender-responsive implementation of national climate change plans. To do this effectively, it is important to enhance the capacity of gender and sector technical personnel in NDC priority sectors to mainstream gender into climate action. The skills of gender focal persons and technical staff need to be developed through hands-on training on the use of gender analysis and gender mainstreaming tools to facilitate the integration of gender into sector programmes and activities. Knowledge on gender norms that create gender inequalities in health, agriculture, energy, waste,

water, transport and disaster risk (as identified in this plan) should be discussed among gender focal persons and technical personnel. Knowledge on gender norms that create gender inequalities and an understanding of the key and differentiated roles women and men play and the value of their knowledge in managing resources in the various sectors will ensure that deliberate steps are taken to encourage increased participation of women at management level. This will increase the level of understanding on barriers, which limit gender equality, and remove any stereotyping on the roles of women and men within the respective sectors. Appreciation of the barriers will garner staff support to work at addressing the gender issues particular to their respective sectors.

To increase the participation of women and men at all levels of management, it is important to promote equal participation of women and men in sector activity planning and implementation. Some efforts are being made to ensure women's participation, for instance in community water committees. While this is good, it is critical to ensure quality of representation. Contributions should be solicited from women as well as men without being subjected to approval from the other gender. For instance, both women and men should be given the platform to contribute to planning and implementation of water, sanitation and hygiene programmes in their communities. Mere presence without actively participating will bury the gender issues and will not ensure gender-responsive implementation.

Increased understanding of climate change and gender issues as they relate to the various sectors is required through awareness raising. This should be extensive and reach out to staff and the public. Emphasis should be placed on the benefits both women and men – and society at large – stand to gain if these gender barriers and vulnerabilities to climate change are addressed. In addition, awareness creation on alternative notions of masculinity and femininity will also lead to transformative gender roles and enhance gender-responsive implementation of the NDCs. One way of doing this is to encourage men to take up roles in female-dominated fields and encourage women to take up roles in male-dominated fields. In addition, measures should be put in place to address women's and men's practical needs in the workplace, thereby, attracting and retaining women and men in such fields of work. These measures will help address the challenge of unavailability of women to occupy positions in the science, technology, engineering and mathematics (STEM) dominated fields such as the transport and disaster risk sectors.

One barrier, which runs through all the sectors, is women's limited access to resources, including technical support, finance and productive time. Resourcing women to more productive sections of the priority sectors will increase general productivity levels. Creating awareness on this will stimulate support from staff and the community members on the importance of equally supporting men and women and enhance gender-responsive implementation.

Promoting gender-responsive budgeting is critical to ensure that funds are available on a continuous basis for implementing gender activities, such as awareness raising, gender-sensitive monitoring and reporting, and training of staff on implementing actions as proposed under this plan. Adequate and timely release of funds will result in prioritization of gender-responsive climate actions. Also linked to this is the use of gender-responsive indicators in monitoring and reporting. Beyond reporting on quantitative indicators (the number of men and women participating and benefiting), having indicators that report on qualitative aspects will assist staff to pick which gender issues to focus on within the sectors. Reporting on the activities' impact on women and men will influence follow-ups and enhance gender-responsive implementation.

1.5 Methodological approach

The formulation of this CCGAP involved two methodological approaches, including a gender analysis and stakeholder consultations.

Gender analysis

Sector policies and strategic documents were reviewed and stakeholders were consulted to provide context analysis of the gender issues within the seven Ghana NDC (GH-NDC) priority sectors – agriculture and forestry, energy, health, water, waste, transport, and disaster risk and climate services. The analysis also identified gaps, barriers and opportunities for integrating gender. Therefore, the CCGAP attempts to propose actions for addressing the gaps identified during the gender analysis.

Stakeholder consultations

Primary data were collected through interviews and consultations held with technical persons working within the NDC priority sectors. Key ministries consulted included the Ministry of Environment, Science, Technology and Innovation (MESTI); Ministry of Gender, Children and Social Protection (MoGCSP) (Department of Gender); Ministry of Sanitation and Water Resources (MoSWR); Ministry of Transport; Ministry of Health; Ministry of Food and Agriculture (MoFA); and the Ministry of Energy. Government agencies, including the Environmental Protection Agency (EPA), the National Development Planning Commission, the National Disaster Management Organisation, the National Commission for Civic Education; and the Ghana Meteorological Agency (GMet) were all consulted. Additionally, civil society organizations (CSOs) and non-governmental organizations (NGOs) working on climate change and gender issues in Ghana – including ABANTU for Development, Water Aid and Coalition of NGOs in Water and Sanitation – were consulted.



Consultations were held with heads, deputies and other technical staff members of the various sector institutions and relevant CSOs through face-to-face and virtual interactions to discuss the gender analysis results and possible actions to address the gaps. A draft action plan was developed as a result of these consultations. The initial draft was discussed with stakeholders on a sector-to-sector basis, and comments were incorporated. A reviewed draft was then shared for further review at a meeting of the NDC Gender Technical Working Group made up of representatives from all the sectors. Sector action plans were then further revised with wider stakeholder contributions from the seven sector ministries, departments and agencies (MDAs). The Action Plan was drafted, reviewed by respective sectors and the NDC Gender Technical Working Group and validated by broad stakeholders in the seven sectors for finalization.

1.6 Organization of the Climate Change Gender Action Plan

The CCGAP is structured into three sections. Section 1 provides the context detailing the purpose of the Action Plan, the organization of the sections and the methodological approaches used in formulating this CCGAP. Section 1 also provides the country overview (including the climate profile, geography and economy) and highlights the legal and policy framework, which underpins the CCGAP. Section 2 provides an overview of the gender and climate change situations in each sector and proposes specific actions for addressing the gaps in each sector for the seven GH-NDC priority sectors: agriculture, energy, water, health, waste, transport, and disaster risk and climate services. The CCGAP covers a 10-year period with the actions categorized as short term (first five years) and long term (second five years). Section 3 highlights the institutional mechanisms including political commitments, interministerial collaboration and coordination, funding arrangements, and monitoring and evaluation. Section 3 also provides the conclusion and the way forward for this Action Plan.



1.7 Country overview

1.7.1 Climate profile

Ghana's climate is tropical and greatly affected by the West African Monsoon winds. The rainfall season in Ghana is predominantly influenced by the movement of the Inter-Tropical Convergence Zone, which oscillates between the northern and southern tropics during a particular year. Rainfall over Ghana was particularly high in the 1960s and decreased to low levels in the late 1970s and early 1980s, which caused an overall decreasing trend in the period 1960 to 2006, averaging 2.3 mm per month (2.4 percent) per decade (MESTI, 2020). Rainfall has witnessed a decreasing trend, especially in the northern and southern parts of the country, with the exception of the forest transition zones and the rainforest that have recorded some increases (Asante and Amuakwa-Mensah, 2015). Northern Ghana has a unimodal rainfall pattern that begins in May and ends in September with southern Ghana characterized by bimodal rainfall patterns from March to July and from September to November (MESTI, 2015). Ghana's mean temperature, on the other hand, has risen by 1°C since 1960, increasing on average at a rate of 0.21°C per decade (EPA, 2015). These changes in climatic conditions have an adverse effect and will continue to present significant challenges directly or indirectly to major sectors of the country's economy, particularly climate-sensitive sectors including water, health, energy, agriculture, transport and disaster risk (MESTI, 2020). The Ghanaian economy and the majority of rural livelihoods heavily rely on natural resources. The ravages of climate change in the country pose serious threats to the economy and livelihoods.

1.7.2 Economy

Ghana is a lower-middle-income country whose main export commodities include oil, gold and cocoa. The country also has a rapidly expanding services sector. Since 2005, the structure of the economy has been transformed from a heavy reliance on agriculture to one dominated by services and industries (World Bank, 2016). Formerly, Ghana had a strong private sector, with credit support from a well-capitalized banking sector. However, due to population growth, the gains attained towards poverty reduction have been eroded as the population living in extreme poverty had risen from 2.2 million to 2.4 million by 2017, with greater growth in poor rural populations.

1.7.3 Geographic profile

Ghana, with a total land area of 227,540 sq. km,¹ is situated in West Africa on the Guinea Coast and lies close to the equator on latitude 11.5°N and 4.5°N and longitude 3.5°W and 1.3°E. The country is comprised of the forest zone (30 percent of southern Ghana) and the savanna zone (70 percent of northern dryland) and subdivided into 12 distinct vegetation zones. Agricultural lands have increased from 55 percent of the total land area in 1990 to 69 percent in 2017 (World Bank, 2020). In the same vein, the share of arable land of the country's land area increased from 12 percent to 21 percent in the same period. Agricultural irrigated land constitutes only 0.2 percent of total agricultural land. Agricultural machinery use is 4.5 tractors per 100 sq. km of arable land. Between 1990 and 2017, forest lands increased from 38 percent of the total land area to 41 percent (World Bank, 2020).

1 <https://data.worldbank.org/country/ghana>

1.8 Legal and policy frameworks for the Climate Change Gender Action Plan

The year 2015 was significant for international action on sustainable development and climate change agendas. Two major international frameworks were adopted to facilitate action on climate change and sustainable development – the adoption of the SDGs by the United Nations General Assembly and the adoption of the Paris Agreement, under the United Nations Framework Convention on Climate Change.

The country has made attempts to bridge existing gender gaps through the enactment of national laws and policies alongside global conventions and protocols to fight the marginalization of women. Actions at the global level include the enactment of the Convention on the Elimination of all Forms of Discrimination against Women (1981), Beijing Declaration and Platform for Action (1995), SDGs and the Solemn Declaration on Gender Equality (2004). At the regional level, Ghana is a signatory to the African Union Agenda 2063, which is a blueprint and development plan to transform Africa into a global powerhouse. Other regional treaties include the Maputo Protocol on Gender, the African Charter on Human and People's Rights and the Economic Community of West African States Gender Policy.

To strengthen gender issues in the country, the 1992 Constitution of Ghana, particularly Article 17(1) and (2) guarantees gender equality and freedom of women and men, girls and boys from discrimination based on social or economic status among other factors. This and the other international commitments have influenced the development of a number of national policies and legislative frameworks, including the National Climate Change Policy (2013), the National Gender Policy (2015), and the Gender Mainstreaming and Gender-Responsive Budgeting within MDAs and metropolitan, municipal and district assemblies (MMDAs). Ghana has also developed the Reducing Emissions from Deforestation and Forest Degradation project and Gender Roadmap to mainstream gender issues into the forestry sector.

The National Gender Policy (2015) provides a broad framework to guide gender mainstreaming in all sectors of the country. The policy defines gender as “the array of socially constructed roles and relationships, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis.” Every aspect of the policy highlights gender with outlined strategies for empowering women and girls.

The government's Coordinated Programme of Economic and Social Development Policies (CPESDP) for 2017–2024 fully embraces Ghana's obligations under the NDC to the Paris Climate Agreement and linkages to the SDGs and the African Union's Agenda 2063. The latest CPESDP and the medium-term development policy framework recognize climate change as a development issue. They adopt it as the vehicle to domesticate Ghana's multilateral environmental obligations by mainstreaming it in the MDAs' and MMDAs' medium-term development plans.

Ghana's NCCP provides an integrated response to the challenges of climate change. The NCCP ensures a climate-resilient and climate-compatible economy while achieving sustainable development through equitable low carbon economic growth for Ghana. GH-NDCs provide a further policy framework for climate change issues in Ghana. The country has also developed a National Climate Change Adaptation Strategy (2012) and has instituted several programmes and actions to achieve the SDGs and the Sendai Framework on disaster risk reduction.

2 Chapter Two:

CLIMATE CHANGE GENDER ACTION PLAN

2.1 Priority Sector 1: Agriculture

2.1.1 Situational analysis: Agriculture

Agriculture plays a crucial role in the economy of developing countries, and provides the main source of food, income and employment to their rural populations. It has been established that the share of the agricultural population in the total populace is 67 percent and that agriculture accounts for 39.4 percent of the gross domestic product (GDP), and 43 percent of all exports consist of goods.² Agriculture is helping to reduce poverty, raise incomes and improve food security for 80 percent of the world's poor, who live in rural areas and work mainly in farming.³ Agricultural development is one of the most powerful tools to end extreme poverty, boost shared prosperity and feed a projected 9.7 billion people by 2050.⁴ Growth in the agricultural sector is two to four times more effective in raising incomes among the poorest compared to other sectors. Research conducted by the World Bank in 2016 concluded that 65 percent of poor working adults made a living through agriculture.⁵ However, the impact of climate change on agriculture is projected to result in global GDP losses from 0.6 percent to 4.4 percent in 2060.⁶ These losses in GDP will affect countries differently with West Africa projected to experience GDP falling by 2.5 percent as a result of climate change. This will seriously affect the agricultural sector, which employs the majority of the population in the region.

Agriculture plays a crucial role in addressing the country's future needs in food production and security, and the preservation of the environment. Provisional GDP estimates for 2017 show a growth rate of 8.5 percent compared to 3.7 percent in 2016. Data from the Statistics Research and Information Directorate of the MoFA suggest that in 2018/2019, GDP for the sector was 4.5 percent. The industrial sector recorded the highest growth rate of 16.7 percent, followed by agriculture (8.4 percent) and the services sectors (4.3 percent). The agricultural sector expanded from a growth rate of 3.0 percent in 2016 to 8.4 percent in 2017. Its share of GDP, however, declined from 18.7 percent in 2016 to 18.3 percent in 2017. Crops remain the largest activity, accounting for 14.2 percent of GDP (Ghana Statistical Service [GSS], 2018). In terms of agriculture as an occupation, the GSS (2012) indicates that 44.9 percent of men have agriculture as their occupation, while for women it is 37.7 percent. In the forestry and fishing sectors, women account for 37.7 percent and men for 45.5 percent. However, the proportions of female contributing family workers in both the agricultural and non-agricultural sectors (23.4 percent and 4.5 percent, respectively) are higher than their male counterparts in the same sector (14.1 percent and 22.2 percent, respectively) (Ghana Living Standard Survey 6, 2014).

Agriculture is predominantly practised on smallholder, family-operated farms using rudimentary technology to produce about 80 percent of Ghana's total agricultural output. It is estimated that about 2.74 million households

2 Khanna, N., and Solanki, P. (2014). 'Role of agriculture in the global economy.' *Agrotechnol*, 2(4), 221.

3 World Bank. (2020). *Agriculture and Food*. Available at <https://www.worldbank.org/en/topic/agriculture/overview> (Accessed on 20 August 2020).

4 Ibid.

5 Ibid.

6 Food and Agriculture Organization of the United Nations. (2018). *Climate change and global market integration – Implications for global economic activities, agricultural commodities, and food security*.



operate a farm or keep livestock (GSS, 2018). The agricultural sector consists of five main subsectors, namely: crops (cereals and starchy crops); livestock (cattle, sheep, goats, pigs, and poultry); fisheries (marine, inland and aquaculture); forestry; and cocoa. However, the Ghana Cocoa Board under the Ministry of Finance is responsible for cocoa affairs in the country, whereas the Ministry of Lands and Natural Resources (MLNR) has responsibility for the Forestry Commission; and the Ministry of Fisheries and Aquaculture Development (MoFAD) is responsible for the fisheries sub-sector.

Climate change and climate variability form a continuously growing and major constraint to the development of the food and agriculture sector (including fisheries) in Ghana. The impact of climate change is mainly due to the increasing variability of rainfall resulting in recurrent and longer dry spells that delay and shorten the growing seasons. In addition, rainfall is becoming more intense resulting in flash floods that destroy croplands and cause land degradation due to erosion. In the area of fisheries development, increasing numbers of coastal communities continue to experience a reduction in land areas available for agriculture due to sea erosion caused by rising sea levels.⁷ The direct impact of these climate change effects is a continuous reduction in or destruction of livelihood sources for most rural families.⁸

2.1.2 Gender in the agricultural sector

It is estimated that if women farmers are granted similar access to resources (productive) as their male counterparts, they could increase yields on their farms by 20–30 percent, which could raise total agricultural output in Ghana by 4 percent, leading to a 17 percent reduction in hunger (Social Enterprise Development Foundation Ghana, 2014). The long-term effects would be improved health due to improved nutrition, good environmental management and fewer conflicts.

Furthermore, land remains critical in discussions about agriculture, and the MLNR is the sector ministry responsible for land issues. In 1999, the ministry established the National Land Policy, which aims to ensure the judicious use of the nation's land and natural resources in support of the different socio-economic activities undertaken, in accordance with sustainable resource management principles, and to maintain viable ecosystems.

Access to land is critical for farming, and control over land is usually synonymous with wealth, status and power. Lack of access to land for farming activities in northern Ghana has been found to inhibit women's ability to implement certain adaptation practices, including planting trees to address the threats posed by climate change.⁹ According to the FAO, women across all developing regions are consistently less likely to own or operate land. The policy guidelines include the facilitation of equitable access to land, security of tenure and protection of land rights, ensuring the sustainable use of land and enhancing land capability, and conservation. Despite the policy guidelines around equitable access to land, the issues surrounding women's access to and control over land are rather more complex (the rules of customary law, which often do not favour women, and the current privatization of land). Women's unequal access to productive resources such as land has led to a feminization of poverty in Ghana. It has been noted that women experience greater levels of poverty and lower literacy rates, which lead to low access to and use of technology for agricultural purposes, less access to health and education services, and heavier time burdens in terms of labour both inside and outside the home (Amu, 2005).

7 Master Plan (2015).

8 Ibid.

9 Antwi-Agyei et al. (2015).

Below is an outline of the gender issues in the agricultural sector.

- Women either work on their own as unpaid workers on family lands, or as paid or unpaid labourers on agricultural enterprises. Their contributions are, however, mediated by multiple forms and expressions of gender inequalities and patriarchal relationships, which limit their access to and control of resources such as land, technology, labour and capital. Women farmers tend to produce lower numbers of yields.
- Women do not have satisfactory access to technical knowledge on agriculture due to numerous barriers to accessing information and profiting from extension services and training.
- In certain parts of the country, women's access to and control over land is woefully inadequate, hindered by various customary laws, and this leads to low economic power, poverty and women's low productivity.
- Women's participation and representation in decision-making spaces in the agriculture sector are woefully inadequate.
- Gender and related issues are often not key in the development of policies but an afterthought. There is often a mere mention of gender but no clearly stated frameworks or strategies for addressing gender and related concerns.
- MoFAD presents an opportunity for gender mainstreaming as a rather new ministry, cut out from the MoFA. There is therefore the need for capacities of key stakeholders to be built on gender- and climate-change-related issues for effective mainstreaming.

OBJECTIVES	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										RESOURCES (finance, human, technology)	IMPLEMENTING PARTNERS			
			1	2	3	4	5	6	7	8	9	10		Lead	Collaborating		
Develop infrastructure (tools, equipment, and machinery) that supports technology uptake and transfer on climate change adaptation and gender.	Engage fabricators to develop tools, equipment and infrastructure along the value chain on identified technologies that are friendly to women and vulnerable groups to support climate change and gender actions.	Number of tools and equipment fabricated.	■	■	■	■	■	■	■	■	■	■	■	■	Finance, human, technology	MESTI	MoFA, GRATIS Foundation
	Advocate for private-sector investment in the fabrication of tools and equipment for technology uptake and transfer for climate change and gender.	Number of public private partnerships and businesses established in the sector.	■	■	■	■	■	■	■	■	■	■	■	■			
	Create awareness on the availability and uses of tools and equipment to address climate change and gender actions.	Number of platforms organized to create awareness on tools and equipment.	■	■	■	■	■	■	■	■	■	■	■	■			
Improve monitoring and evaluation of climate change adaptation and gender issues in the agricultural sectors.	Develop monitoring and evaluation tools to track progress of climate change and gender in the agricultural sector.	Monitoring and evaluation framework developed and functional.	■	■	■	■	■	■	■	■	■	■	■	■	Finance, human, technology	MESTI	UNDP, MoFA, MMDAs, NGOs, research institutions
	Develop common monitoring and evaluation templates for reporting on climate change and gender issues in the sector.	At least one visit carried out.	■	■	■	■	■	■	■	■	■	■	■	■			
	Conduct annual joint monitoring visits of the targeted interventions to report on best practices and document efforts to support global decision-making.	At least one evaluation study conducted.	■	■	■	■	■	■	■	■	■	■	■	■			
	Carry out annual joint evaluation studies on climate change and gender efforts in the sector.		■	■	■	■	■	■	■	■	■	■	■				

2.2 Priority Sector 2: Energy

2.2.1 Situational analysis: Energy

Energy is a critical input to economic development, essential for poverty alleviation and an important sector for climate change mitigation. SDG 7 on sustainable energy is not only a standalone SDG, but also a precondition for success across the SDGs. Climate change impacts the energy sector, including supply, demand, endowment, infrastructure and transportation. On the other hand, the sector is also responsible for a significant share of historic and current greenhouse gas emissions.

Sustainable energy security is one of the seven priority sectors of GH-NDCs. Policy actions under the energy sector include scaling up renewable energy electricity penetration to 10 percent by the year 2030, promoting clean rural household lighting, expanding the adoption of market-based clean cooking solutions and doubling energy efficiency to 20 percent in power plants. Specific targets under SDG 7 are to: ensure universal access to affordable, reliable and modern energy services; substantially increase the share of renewable energy in the global energy mix by 2030; double the rate of improvement of energy efficiency in countries around the globe by 2030; facilitate access to renewable and clean energy technology and promote investment in energy infrastructure by 2030; and increase supply of modern and sustainable energy services for all in developing countries through infrastructure expansion and technology upgrade by 2030.



Ghana currently relies heavily on hydropower, with three plants (Akosombo Dam, Bui Dam and Kpong Dam) composing 41 percent of Ghana's available electric capacity.¹⁰ Ghana's primary energy supply comes from petroleum, biomass and hydropower. In terms of cooking, biomass is the main source of energy for cooking and heating in households. Wood and charcoal are the dominant sources of cooking fuel for households in Ghana.¹¹ Close to one-third of households in Ghana use charcoal as their main fuel for cooking. The next most predominant fuel for cooking is wood, accounting for 33.3 percent of households. The use of liquefied petroleum gas as a main source of cooking fuel for households is just close to 25 percent. Other energy sources used by households for cooking include electricity, kerosene, crop residues, sawdust and animal waste. Rural households primarily use wood for cooking (63.0 percent). Gas and charcoal are more prevalent in urban coastal (50.2 percent) and urban savannah (48.2 percent) households. Wood (81.6 percent) and crop residues (3.4 percent) are more prevalent in rural savannah households for cooking than in the other ecological zones.

In the regions, wood is the most common energy source for cooking in the Upper West, Northern, Volta and Brong Ahafo regions. The depletion of forest wood from unsustainable exploitation means women and girls walk longer distances to fetch firewood for cooking and for charcoal production.¹²

In terms of energy for electricity, Ghana depends mainly on hydro and thermal sources of energy. Until the early 2000s, large hydro dominated Ghana's electricity generation. In recent years, however, thermal generation has increased from 1,159 GWh in 2005 to 5,644 GWh by 2015. The major fuels for thermal electricity generation in Ghana include light crude oil, natural gas and diesel. Total installed renewable energy capacity (electricity) at the end of 2015 was about 1,602 MW, contributing approximately 43.8 percent of the total national installed electricity. Hydropower accounted for 43.2 percent. Electricity generation from hydropower decreased significantly in the years 2007 and 2015 due to low rainfall in the Volta basin, leading to increased investment and reliance on fossil fuel power plants.¹³

2.2.2 Gender in the energy sector

Access to renewable energy targets in the GH-NDCs and SDG 7 cannot be fully met if deliberate attempts are not made to meet the energy needs of vulnerable groups, especially women. Research has established that energy policies that do not explicitly target women often result in inequities in energy access for women and men. Cultural roles and societal norms limit women's access to modern energy; and without equipping institutions to address these limitations, inequities in access to energy will persist.

It is important to involve women in all the processes, including the supply chain of renewable energy services as either entrepreneurs or employees. As the primary users of energy in households and communities, women are able to relate better to this issue and relay their views and experiences about it, which will accelerate the realization of the global goals. However, barriers such as lower literacy; lower access to finance, education, land and mobility; and the burden of unpaid care work limit women's access to modern energy. A comprehensive package of support – including capacity-building in the manufacturing and use of modern energy technology, business skills and leadership; marketing, promotion and distribution; access to finance; and one-to-one mentoring – will help overcome the barriers.¹⁴

10 Hellmuth, M. Bruguera, M and Ankoh, M. (2018). Ghana Integrated Resource and Resilience Planning Programme: Risks and Resiliency in Ghana's Electric Power Sector. Accra, Ghana Innovation for Rural Prosperity Project, United States Agency for International Development.

11 Ghana Statistical Service. (2017). Ghana Living Standard Survey 7, IAccra.

12 Anang, B. T., Akuriba, M., and Alesane, A. (2011). 'Charcoal Production in Gushegu District, Northern Region, Ghana: Lessons for Sustainable Forest Management.' *International Journal of Environmental Sciences*, 1(7).

13 Energy Commission. (2019). Renewable Energy Master Plan. Available at <http://www.energycom.gov.gh/files/Renewable-Energy-Masterplan-February-2019.pdf>

14 Energia. (2019).

From the gender analysis, it was evident that many of the existing policies with gender considerations are often ad-ons. This is evident in sections within the sector policies, plans and strategies where gender is inserted and in the brief discussions on gender within those sections. There is the need for deliberate measures to mainstream gender and climate change in all subsequent revision and development of energy policies, programmes and plans.¹⁵

Low capacity of staff of the energy sector MDAs is also a major challenge in mainstreaming gender into energy and climate change interventions in the country. Inadequate knowledge and skills to mainstream gender into climate change stems from the fact that policy and programme staff have yet to fully engage with climate change as a relevant issue. The inadequate staff strength compounds the challenge of low capacity, affecting the planning and implementation of gender inclusive energy programmes for the sector.¹⁶

There is also the low level of awareness on gender and climate change in the energy sector at both the national and sub-national levels.¹⁷ Findings of the gender and climate change analysis need to be publicized to provide the needed data required for gender inclusive energy and climate change planning and programme implementation. Baseline data and monitoring indicators for such programmes need to reflect persistent gender and climate change issues. The 2010 energy sector gender assessment, which influenced the preparation of the Action Plan for the sector, requires revision to include climate change issues.

“ Inadequate knowledge and skills to mainstream gender into climate change stems from the fact that policy and programme staff have yet to fully engage with climate change as a relevant issue. ”

15 Mensah-Kutin. (2018). In-Depth Gender Analyses for the Nationally Determined Contributions Process in Ghana.

16 Mensah-Kutin. (2018). In-Depth Gender Analyses for the Nationally Determined Contributions Process in Ghana.

17 Ibid.

Table 2: Action plan – energy

OBJECTIVES	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										RESOURCES (human, technical, finance)	IMPLEMENTING PARTNERS				
			1	2	3	4	5	6	7	8	9	10		Lead	Collaborating			
			Achieve widespread understanding of energy, gender and climate change issues at all levels of society.	Build capacity of staff in Ministry of Energy and sector agencies on gender and climate change. Raise awareness on initiatives targeted at addressing cultural beliefs and practices on energy, gender and climate change. Update the 2010 gender assessment/gender audit of the energy sector to include climate change issues.	Number of staff sensitized. Percentage of male and female citizens exposed to announcements. Complete assessment report.	■	■	■	■	■	■							
Increase women's participation in energy-related technical and decision-making roles, processes and positions.	Promote women's employment in the energy sector. Institutionalize training programmes for women within the energy sector to build their capacity for management positions. Increase female access to STEM education and skills training. Implement a mentoring and coaching programme for the women in the energy sector. Implement Ghana's affirmative action policy in the energy sector.	Percentage of women employed in the energy sector. Percentage of women trained. Percentage of females with access to STEM education. Number of women mentors/mentees. Percentage of women on energy boards and commissions.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	Ministry of Energy	Energy Commission, National Petroleum Commission

2.3 Priority Sector 3: Water

2.3.1 Situational analysis: Water

Good quality water is a critical resource for human survival globally. There have been growing global concerns about water security as a result of climate change impacts and increasing population. The situation is serious in some regions, including sub-Saharan Africa. Water is at the core of sustainable development and is important for socio-economic development, energy and food production, healthy ecosystems – and for human survival itself. Climate change will affect the availability and quality of water resources and compound water insecurity, particularly in developing countries.

Water security is one of the world's critical challenges today. The problems that affect the water sector also have a significant impact on almost every sector. Over the years, there has been a global effort to address water security challenges, but these efforts are threatened by climate change impacts. Also, with increasing global population, the demand for water resources will be overstretched. The World Bank notes that, currently, 1.6 billion people live in countries and regions with absolute water scarcity, and that number is expected to rise to 2.8 billion people by 2025.¹⁸ In sub-Saharan Africa, more than a quarter of the population take longer than 30 minutes to make one water collection round trip.¹⁹ In addition, in 2015, the United Nations Children's Fund (UNICEF) reported that there was generally a significant inequality in access to improved water sources across regions and within regions. The report identified that there were 663 million people who use unimproved water sources, with the majority of the people living in developing countries.



18 World Bank Group. (2013). Water and climate change. <http://water.worldbank.org/topics/water-resources-management/waterand-climate-change>

19 https://www.unicef.org/wash/index_watersecurity.html

In Ghana, over five million people do not have access to safe potable water; hence, they must rely on surface water for drinking and other household uses.²⁰ This has implications for household poverty and expenditure as well as the work burden on women and children who are the main collectors of water.²¹ According to the 2010 National Population and Housing Census, regional dissimilarities exist in the main sources of drinking water. While the highest reported source of drinking water for Western and Greater Accra regions was pipe-borne outside the dwelling, for Central and Volta it was public tap or standpipe, and for the remaining six regions it was borehole. For Upper West and Upper East regions, 70.1 percent and 67.8 percent relied on boreholes for their drinking water. Water from rivers and streams constituted the main source of drinking water for 17.4 percent of dwelling units in Northern region, 16.5 percent in Volta region and 16.3 percent in Western region. For some households, particularly in cities in Greater Accra, Eastern and Central regions, sachet water was the main source of drinking water. The majority of households without access to safe water already live in poverty in rural areas and usually have to pay more to access safe water.

Rural–urban disparities exist in access to safe drinking water. In rural and peri-urban areas, many water systems are inefficient with broken hand pumps and partial functional capacity.²² In the dry season, availability of water is reduced for households and communities that rely on surface water sources and rainwater harvesting, particularly for those in the Northern Development Zone. Households in rural areas of northern Ghana have long water collection times and are most likely to spend over 30 minutes collecting water. The Ghana Water Company Limited has the mandate of water supply to urban communities. From the demand of about 1.13 million cubic metres of potable water per day, the current production capacity averages around 77 percent of demand.²³

Prolonged farming, mining activities and indiscriminate disposal of industrial waste in and around waterbodies have polluted water sources to significant levels of toxicity, making the water non-potable. Poor sanitation systems and hygiene practices further contaminate water sources, which, more often than not, have high concentrations of harmful parasites and microbial content. In other areas, the water may be significantly discoloured and may contain dangerous minerals.

In 2016, the Water Research Institute of the Council for Scientific and Industrial Research (CSIR) projected that if the rate of exploitation and pollution of water sources in the country were not reversed there could be a water crisis by 2030 where there would be no treatable surface or groundwater source for use.²⁴ The continuous availability of water resources is heavily dependent on climate change and variability. That seasonal variations impact access to water in both urban and rural areas is evidence of this. Increasing rainfall will positively impact fresh surface water availability and groundwater recharge, whereas decreased rainfall volumes have the tendency to reduce water volumes available for treatment for urban supply.²⁵ Hence the key objectives of the Ghana National Water Policy (2007) are to “minimize the effects of climate variability and change” and to “institute measures to mitigate the effects of, and prevent damage caused by, extreme hydrological occurrences (floods and droughts)”. Similarly, the National Climate Change Policy recognizes the potential of climate change to impact equitable access to water for all uses considering the various human-induced challenges facing the sector. Thus, the policy aims to ensure efficient and sustainable management and development of water resources for all persons, irrespective of socio-economic status.

20 <https://water.org/our-impact/ghana/>

21 <https://www.unicef.org/ghana/water>

22 <https://www.safewaternetwork.org/countries-regions/ghana>

23 <https://gwcl.com.gh/company-profile/>

24 <https://www.csir.org.gh/index.php/component/k2/item/414-pollution-of-ghana-s-water-bodies-csir-predicts-water-crisis-in-2030>

25 <https://iwaponline.com/jwcc/article/doi/10.2166/wcc.2019.204/71448/Rapid-Climate-Adaption-Assessment-RCAA-of-water>

2.3.2 Gender in the water sector

In Ghana, 81 percent of its 29 million population has access to safely managed and basic service drinking water²⁶ (World Health Organization [WHO]/UNICEF Joint Monitoring Programme, 2019). According to the GSS (2018), 21 percent of women compared to 17 percent of men spend about one to three hours per day collecting drinking water when water is absent from their premises. On average, girls and women spend at least 4.5 hours per week fetching and carrying water. Women and girls, especially from the northern part of the country, spend an average of 43.5 hours per week accessing water for farming.²⁷

Climate change may lead to increased frequency and intensity of floods and deteriorating water quality. This is likely to have a particularly harsh effect on women and girls because of their distinct roles in relation to water collection and use and their specific vulnerabilities in the context of disasters (Intergovernmental Panel on Climate Change [IPCC], 2014). In Ghana, like many other developing countries, women and girls bear the burden of fetching water for their families and spend significant amounts of time daily hauling water from distant sources.²⁸ In drought-prone areas affected by desertification, for example, the time absorbed by water collection will increase as women and children (mostly girls) will have to travel greater distances to find water. The heavy rainfall and more frequent floods predicted to result from climate change will also increase women's workloads, as they will have to devote more time to collecting water and to cleaning and maintaining their houses after flooding (Boateng et al., 2013). Walking long distances to fetch water and fuel can expose women and girls to harassment or sexual assault, especially in areas of conflict; there are many accounts of women and girls being attacked when searching for water and kindling in refugee camps.

Rising temperatures will cause an increase in evapotranspiration, limiting run-off and aquifer recharge while higher water temperatures can be conducive to the proliferation of algal blooms and compound the effects of sanitation pollution in freshwater. The impacts of climate change on precipitation are projected to cause more extreme flooding and droughts, resulting in pollution of freshwater resources and increased water scarcity.²⁹

Floods, which are an outcome of heavy rains, can affect the quality of surface water and the availability of potable water. As a result, rural women, who are usually given the task of fetching potable water, have to cover greater distances to collect this, thereby increasing their already substantial workload. With climate change and recurring droughts, particularly in the northern parts of the country, coupled with chronic water shortages, the poor, especially women and children, usually spend more resources on water.

Traditionally, men and women in developing rural communities have different roles that they play in water access, use, knowledge and governance (Boateng, et al., 2013). Barnes (2014) asserted that men might have knowledge in water uses such as water for irrigation and other productive uses, while women may focus on quantity and quality of water for domestic uses. Wutich and Ragsdale (2008) further stated that men and women often participate differently and unequally in the governance of water. They added that men are mostly active participants in water-related institutions compared to women. Even when women participate, their contributions and decisions are oftentimes qualitatively different and subordinated to male authority (Hemson, 2002). While women play a role in collecting, maintaining and managing community water supply as well as controlling and regulating the use and safe maintenance of water, men partake in decision-making relating to water management. It is reported that women have the best knowledge, information and skills on the availability and quality of water sources within the household and community contexts.

26 Ghana Statistical Service (GSS). (2018). Multiple Indicator Cluster Survey (2017/18), Survey Findings Report. Accra, Ghana: GSS.

27 Archer, E. (2005). 'The wells are drying up: Water and women in Ghana.' *Off our Backs*, 35 (3/4), 23–27. Available at <https://www.jstor.org/stable/pdf/20838316.pdf?refreqid=excelsior%3Adcf63330612409fc8377896e78ac14e7> (accessed 24 May 2020).

28 https://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf

29 FitzGibbon, J., and Mensah, K. O. (2012). 'Climate change as a wicked problem: an evaluation of the institutional context for rural water management in Ghana.' *Sage Open*, 2(2), 2158244012448487.

OBJECTIVES	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										RESOURCES (finance, human, technology)	IMPLEMENTING PARTNERS		
			1	2	3	4	5	6	7	8	9	10		Lead	Collaborating	
Ensure that implementing agencies' indicators include gender- and climate-change-sensitive indicators for integrated water resources management.	Develop the gender-sensitive indicators of implementing agencies for integrated water resources management.	Existence of climate-resilient and gender-responsive indicators at all levels.		■												
	Collaborate with the MoGCSP for technical support in formulating gender and climate change indicators for integrated water resources management.	Report on the technical expertise provided by the MoGCSP in the formulation of gender- and climate-sensitive indicators.		■												
Mainstream gender and climate change issues into existing communication strategy.	Mainstream gender and climate change issues into existing communication strategy.	Existence of Gender and Climate-Responsive Communication Strategy for Water Management.		■												
	Carry out community outreach programmes to sensitize men and women towards more sustainable management practices in water management, including climate change adaptation practices.	Number of communities engaged in sensitization programmes targeting both men and women towards more sustainable water management practices, including climate change adaptation practices.		■												

NDPC, MoGCSP, WRC, development partners

MoSWR

Finance, human

2.4 Priority Sector 4: Health

2.4.1 Situational analysis: Health

Globally, the health and well-being of the human population are major concerns of every country. Sub-Saharan Africa has some of the lowest health indicators across the world. The average life expectancy of the region (61 years) is the lowest compared with other regions of the world. The average life expectancy of 63.4 years in Ghana is higher than that of sub-Saharan Africa and that of West Africa (54 years). However, there are critical health challenges in Ghana, despite some achievements made in health over the years. Disparities exist in health infrastructure and personnel across the regions in the country. There are a limited number of specialists in the various health facilities, and health financing has equally become a major challenge.

Health is a cross-cutting issue, and problems in other sectors of the economy indirectly affect the sector. Good health cannot be achieved when there is poor nutrition, poor quality of water supply and poor sanitation. Climate change is having a significant effect on other sectors of the economy, thereby exacerbating the already existing health problems. In some countries in sub-Saharan Africa including Ghana, the incidence of diseases such as cerebrospinal meningitis, bilharzia, heat rashes, respiratory infections and cholera are increasing as a result of climate-related hazards. The WHO in 2015 estimated that climate change will cause an additional 250,000 deaths per year, between 2030 and 2050, from cases of malaria, diarrhoea, heat stress and malnutrition.³⁰ It is important for the global community, national governments and stakeholders in particular, to implement cross-cutting actions to improve the well-being of populations so they can cope with the increased effects of climatic change.

The Ghana Health Service is mandated to “provide and prudently manage comprehensive and accessible quality health services with emphasis on Primary Health Care in accordance with approved national policies.”³¹



30 World Health Organization. (2015). Climate change and health. <http://www.who.int/mediacentre/factsheets/fs266/en/>

31 https://www.ghanahealthservice.org/downloads/FACTS+FIGURES_2017.pdf

The Ghana Health Service provides annual updates on the state of Ghana's health sector. The most recent was published in 2017 with data from 2016. Life expectancy at birth is 62.5 years for males and 64.4 years for females. Infectious diseases accounted for over two thirds of all outpatient morbidity cases in Ghana in 2016. Malaria is the leading cause of morbidity, accounting for about 31 percent of all morbidity cases presented in health facilities. Malaria is also the leading cause of death with a mortality rate of 69 per 100,000 population. The national doctor-to-patient ratio was 1:8,481 (in 2016), ranging from 1:3,582 in Greater Accra to 1:25,878 in the Upper East region. On average, there are nine hospital beds per 10,000 of the population. Total fertility rate (TFR) is 4.2 with rural TFR at 5.2 and urban at 3.4. TFR is lowest in the Greater Accra region (2.8) and highest in the Northern region (6.6). The maternal mortality ratio stood at 150 per 100,000 live births with annual regional variations between 2006 and 2016, and thus not showing which regions have the highest rates.

In terms of health financing, the total expenditure on health as a percentage of GDP in 2017 was 3.3, with a total per capita expenditure on health of US\$ 147 (purchasing power parity), substantially lower than the sub-Saharan African average (\$ 198) and the average for lower-middle-income countries (\$ 262).³² Ghana has a number of poverty alleviation and social welfare programmes that extend into social health protection programmes. Since 2005, the country has implemented a National Health Insurance Scheme (NHIS) to reduce individuals' out-of-pocket expenditure at the point of health-care delivery.³³ While individuals are expected to pay premiums to be enrolled onto the scheme, there are exemptions for a large group of people including "SSNIT [Social Security and National Insurance Trust] contributors and pensioners, persons under 18 years old, persons 70 years old and above, pregnant women, indigents (the core poor), persons with mental health conditions, categories of disabled persons designated by the Minister responsible for Social Welfare, as well as beneficiaries of the Livelihood Empowerment Against Poverty Programme (LEAP)." This notwithstanding, the scheme is riddled with inequities in coverage (Dake, 2018).³⁴ A high proportion of Ghanaians are not covered by the scheme, particularly among the poor. Thus, coverage is mostly among the wealthier and better educated professionals. Beside the NHIS, there are a number of private mutual health insurance schemes, which are run by individual insurance entities but are overseen by the National Health Insurance Authority.

The Ghana NCCP (2012) acknowledges the potential impact of climate change on human health. Infectious diseases including malaria and diarrhoeal diseases will likely change in their distribution and incidence. Also, there may be indirect impacts on health including injuries, hunger and disruption to livelihoods and health systems. Thus, the policy aims to "identify and improve data recording, reporting, analysis and storage of climate sensitive diseases at all levels of service delivery; enhance knowledge and sensitize the health sector on the impacts of climate change including issues for vulnerable groups such as the aged, women and children; and minimize the impacts of climate change on health in communities whilst strengthening public healthcare delivery and preventive care". The Ministry of Health is leading the Climate Health Ghana project with pilot interventions in Keta district, Gomoa West/Apam district, and Bongo district. The project is a national strategy for mainstreaming climate change risks into health sector policies and programmes.³⁵

32 https://data.worldbank.org/indicator/SH.XPD.CHEX.PP.CD?locations=GH&name_desc=false

33 <http://www.nhis.gov.gh/nhisreview.aspx>

34 <https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-018-0793-1>

35 <https://www.moh.gov.gh/climate-change-health-project/>

2.4.2 Gender in the health sector

The health sector of Ghana has many players, whose collective role is to provide quality health service delivery to the population. The Ministry of Health is the responsible ministry for the health sector, but there are other partners in both public and private sectors collaborating with the ministry in health delivery in the country. Over the last three decades, the health sector has made significant gains in the provision of health services and improvement in the health of the population. The proportion of fully immunized children increased significantly by 30 percent between 1988 and 2014. Under-five mortality dropped from 119 deaths per 1,000 live births to 60 deaths per 1,000 live births, while antenatal and maternal care utilization among pregnant women has increased steadily since the launch of the Ghana Demographic and Health Survey in 1988 (GSS and United Nations Population Fund, 2016). The proportion of stunted children has decreased steadily from 31 percent in 1998 to 19 percent in 2014. Similarly, the proportion of wasted children has decreased from 10 percent in 1998 to 5 percent in 2014. The proportion of underweight children has decreased from 20 percent in 1998, 18 percent in 2003, and 14 percent in 2008 to 11 percent in 2014. Overall, reports from the health sector indicate an improvement in the health of the country's population, but this cannot be generalized because of the spatial inequalities in health services provision across the country.

Some health indicators in Ghana are poor. Life expectancy at birth currently stands at 63.4 years for the total population (64.4 years for females and 62.5 years for males). The statistics on maternal mortality and child health have not been encouraging. The maternal mortality ratio of 319 deaths per 100,000 live births, an under-five mortality rate of 61.6 deaths per 1,000 live births and a neonatal mortality rate of 28.3 per 1,000 live births³⁶ form a treacherous triad. Although these statistics may represent improvements over previous years, they are nonetheless frightening and need to be improved. Ghana's total expenditure on health as a percentage of GDP has fluctuated between 1994 and 2014 with a net increase of 0.47 percent over the 19-year period.

The 2014 Ghana Demographic Health Survey data show that more rural women (60.9 percent) than men (45.8 percent) subscribe to the national health insurance scheme. In some communities (especially in rural communities), the decision to access health care rests on males in the family and this, to a large extent, impedes women's access to critical health-care programmes including antenatal, postnatal and family planning services.³⁷ This is also because men have poor access to reproductive health care so do not appreciate the need to encourage women and children to access health care. Long distances to health centres compounded by the poor nature of roads and means of transport have also reduced women's and men's access to health care. In urban areas, about 89 percent of women made four or more antenatal visits during pregnancy, compared with 70 percent of women in rural areas (Japan International Cooperation Agency [JICA], 2013). About 88 percent of women with secondary education or higher delivered in a health facility compared to 31 percent of women with no education (JICA, 2013).

Climate change has myriad impacts on the health sector. Climate change can have direct impacts on vector-borne diseases and the conditions for other non-communicable diseases as well as impose significant challenges on health-care systems. Increased incidence of diseases because of high temperatures will deteriorate human health. Air pollution due to increased temperature and humidity can worsen allergies and other respiratory diseases, such as asthma.³⁸ Increasing temperatures also cause poor air quality that can affect the heart and worsen cardiovascular disease.³⁹ When there is an increase in flooding and sea levels rise, water gets contaminated

36 World Health Organization. (2017).

37 Ghana Statistical Service. (2014). Ghana Living Standards Survey Round 6: Poverty Profile in Ghana. Accra.

38 United Nations Development Programme (UNDP). (2007). Human Development Report 2007–2008: Fighting climate Change: Human Solidarity in a Divided World, Palgrave Macmillan, New York.

39 Ibid.

with harmful bacteria, viruses, and chemicals, causing food-borne and water-borne illnesses.⁴⁰ Floods increasing consistently with climate change may also increase the prevalence of water-related diseases, especially water- and vector-borne diseases, which affect millions of poor people each year. In addition, an increase in prevalence of diseases will likely aggravate women's caregiving of family and community members who are ill.⁴¹

Existing gender inequalities underlie the vulnerabilities of populations and livelihoods to these impacts of climate change. These inequalities are brought about by the fact that women and men have different physiological and social needs, roles and responsibilities, livelihood types and unequal access to and control over economic resources and decision-making power. The cultural context within which the health sector operates creates gender inequalities in decision-making within the sector. The National Health Policy advocates for gender- and child-sensitive programmes, which has influenced a number of programmes and activities in the sector. Also, the development of a gender-sensitive climate resilience screening tool for the health sector with support from the UNDP in 2014⁴² has guided the sector in the implementation of gender-sensitive programmes and activities. Programmes on maternal and child health strongly target women, while family planning programmes now target both women and men to achieve the desired impact.

A rise in temperature, which is climate-related, can trigger the increased incidence of cerebrospinal meningitis. Statistics indicate that the disease kills both men and women, especially in northern Ghana (Codjoe and Nabie, 2014). Cases of cholera, diarrhoea, malaria, malnutrition and heat-related deaths might increase depending on varied climate scenarios. Pregnant women and children are particularly susceptible to malaria, which also contributes to antenatal mortality, low birth weight and maternal anaemia.⁴³ Lack of rainfall can expose women and children who are responsible for fetching water to water-borne infections such as Guinea worm, onchocerciasis and schistosomiasis, especially when they have to fetch from rivers and lakes.⁴⁴ Extreme weather events such as heavy precipitation, floods and drought, which are attributable to climate change, could affect the health of women and children and their socio-economic status and well-being.

“ Lack of rainfall can expose women and children who are responsible for fetching water to water-borne infections such as Guinea worm, onchocerciasis and schistosomiasis, especially when they have to fetch from rivers and lakes. ”

40 Halm, M. (2014). Integrating climate change into the management of priority health risks in Ghana.

41 https://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf

42 Government of Ghana, Global Environment Facility and UNDP. (2014). Development of a gender sensitive climate resilience screening tool for the health sector.

43 Dampney, P. T. (2007). 'Climate Change and Women's Livelihoods.' In *National Forum on Climate Change. Accra.*

44 Glazebrook, T. (2011). 'Women and climate change: A case-study from northeast Ghana.' In *Hypatia*, 26(4), 762–782.

2.5 Priority Sector 5: Waste

2.5.1 Situational analysis: Waste

Over two billion tonnes of waste are generated globally each year, and this is projected to increase to over 3.4 billion tonnes by the year 2050 according to the World Bank, 2018. SDG 6 aims at ensuring access to safe water sources and sanitation for all. Also linked to waste is SDG 12, which aims at ensuring responsible production and consumption to protect the environment. There has been a global call for sound approaches to waste management, by critically looking at the production and consumption patterns of the population. The sub-Saharan Africa region generated 174 million tonnes of waste in 2016, at a rate of 0.46 kilograms per capita per day. Only 44 percent of this waste was collected, and the majority of the waste is deposited in open dumps, which has serious health implications for the population.

There is a growing concern regarding the rate of waste generation and its management in Ghana. The rate of waste generation in Ghana stands at 0.47 kg/person/day, which translates into about 12,710 tons of waste per day on average. Waste composition in Ghana is 61 percent organics, 14 percent plastics, 6 percent inert, 5 percent miscellaneous, 5 percent paper, 3 percent metals, 3 percent glass, 1 percent leather and rubber, and 1 percent textiles. Nationally, solid waste composition is made of waste from organic sources, paper, and plastic waste. Waste from metropolitan areas and municipalities are dominated by organic materials compared with waste from the relatively smaller districts, which are mostly dominated by plastics. Increasing waste generation in the country has been attributed to increased population, economic activities, and a high standard of living, among other factors.

Waste management in Ghana has mainly been in the form of waste disposal in open dumps, wetlands, open-air incineration and landfills instead of managing waste as a valuable resource for energy and other uses. This has led to poor sanitation, especially in the cities as only a small amount of the waste is recycled or ends up at a



composting site. This method of waste management leads to emission of greenhouse gases (including methane and carbon dioxide) into the atmosphere. Carbon emissions from waste was 3.17 MtCO₂e, constituting 7.5 percent of total carbon emission in 2016 (EPA, 2019).

2.5.2 Gender in the waste sector

Gender issues present in the waste sector run through daily generation and handling of waste to disposal and decision-making at the household level through to the national level. At the household and community levels, women are responsible for cleaning, sweeping and disposing waste as part of their unpaid domestic work. Waste management at this level is considered and accepted as the role of women. Men perform this role on a temporary basis when women are not available or not in the position to do so.⁴⁵ Men also play a role in bearing the cost of waste disposal in instances where this is paid for.⁴⁶

The role of women as household waste managers is evident in household work; women determine the type of waste generated by what they purchase for home use and as environmental educators inculcating habits and values for children. These risks notwithstanding, women are not meaningfully involved in decision-making in the waste sector on a consistent basis.

With regard to decision-making, women are more involved in waste sector decisions that relate directly to their reproductive duties, but this is sometimes subject to approval by their male partners.⁴⁷ Decision-making positions at the community, district and national levels in the waste sector are mostly held by men. Along the waste value chain, men are mostly engaged in waste recycling, waste transport and waste management. Though women are also involved, men are more involved in more lucrative positions than women.⁴⁸

Other barriers to women's empowerment in the waste sector are the lack of inclusion of gender-specific designs and gender-sensitive approaches in sanitation education and a tendency to design strategies directed at only women.⁴⁹ Unpaid sanitation work will thus continue to fall more heavily on women, rather than both sharing equally in sanitation responsibilities. There is also the challenge of inadequate commitment from leadership to provide resources to train and empower women.

Cases of cholera, diarrhoea, malaria, malnutrition and heat-related deaths – all associated with generation of waste – may increase women's burden of taking care of the sick (Asante and Amuakwa-Mensah, 2015). Floods can generate lots of waste at the household level, thereby increasing women's overall work burden. For example, a dirty environment increases women's caring responsibilities for sick people.⁵⁰ Increased precipitation could elevate groundwater levels and prevent the construction of septic tanks for wastewater treatment. Flooding of on-site systems caused by intense or prolonged rainfall may cause spillage and contamination. There has not been much progress in the sector with a current basic service coverage of 21 percent. In effect, only one in five households has access to an improved sanitation facility.⁵¹

45 Sikweyiya, Y., Addo-Lartey, A. A., Alangea, D. O., Dako-Gyeke, P., Chirwa, E. D., Coker-Appiah, D., and Jewkes, R. (2020). Patriarchy and gender-inequitable attitudes as drivers of intimate partner violence against women in the central region of Ghana. In *BMC Public Health* 20, 682.

46 Yin, E. T., and Mariwah, S. (2013). 'A Socio-Legal Approach: Gender and Domestic Solid Waste Management in Ashaiman, Ghana.' In *The International Journal of Humanities and Social Studies*.

47 Sikweyiya. Patriarchy and gender-inequitable attitudes.

48 Muchangos, L. S., and Vaughter, P. (2019). 'Gender Mainstreaming in Waste Education Programs: A conceptual Framework.' In *Urban Science*.

49 Muchangos, L. S., and Vaughter, P. (2019). 'Gender Mainstreaming in Waste Education Programs: A conceptual Framework.' In *Urban Science*.

50 Dankelman, I., and Jansen, W. (2012). 'Gender, environment and climate change: understanding the linkages.' In *Gender and climate change: An introduction* (pp. 49–82). Routledge.

51 Ghana Statistical Service. (2017). Ghana Living Standard Survey (7). Ghana Government, Accra.

OBJECTIVES	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										RESOURCES (finance, human, technology)	IMPLEMENTING PARTNERS			
			1	2	3	4	5	6	7	8	9	10		Lead	Collaborating		
Increase the level of awareness on waste and sanitation issues among women and men.	Integrate climate change and gender into the sector communication strategy, inclusive of all specified interventions.	Extent of climate change and gender issues addressed in the sector communication strategy.	■	■	■	■	■										
	Develop communication materials that target both men and women on climate change and waste management.	Number of knowledge products produced and disseminated within communities on the value of waste management targeting both women and men.	■	■	■	■	■										
	Awareness creation on gender issues within the waste sector for staff of the sector ministries.	Number of gender awareness programmes organized for staff in a year.	■	■	■	■	■										
	Promote alternative waste handling and management technologies that add value to domestic waste (waste segregation, reuse, recycling, creative arts) to attract men and women to participate in waste handling and decisions that relate to it.	Number of women and men trained and implementing waste segregation.	■	■	■	■	■										
Increase women's and women's NGOs' awareness about waste management and related projects in urban and rural areas.	Increase women's and women's NGOs' awareness about waste management and related projects in urban and rural areas.	Number of waste management projects led by women.	■	■	■	■	■										
	Provide technical support for sanitation and hygiene clubs and associations and raise media role for behaviour change communication.	Number of campaigns and clubs supported.	■	■	■	■	■										
		Number of gender-responsive communication strategies developed.	■	■	■	■	■										

MoGCSP,
Gender Working Group, MoSWR, MESTI, EPA, MoC, NGOs, private sector, MMDAs, MLGRD

MoSWR

Finance, human, technology, (innovation)

2.6 Priority Sector 6: Transport

2.6.1 Situational analysis: Transport

Transportation provides access to jobs and resources and is a key determinant of social and economic development. Globally, the transport sector contributes about 25 percent of energy-related greenhouse gas emissions, and these emissions are projected to grow substantially in the coming years. SDGs 9, 11 and 13 all aim at providing a sustainable and climate friendly transport system for all. In sub-Saharan Africa, the sector is faced with numerous challenges including the poor state of roads and railways, transport terminals and private vehicles; traffic congestion; air and noise pollution; poor public transport; inadequate maintenance; and high accident rates.

Transport is one of the key sectors for sustainable economic and social development. Efficient mobility of goods and people is what permits the development of markets for goods and labour that support economic growth, the development of social services, and social interactions. In case of climatic disasters and extreme events, a functioning and efficient transport system determines people's ability to cope with the event, evacuate the area if needed, receive emergency support (food, medical services, etc.) and therefore limits the number of deaths from the event. Each transport mode – pedestrian, roads, railways, waterways and ports, and air transport – is impacted differently by climate risks, depending on geographic location, standards of construction, existing condition, maintenance capacity and patterns of use.

Road transport is by far the most dominant carrier of freight and passengers in Ghana's land transport system. It carries over 95 percent of all passengers and freight traffic and reaches most communities. Ghana's road network increased from 38,000 km in 2000 to nearly 78,401 km in 2018, of which 23 percent is paved.



Changes in the climate, intensified by human activities, have resulted in more frequent storms, an intensification of precipitation, and increased flooding and a rise in sea level. A degree rise in temperature is likely to cause coastal flooding and potentially affect the design and implementation of road projects (Ministry of Finance and Economic Planning 2010, p.78). Increased temperature during the summer season reduces pavement life. More frequent and intense rainfall events, including flooding and windstorms could disrupt transportation networks and services with washout and visibility problems, disrupting existing road networks across the country (EPA, 2020).

2.6.2 Gender in the transport sector

Gender dimensions of transport are evident when transport systems (infrastructure and services) are viewed as enabling the mobility of people and goods for different purposes.⁵² The conditions that apply to mobility obviously vary substantially between men and women and in most cases are more penalizing for women in African countries.⁵³ Safe travel is a key element in promoting women's mobility, especially considering their higher transport burden. Where safe travel is absent, it tends to hinder women's participation in many activities and perpetuates the existing male dominance in society.⁵⁴

The impact of climate change on transport systems also affects women and men differently, as there are significant differences in their respective travel patterns, modes of transport, mobility, and safety.⁵⁵ In most African countries, women make more trips than men, with a greater variety of routes, but within a more restricted geographical area.⁵⁶ Women frequently need to make trips outside rush hours and to destinations different to those of men. Men generally make more personal and work-related trips than women. Women's mobility is more influenced by their domestic responsibilities than men. Women usually take trips to the market, accompany children to school or health centres and attend antenatal and postnatal services.⁵⁷ The frequent travel undertaken by women to make transactions presents opportunities for women to control proportions of household income, since they are responsible for running errands for the family.⁵⁸ Though the transport demands of women are greater than those of men, especially in rural communities in Ghana, women have limited ownership of vehicles and transport infrastructure.⁵⁹ According to

“ Women’s mobility is more influenced by their domestic responsibilities than men. Women usually take trips to the market, accompany children to school or health centres and attend antenatal and postnatal services. ”

52 <http://asiapacificadapt.net/gender-sourcebook/7-sectoral-modules/7-8-module-h-transport/>

53 Venter, C., Vokolkova, V., and Michalek, J. (2007). 'Gender, residential location, and household travel: Empirical findings from low-income urban settlements in Durban, South Africa.' *Transport Reviews*, 27(6), 653–677.

54 Amoako-Sakyi, R. O. (2017). Scaling up Gender Mainstreaming in Rural Transport: Analysis of Policies, Practices, Impacts and Monitoring Processes Case Study Report: Ghana.

55 <http://asiapacificadapt.net/gender-sourcebook/7-sectoral-modules/7-8-module-h-transport/>

56 Maramba, P., and Bamberger, M. (2001). A gender responsive monitoring and evaluation system for rural travel and transport programs in Africa. Sub-Saharan Africa Transport Policy Program, the World Bank and Economic Commission for Africa Working Paper (55).

57 Adom-Asamoah, G., Amoako, C., and Adarkwa, K. K. (2020). Gender disparities in rural accessibility and mobility in Ghana. *Elsevier*, 49–58.

58 Ibid.

59 Ibid.

a survey by GSS (2012), 92 percent of the bicycles in a household are owned by males while 3 percent of the bicycles were owned by both males and females. Only 5 percent of the bicycles were solely owned by females.

Overall, climate change increases the vulnerability of infrastructure, accelerates the deterioration of infrastructure assets, and increases the need and cost of maintenance. With road transport being by far the most dominant carrier of freight and passengers in Ghana's land transport system, men will be more affected by deterioration in road transport than women. This is because men make greater use of motorized transport than women, or are engaged in businesses that rely on such infrastructure.⁶⁰ Women will be affected more by the deterioration of non-vehicular road infrastructure. The National Household Transport Survey (2013) data suggest that in rural Ghana, 82.4 percent of women and 66.1 percent of men commute on foot to work daily. More women commute by foot and thus are more affected by increased precipitation, sea levels, coastal winds, and increased variability and frequency of extreme events in coastal areas and lowlands, which make pedestrian transport extremely difficult.⁶¹

Furthermore, women's mobility is largely affected by sociocultural contexts, whereby traveling alone away from home without being accompanied by a male family member or an older woman may not be acceptable. Personal safety, sexual harassment and violence are risks confronted more significantly by women than by men, both in rural and urban areas, on public transport.⁶²

60 <http://asiapacificadapt.net/gender-sourcebook/7-sectoral-modules/7-8-module-h-transport/>

61 Ibid.

62 Ibid.

2.7 Priority Sector 7: Disaster Risk Reduction and Climate Services

2.7.1 Situational analysis: Disaster risk reduction and climate services

Ghana's economy largely relies on climate-sensitive sectors, in particular agriculture, energy and forestry. Disaster is a major problem confronting Ghana with the ability to erode all the economic gains that the country has made over the last three decades. Floods, droughts, bush fires and other industrial fires are the main hazards affecting the country. The National Disaster Management Organisation (NADMO),⁶³ under the Ministry of the Interior coordinates all disaster-related issues in the country. About 85 percent of the resources and efforts of NADMO are devoted to addressing issues related to hydro-meteorological disasters.⁶⁴



63 The National Disaster Management Organisation (NADMO) was established in 1996 under the Ministry of the Interior with responsibility to manage disasters and emergencies. NADMO has traditionally focused on disaster response, in line with the emphasis in Act 927 in which it originated. In 2016, however, Act 927 was updated and broadened NADMO's mandate to cover more preventative activities with response. Following this, NADMO created various departments (including a Climate Change Department) with a strong focus on pursuing risk reduction and prevention. NADMO has an important role as a coordinator of action on disaster risk management, working across government departments and agencies.

64 National Climate Change Policy Master Plan (2015).

Apart from NADMO, other state institutions that play a critical part in disaster-related issues in the country include the EPA, GMet, the Fire Service, the Ghana Police Service, and the Ghana Armed Forces. There are also some NGOs and CSOs that work in this area. Ghana signed on to the Hyogo Framework for Action (2005–2015) when it was developed under the auspices of the United Nations International Strategy for Disaster Reduction. As a result, there has been a high-level commitment from government to shift the national agenda from a disaster response approach to disaster prevention and risk reduction approach. The development of the Ghana Plan of Action for Disaster Risk Reduction (2011–2015) constitutes a milestone in this process. The intensity and frequency of extreme precipitation events are very likely to increase over many areas, and the return period of extreme rainfall events is projected to decline, resulting in more numerous floods and landslides.

2.7.2 Gender in the disaster risk reduction and climate services sector

Different roles and responsibilities of both women and men and their access to resources influence how each is affected by different hazards, and how they will cope and recover from disaster. For example, Owusu (2019) reported that the percentage of males who experienced flooding in the slums of Accra were 77.7 percent compared to that of 77.1 percent of females. In addition, in terms of extreme heat, 77.7 percent of females experienced the climatic hazard compared to 75.4 percent of males. In that same study, 51.4 percent of females experienced rainstorms compared to 56.6 percent of males. Furthermore, 53.1 percent of females experienced soil erosion compared to 43.4 percent of males. Additionally, 39.4 percent of females experienced salt-water intrusion compared to 32.6 percent of males.

Women and children are most affected in disaster situations compared to men due to inequalities in exposure and sensitivity to risk as well as inequalities in access to resources, capabilities and opportunities. Women's vulnerability is worsened by their limited access to the required resources that would enable them to adapt. In other words, the gendered social norms place women, children and other vulnerable groups at a disadvantage in the sharing of agricultural lands, irrigation systems and other natural resources. Men have more access to good farmlands, household income and other resources and thus are able to build their resilience. A study conducted in some slum areas of Accra revealed that about 60 percent of men own assets such as bank accounts, houses and machinery compared to 40 percent of women. Even when resources are communally owned, men are reported to be in charge of allocating space and time for individual use. Women's limited access to resources and decision-making power over the use of resources places them in more vulnerable positions to adapt to climate change (Owusu, 2019).

Another factor contributing to the vulnerability of women and men is knowledge of and access to climate information services. Research has shown that women and men in Ghana have increasingly become aware of the changes in climatic conditions. They perceive the changes as an increase in strong winds, higher temperatures, increased frequency of drought, increased rainfall variability and increased flooding.⁶⁵ Beyond being aware of these changes, many women and men in Ghana have become increasingly aware of the effect these changes have on their livelihoods and other aspects of their lives. With regard to access to climate information however, there are disparities between women and men. Through the use of mobile phones and radios, men in Ghana are reported to have more access to climate information enabling them to receive early warnings (Owusu, 2019). Therefore, men have a higher tendency to use climate information services than women.

65 Partey, S.T., Dakorah, A.D., Zougmore, R.B. *et al.* (2020). 'Gender and climate risk management: evidence of climate information use in Ghana.' *Climatic Change* 158, 61–75.

Occurrence of disasters is compounded by other challenges, such as lack of capital (including availability and accessibility of funds), limited access to land, lack of skilled human resources, inadequate raw materials, market accessibility and lack of opportunity for growth and expansion.⁶⁶ These challenges limit the resilience of men and especially women to climate change. The impact of flooding, for instance, is felt more by retailers, the majority of whom are Ghanaian women. Market centres and trading stalls or shops are sited in locations that are prone to flooding.⁶⁷ When disaster occurs, these traders lose their livelihoods, since they are also unable to insure their assets.

Drought associated with a rise in temperature can increase women's and girl's vulnerability and undermine their ability to cope with it and other disasters.⁶⁸ A gender analysis of policies related to climate change adaptation is necessary to assess the extent to which policy formulation and implementation can respond to and reduce gender inequalities. This should take into consideration priorities in local gender policies as well as international commitments to eradicating discrimination against women and ensure equitable development plans and programmes in disaster risk and climate services.

“ A gender analysis of policies related to climate change adaptation is necessary to assess the extent to which policy formulation and implementation can respond to and reduce gender inequalities. ”

66 Opoku Mensah, A.; Fobih, N. and Adom, A. (2017). Entrepreneurship Development and New Business Challenges and Prospects for Ghanaian Entrepreneurs.' In Universities, Entrepreneurship and Enterprise Development in Africa, German African University Partnership Platform for the Development of Entrepreneurs and Small/Medium Enterprises.

67 Aboagye, D. (2012). 'Living with Familiar Hazards: Flood Experiences and Human Vulnerability in Accra, Ghana.' *Journal of Urban Research*.

68 Gell, F. (2010). Gender, Disaster Risk Reduction, and Climate Change Adaptation: A Learning Companion.

Table 7: Action plan – disaster risk reduction and climate services

OBJECTIVES	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										RESOURCES (human, technical, finance)	IMPLEMENTING PARTNERS				
			1	2	3	4	5	6	7	8	9	10		Lead	Collaborating			
Ensure efficient early warning to vulnerable communities.	Generate location-specific forecasts and indigenous early warning systems on climate-related disasters.	Existence of forecasts and early warning systems for preparedness.	■	■	■	■	■	■	■	■	■	■	■	■	■	Human, technology, finance	GMet	NADMO, EPA, Ghana National Fire Service (GFNS), Ghana Health Service
	Establish effective gender-responsive hazard monitoring and early warning systems with a sound scientific and technological basis.	Number of hazard monitoring systems developed for vulnerable communities.	■													Human, technology, finance.	NADMO	GMet, MoGCSP, academia
	Enhance the technical capacity of GMet, NADMO and other related institutions, through training, communication equipment and dissemination mechanisms.	Number of capacity-building trainings and workshops organized for GMet and NADMO staffs.	■													Technology, finance	GMet, NADMO	EPA, GNFS, research institutions, traditional authorities, NGOs
	Ensure swift and automatic dissemination to media houses (to interrupt programmes with incoming disaster information).	Number of media houses automatically linked to GMet and NADMO systems for swift dissemination of early warnings.	■	■	■	■	■	■	■	■	■	■	■	■	■	Technology, finance	GMet	NADMO, media houses, NCCE, Hydrological Services Department (HSD)
	Increase lead-time for early warning from 2 hours minimum to 4 hours.	Improved quality of disaster risk reduction data and information.	■	■	■	■	■	■	■	■	■	■	■	■	■	Technology, finance	GMet	HSD, academia
	Provision of adequate resources (technical and financial) to responsible agencies for mapping of risks, giving early warning, etc.	Increased number of trained personnel in disaster risk reduction segregated by gender.	■	■	■	■	■	■	■	■	■	■	■	■	■	Human, technology, finance	NADMO, GMet	

OBJECTIVES	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										RESOURCES (human, technical, finance)	IMPLEMENTING PARTNERS				
			1	2	3	4	5	6	7	8	9	10		Lead	Collaborating			
Implement a gender-sensitive community education initiative on early warning systems and hazard management.	Hold consultations with women and men on their current methods of gauging forthcoming dangers and of dealing with hazard management.	List of beneficiary groups and institutions of the programme. Number and types of gender-sensitive ICT materials developed.			■												NADMO, GMet	MoGCSP, Ministry of Information and Media Relations (MIMR), media
	Develop and strengthen gender-sensitive early warning and hazard management systems using ICT tools (dissemination system/apps).	Existence of gender-sensitive early warning and hazard management systems.				■											NADMO, GMet	MoGCSP, CSOs
	Mount public education campaigns at all levels in the country on gender-sensitive early warning systems.	Existence of reports of actual participation of both women and men.				■												NADMO, MoGCSP
Invest in training and capacity-building programmes on gender and disaster risk management and reduction at all levels.	Institute climate change, disaster risk reduction and gender focal points at all levels.	Climate change, disaster risk reduction and gender focal points established.	■														GMet	MoGCSP, MIMR, CSOs
	Identify training needs of women and men and develop interest in early warnings provided by state institutions.	Existence of a report on various training needs identified for all levels.						■									NADMO	GMet, Media, NCCE, academia
	Publish hard and soft audio-visual materials. Hold training-of-trainers workshops to benefit women and men based on selection criteria.	Existence of impact assessment report.																

OBJECTIVES	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										RESOURCES (human, technical, finance)	IMPLEMENTING PARTNERS			
			1	2	3	4	5	6	7	8	9	10		Lead	Collaborating		
Promote a gender-sensitive approach to addressing issues related to disaster risk reduction.	Promote gender participation in disaster risk reduction programmes at all levels.	Increased number of women, youth, vulnerable groups, etc. in disaster risk reduction decision-making.	■	■												NADMO	GMet, MoGCSP, NCCE, MMDAs
Increase the sensitivity of young women and men, girls and boys to disaster risk reduction in schools (competitions, clubs and activities that involve students).	Increase collaboration with the Ghana Education Service on disaster prevention and mitigation of risk from the basic to tertiary level.	Number of events organized to increase collaboration with the Ghana Education Service.		■	■	■	■									GMet, NADMO, Ministry of Education	MESTI, academia, research institutions
Increase resources for early warning and disaster risk reduction.	Ensure provision of adequate resources (human and financial) to responsible agencies for mapping of risks, giving early warnings, etc. Enhance the generation of and access to information (expanding research).	Number of women involved in risk mapping and information sourcing. Number of research projects undertaken and shared with stakeholders.	■													NADMO, GMet	MoF, MLGRD, MMDAs
			■													Academia, NADMO, Research institutions	GMet

OBJECTIVES	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										RESOURCES (human, technical, finance)	IMPLEMENTING PARTNERS			
			1	2	3	4	5	6	7	8	9	10		Lead	Collaborating		
Ensure the integration of disaster risk reduction into emergency response and post-disaster recovery.	Promote the inclusion of disaster risk reduction at all requisite levels (national, regional and local).	Existence of comprehensive plans that apply disaster risk reduction principles in emergency response management and post-disaster recovery.			■										Human, technology, finance	NADMO	EPA, MMDAs
	Integrate disaster risk reduction into formal education.	Disaster risk reduction incorporated in curricula at all levels (primary, secondary and tertiary) of education.	■												Human, technology, finance	NADMO	GMet, Ghana Education Service, MoGCSP, academia
	Strengthen the roles of youth in disaster risk reduction.	Number of youths trained on disaster risk reduction.					■								Human, technology, finance	NADMO	Ministry of Youth and Sports, MoGCSP, NGOs/CSOs
Increase access of women and men to climate information.	Expand climate dissemination channels to reach women and youth groups.	Increased dissemination channels for vulnerable socio-economic groups.		■	■	■								Technology, finance	GMet, NADMO	MoC, National Communications Authority, National Media Commission	
	Develop local community information centres.	Number of community information centres developed.		■										Technology, finance	GMet, NADMO	MLGRD, MMDAs	
Increase the availability and access to climate impact data on women and men.	Develop mechanisms for disaggregated data collection in a digital format.	Number of women and men affected by disasters (e.g. flood, fire, etc.). Tools developed for disaggregated data collection.						■	■	■	■	■	■	Technology, finance	GSS, NADMO	GMet, MoFA, MESTI, MoGCSP, academia	
	Analyse and use data on a regular basis on the impact of disasters on women and other vulnerable groups.	Number and types of actions taken by women and men to build resilience.						■	■	■	■	■	■				

2.8 Cross-cutting issues

In order to coordinate the gender activities across the seven sectors, it is important to put in place mechanisms that ensure gender is prioritized. Coordination is also intended to provide a platform for the sharing of experiences and lessons learned, to avoid duplication of efforts and create synergy among the sector actions and plan cooperation. Effective mainstreaming of gender issues into activities of the seven priority sectors will be realized with the planned coordination of gender activities across the sectors. This section mirrors the important role gender plays in GH-NDCs, which recognize the need to make gender a priority area by itself as well as a cross-cutting issue that runs through the other sector actions. For these reasons, specific actions have been formulated to coordinate and monitor progress of gender in climate actions across the seven sectors.

“ Coordination is intended to provide a platform for the sharing of experiences and lessons learned, to avoid duplication of efforts and create synergy among the sector actions and plan cooperation. ”

Table 8: Cross-cutting issues

OBJECTIVE	ACTION STEPS	INDICATORS OF SUCCESS	PERIOD AND TIME FRAME (2021–2030)										IMPLEMENTING PARTNERS						
			1	2	3	4	5	6	7	8	9	10	Lead	Collaborating					
Coordinate gender-related NDC activities across sectors.	Develop coordinating framework for mainstreaming gender into climate actions.	Existence of a coordination framework.	■														MoGCSP	MESTI, EPA	
	Develop an monitoring and evaluation framework.	Monitoring and evaluation framework developed.															MoGCSP	MESTI, EPA	
	Hold quarterly intersectoral coordination meetings.	Number of meetings held on gender mainstreaming.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	MoGCSP, MESTI, EPA	MoFA, MoSWR, NADMO, Ministry of Health, Ministry of Education	
	Build capacities of gender focal persons on mainstreaming gender into climate actions using the developed Gender Mainstreaming Toolkit.	Number of capacity-building programmes held for gender focal persons to mainstream gender into climate actions.	■	■		■											MoGCSP/ Department of Gender, MESTI/ EPA	MoFA, MoSWR, Ministry of Transport, NADMO, Ministry of Health, Ministry of Education	
		Number of staff trained on gender mainstreaming in climate action.	■	■	■	■	■	■	■	■	■	■	■	■	■	■		MoGCSP/ Department of Gender, MESTI/ EPA	MoFA, MoSWR, Ministry of Transport, NADMO, Ministry of Health, Ministry of Education
		Number of times sector monitoring and evaluation is conducted.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	MoGCSP/ Department of Gender, MESTI/ EPA	MoFA, MoSWR, Ministry of Transport, NADMO, Ministry of Health, Ministry of Education
		Yearly reports collated.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	MoGCSP/ Department of Gender, MESTI/ EPA	MoFA, MoSWR, Ministry of Transport, NADMO, Ministry of Health, Ministry of Education
		Analysis report on gender and climate change.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	MoGCSP/ Department of Gender,	MESTI, EPA
		Meetings with political and administrative leadership on implementing the CCGAP.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	MoGCSP/ Department of Gender, MESTI/ EPA	MoFA, MoSWR, Energy Commission, Ministry of Transport, NADMO, Ministry of Health, Ministry of Education

3 Chapter Three:

INSTITUTIONAL MECHANISMS

3.1 Policy alignment

Policy alignment is critical to the realization of the proposed action plans across the GH-NDC sectors. The policies in the various GH-NDC sectors determine the programmes and activities that are promoted by the sectors. The alignment of the various sector policies, therefore, provides an opportunity for greater coherence among the various sector programmes and activities.

The review of sectoral policies and strategies highlights good policy alignment between NDC priority sector policies and key climate change policies in Ghana. Several opportunities exist for a win-win situation between the various policy actions stated in the NDCs and the proposed CCGAPs for the various sectors. Good policy alignment can enhance policy outcomes, which leads to greater synergy among the sectors and climate change policies, increasing the effectiveness of such sector policies to advance solutions towards climate change.

For now, there is no evidence to suggest the various NDC sector policies support the integration of gender-related issues. While some of the sector policies and cross-sector policies acknowledge and incorporate gender-differentiated aspects and effects of climate change, it is unclear how the different needs, opportunities and impacts of climate change on men and women have been considered in the sector policies and other documentations. This could be explained by the fact that most of these sector policies and strategies were formulated to achieve specific objectives that did not take into account the implications for gender. The broad national directives for the promotion of gender as outlined in the National Gender Policy (2015) are not strongly reflected in the gender elements of the NDC sector policies. This is something critical that needs to be given attention by the GH-NDC sectors because some sectors are currently reviewing their policies, and this can be an entry point to get gender strongly represented in such policies. However, the existence of good policy alignment among the sectors provides an opportunity to integrate the proposed CCGAPs into the various sector programmes and activities to strengthen the integration of gender into the various sectors' activities.

In summary, it is important to strengthen the alignment between the climate change policy and GH-NDC sector policies by making funds available for the implementation of the proposed CCGAPs across the sectors. Also, ongoing policy reviews in the various sectors should pay critical attention to climate change issues and allocate appropriate budget for such activities. It is also important to build the capacity of GH-NDC sector agencies on how to integrate gender into their programmes and activities, and provide them with the resources to perform such a task. Gender and climate change budgeting, monitoring and evaluation should play a central role in the GH-NDC sectors plan.

3.2 Multisectoral collaboration and coordination for mainstreaming gender and climate change in Ghana's Nationally Determined Contributions priority sectors

The effective implementation of this CCGAP requires collaboration and coordination among institutions and stakeholders in the seven NDC sectors. The Gender Analysis revealed that there are multiple institutions, agencies and ministries as well as CSOs involved in the implementation of the GH-NDCs who are critical for the successful implementation of the Action Plan. These ministries and agencies include MESTI; the MoGCSP (Department of Gender); the MoSWR; the Ministry of Transport; the Ministry of Health; the MoFA; and the Ministry of Energy. Government agencies include EPA, the NDPC, and NADMO. While this array of ministries and institutions presents opportunities to ensure a greater multisectoral approach, it also presents considerable challenges that require greater collaboration among the various institutions and ministries. Weak intersectoral engagements and coordination across the different sectors was one of the key challenges identified by the Gender Analysis of the NDC priority sectors. Without strong and effective collaboration and coordination, the objectives outlined in this Action Plan may not be achieved. Coordination and collaboration across sectors have value for effective policy/programme development and coherence; climate change information and data management; public awareness, education, research and knowledge management; and for mobilizing climate finance and sourcing technical assistance and other resources, including funds from the private sector. MESTI, EPA and the Department of Gender of the MoGCSP should be the key institutions responsible for coordinating the implementation of the CCGAP.

The NDPC, by virtue of its monitoring and evaluation functions, is critical in ensuring that issues pertaining to gender and climate change are incorporated into the development plans and programmes of various MDAs and MMDAs. Conscious efforts should be made by EPA and the Department of Gender to promote stronger intersectoral platforms of engagements to ensure the effective implementation of this Action Plan. Effective communication will be key to promoting stakeholder engagement and ensures a smoother flow of information and reporting of results between different ministries and departments in order to avoid any potential misunderstandings. This calls for building the capacity of the Department of Gender in relation to gender and climate change as well as strengthening the required human and financial resources to enable the department to effectively champion the implementation of this Action Plan.

3.3 Funding arrangements

The implementation of the various actions proposed in this Action Plan would require significant investment by sector MDAs. The relevant institutions are encouraged to integrate this Action Plan into their annual institutional plan of action and budget to facilitate the allocation of Government of Ghana resources for its implementation. Secondly, international funding mechanisms could be explored to fund some components of the Action Plan as applicable. For instance, it is reported that Ghana would need to mobilize \$ 22.6 billion investments from domestic, international and private sources to implement the NDCs for the 10-year period (2020–2030). Of that amount, \$ 6.4 billion will be mobilized from domestic sources (including existing public investments and fiscal incentives) and \$ 16.2 billion from external sources. In all, 56 percent of the total amount will be mobilized to implement adaptation programmes, and 44 percent will be allocated to mitigation programmes. Therefore, innovative funding mechanisms such as the Ghana Green Fund, the EPA Environmental Fund, the Renewable Energy Fund, the Forest Plantation Development Fund and the Minerals Development Fund should be explored. The NDC is aligned strongly with the government's development agenda and conscious efforts should be made by key sector ministries to get the necessary political buy-in and commitment to allocate more funds for the implementation of the CCGAP.

3.4 Anticipated implementation challenges and proposed solutions

- **Financial and logistical support.** This has always been the challenge in the implementation of most national programmes and activities. The reliance on donor support for such important national assignments is not sustainable. It is important to begin to generate local funding for such activities. Implementing agencies should be given the needed logistical and financial resources to enable them to perform. Budgetary releases for such programmes should be done on time to achieve the needed results.
- **Coordination power of MoGCSP.** MoGCSP should be adequately resourced to effectively coordinate gender and climate change issues in the country. There are a number of stakeholders working in the area – some are government agencies and others are private organizations. The sources of funding to these agencies usually determine who they report to, and in most instances, MoGCSP has no clue as to what is going on within the other agencies. These agencies are also not obliged to report to the ministry because they do not receive any support from the ministry. The lack of coordination has therefore led to duplication of programmes and waste of limited resources. It is important to give MoGCSP the necessary legislative powers to be able to monitor and coordinate the activities of all agencies working in gender and climate change.
- **Capacity-building.** Implementing agencies need capacity training to enable them to effectively mainstream gender and climate change into their programmes and activities. This should be done at least annually to refresh implementing partners' skills and to work on challenges faced by some partners. Capacity training is critical for the sustainability of programmes, and it is important to encourage trained officers to mentor other junior staff within their unit so the junior staff can step in when senior staff are not available. There should be at least one training for such mentees every year.
- **Government commitments.** It is important to get government commitment to the exercise. It should not just be an issue of a budgetary commitment that is never released by the MoF, but one that has regular and timely release of funds and other resources to ensure the programme's smooth implementation. There is a need for effective lobbying of the various parliamentary caucuses working in the seven GH-NDC sectors to get parliamentary buy-in at the higher level. It is also important to train this group to understand the issues, so they can make the right arguments for adequate financial and other resources for the programme.

3.5 Monitoring and evaluation

The implementation of the CCGAPs by the GH-NDC sectors will be guided by a gender mainstreaming framework that will facilitate the preparation of monitoring indicators to measure the progress of integration in each of the sectors. MESTI, EPA and MoGCSP will each play a lead role in the preparation of the monitoring and evaluation framework that takes into consideration all the issues raised in the CCGAP. The monitoring and evaluation arrangement of the CCGAPs are outlined as follows:

- The CCGAPs will be integrated into the medium-term development plans of the GH-NDC sector agencies, NGOs and CSOs. The MDAs and MMDAs will be required to mainstream gender and climate change into the preparation and implementation of their respective medium-term development plans.
- The GH-NDC sectors' plans and district medium-term plans of the MDAs and MMDAs, respectively, will serve as the basis for the annual national budget coordinated by the MoF to ensure that there are enough funds available for the implementation of the CCGAPs.
- MESTI, EPA and MoGCSP will collaborate with the Ministry of Planning and NDPC to coordinate the implementation of climate change and gender mainstreaming in the GH-NDC sectors. The monitoring and evaluation system of the CCGAPs will be prepared by the NDPC in collaboration with MESTI, EPA and MoGCSP.

Conclusion and the way forward

The gender analysis identified various gaps in the seven NDC priority sectors: water, waste, health, transport, disaster risk and climate services, energy and agriculture. Key among the gaps are inadequate logistical and financial resources to implement programmes and activities related to climate change and gender issues; inadequate technical capacity of staff to mainstream climate change and gender into programmes; and low level of gender awareness at management level. Based on the identified challenges, this CCGAP has been developed together with stakeholders within the respective sectors.

The Action Plan has the overall goal to facilitate the integration of gender into seven NDC priority sectors – agriculture and forestry, energy, health, water, waste, transport, and disaster risk and climate services. To achieve this goal, various objectives with corresponding actions have been proposed. The objectives are to: (i) build capacity of staff on climate change and gender; (ii) increase the participation of women and men at all levels of management; (iii) support staff of the various sectors to mainstream gender into programme delivery and operations; (iv) increase awareness of climate change and gender considerations at all levels; (v) increase access to resources for both women and men; and, (vi) promote gender-responsive budgeting, monitoring and reporting.

In order to enhance gender responsiveness within the seven NDCs, the proposed actions require adequate financial and logistical support. In particular, financial resources have been known to determine priority level of gender mainstreaming activities; thus, it is a precondition for successful implementation of the Action Plan. Oversight responsibility of the gender actions based on the institutional arrangements of climate change and gender issues within the country lies with MESTI; the EPA; and the MoGCSP. There is the need for capacity-building to enable these institutions in leading the implementation of the activities proposed in this Action Plan. The private sector is critical in the implementation of the Action Plan. The private sector consists of private financiers (such as private commercial banks, microfinance institutions, and private insurance companies) and private enterprises (including privately owned small-scale enterprises). With CSOs playing the watchdog roles and the sector MDAs taking their respective responsibilities as indicated in the Action Plan, the country will be working towards a gender-responsive adaptation.

Annex

Annex 1: List of stakeholders consulted during national consultation exercise

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38	Abdul Nashiru Mohammed	Water Aid		
39	George C. Yorke	Water Aid		
40	Yvonne Kafui Nyaku	Water Aid		
41	Robert Bruce	Water Aid		
43	Dr Michael Tanu	GMet		
44	Dr. Eric Asuman	GMet		
45	Dr. Naomi Kumi	GMet	naomikumi@yahoo.com	0240238267

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