Releasing children from poverty
Compassion
in Jesus' name

FINAL REPORT

Impact of Climate Change on Children and Youth

THE ROLE OF FAITH IN ADDRESSING CLIMATE CHANGE IMPACTS

August 2024

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ABBREVIATION	CONNOTATION
CBA	Community-based Adaptation
CIGH	Compassion International Ghana
CSA	Climate-Smart Agriculture
CSR	Corporate Social Responsibility
FBOs	Faith Based Organisations
FCPs	Frontline Church Partners
FGD	Focus Group Discussions
FMNR	Farmer Managed Natural Regeneration
KII	Key Informant Interview
MVI	Multidimensional Vulnerability Index
NGOs	Non-governmental Organisations
PF	Partnership Facilitator
UNDP	United Nations Development Programme
WASH	Water, Sanitation and Hygiene

Executive Summary

Amidst dealing with persistent socioeconomic disadvantage and entrenched cycles of poverty, Christian faith-based organisations such as Compassion International Ghana (CIGH) that provide essential support to children and youth face an additional threat: the deteriorating effects of climate change. These effects have the potential to dampen their investments and efforts by increasing food insecurity, disrupting educational opportunities, disrupting livelihoods, or displacing communities, among others. Although there is recognition of the negative impact of climate change in the communities that CIGH works in, there is no documented evidence or information of such impact. Again, there is no documented evidence of the effect of climate change on children in the communities CIGH operates and how the local churches are armed and empowered to work with communities to address them. In view of this, this assignment sought to provide some foundational information on the dynamics of climate change in the operating contexts of CIGH as a basis for a coordinated program response including capacity development, youth engagement and other activities aimed at accelerating the release of more children from poverty.

The study is embedded in a mix methods design where both qualitative and quantitative approaches are adopted to address the objectives of the study which include; 1. Identifying and analysing the impact of climate change on children and youth in the operating context of CIGH; 2. Examining specific strategies employed by Frontline Church Partners (FCPs) and other Christian organisations in Ghana to support children and youth in coping with and adapting to the impacts of climate change; 3. Identifying the capacity gaps among the Frontline Church Partners in climate change mitigation and adaptation solutions; 4. Mapping out opportunities and entry points for FCPs to take ownership and leadership in elevating the voices of children and youth in developing climate smart solutions in their contexts; and 5. Making recommendations for enhancing the impact of existing initiatives and scaling up successful models for wider adoption across Ghana, ensuring sustainable support for children and youth facing climate challenges. A total of 200 participants make up the sample for the study; which included 100 survey participants; 9 key informant interview participants and 91 focus group discussion (8 FGDs in total). The

Providing foundational information on the dynamics of climate change in the operating contexts of CIGH as a basis for a coordinated program response including capacity development.

200 **total study participants**

100 survey participants; 9 key informant interview participants and **91 focus group discussion**

data was analysed using descriptive statistics and multidimensional variability index for the quantitative data and content analysis for the qualitative data.

Findings indicate that climate change does impact on children and youth, and these are manifested through reduced agricultural productivity, water scarcity, and increased incidences of climate-related health issues, exacerbating the vulnerabilities of children and youth. The Multidimensional Vulnerability Index (MVI) scores reflect this, with the Eastern territory showing the highest level of vulnerability, indicating severe deficiencies in healthcare, disaster preparedness, and social infrastructure. Education outcomes are also heavily affected by climate change that is exhibited in low school attendance and infringing on access to educational facilities. There are also health effects, manifested in respiratory diseases, skin diseases, malaria and mental health. The high proportions of undiversified employment opportunities further compound the problem, limiting alternative livelihood options for the youth.

The study reveals that while 63% of Frontline Church Partners (FCPs) have climate adaptation and mitigation programs, significant barriers such as insufficient resources, lack of awareness, and inadequate guidance persist for the remaining 37%. Active FCPs employ strategies like educational programs on climate change, health and wellness initiatives, and environmental conservation efforts to raise awareness, promote community health, and protect the environment. However, disaster preparedness and agricultural support are less frequently implemented, indicating a gap in comprehensive climate resilience efforts. Common approaches involve community engagement through sensitization campaigns, communal health screenings, and educational activities, often addressing immediate concerns like disease control and sanitation in areas prone to flooding and poor waste management.

The findings also highlight the need for increased funding, better resource allocation, and enhanced expertise to support FCPs in expanding their climate efforts. It points out significant gaps in

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37%

the capacity of FCPs to address climate change effectively, with disparities in knowledge, skills, and resources across various territories. The Northern territory shows higher competence in climate science, while the Southern and Eastern territories exhibit stronger capacities in project planning and technical skills, respectively. However, the Central Western territory lags in most skill areas, indicating a need for focused capacity-building efforts. The biggest capacity gap is understanding the science and impact of climate change.

There are identifiable opportunities for enhancing climate-sensitive programming within Compassion International Ghana's Frontline Church Partners (FCPs). Despite 63% of FCPs engaging in climate initiatives, the scope and depth of these initiatives vary across territories. The Eastern territory stands out with 84% involvement, suggesting a model for replication. Predominant initiatives like tree planting highlight initial awareness and engagement with environmental stewardship. However, there is a need for more diverse and comprehensive climate actions, including sustained and practical climate education, food and water security initiatives, and advocacy campaigns. Adaptable models from other FBOs include targeted climate projects and interventions, children and school-based projects and cooperate climate policies.

There is a clear opportunity for Compassion International Ghana's FCPs to expand and deepen their climate initiatives by learning from successful models within and beyond their current territories. Emphasising comprehensive climate education, enhancing health and wellness programs, ensuring food and water security, and strengthening disaster preparedness and environmental conservation efforts are crucial steps. Additionally, fostering robust advocacy and awareness campaigns and integrating the successful practices of other FBOs can significantly enhance the climate resilience and sustainability of the communities served by Compassion International Ghana. It is recommended that Compassion Ghana takes a critical look at the various entry points that have been listed in this report and summarised in Figure 01.

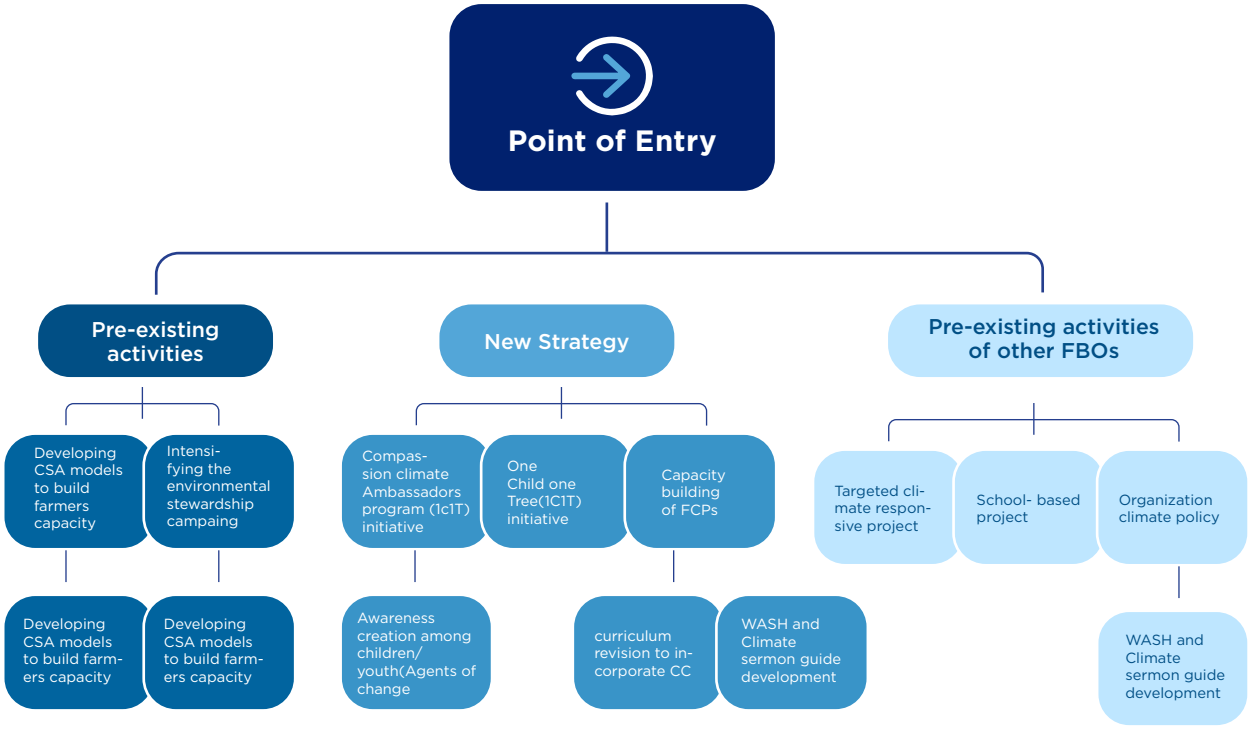

Figure 01: Recommended points of entry for climate strategies
Source: Authors' construct based on field data (2024)

01 Introduction

1.1 Background

There is ample evidence of the changing climate in Ghana manifested in flooding, excessive temperatures, irregular and unpredictable rainfall patterns and many others. These manifestations are already exacerbating existing vulnerabilities for the poor, limiting access to clean water, increasing food insecurity and negatively affecting the health conditions. Meanwhile, children are disproportionately impacted and exposed to the vulnerable effects of climate change. Their holistic development in the form of physical growth and immune systems, behavioural characteristics and other developmental needs make them susceptible to diseases, food insecurity, water scarcity and air pollution.

Compassion International works in needy and poor communities which are already exposed to climate shocks. There have been pockets of efforts to support communities to adapt and to promote some mitigation measures through tree planting, sustainable agriculture for income and food security as well as the provision of sustainable water, sanitation and hygiene infrastructure. These have been undertaken together with the Frontline Church Partners, some of whom have demonstrated the interest in integrating climate issues into our work, but they have limited capacity to address the risks of climate change in our work.

However, the voices of the youth in Compassion's program have been limited on the debate and matters of climate change and its impact on children and youth. This is partly as a result of the limited understanding of the subject matter and the lack of information to serve as a rallying point for amplifying the voices of the children and youth in generating local solutions that enable families and communities to adapt to climate shocks. Meanwhile, there has been evidence in Compassion International Ghana's work that, when the youth have more access to information on the effect of climate change in their localised environment, they are able to proffer alternative solutions including business ideas in the circular economy as part of the solutions to climate change.

Although there is recognition of the negative impact of climate change in the communities that CIGH works in, there is no documented evidence or information of such impact. Again, there is no documented evidence of the effect of climate change on children in the communities CIGH operates and how the local churches are armed and empowered to work with communities to address them. Thus, although there are different interventions which directly respond to, or have the potential to respond to mitigating and adapting to climate change, these have not been consolidated into a program response, as a result, much of CIGH's attempt to support the local church is sporadic and uncoordinated. In view of this, this assignment sought to provide some foundational information on the dynamics of climate change in the operating contexts of CIGH as a basis for a coordinated program response including capacity development, youth engagement and other activities aimed at accelerating the release of more children from poverty more quickly.

1.2 Literature Context

Climate change poses a significant threat to the well-being of children and youth worldwide, particularly in vulnerable regions like Sub-Saharan Africa, where 70% of children are already directly exposed to at least two climate hazards. This translates to 20 million children facing hunger due to climate change, with projections of up to 24 million, pushed into extreme poverty by 2050 (World Bank, 2023). Ghana as a nation is already grappling with food insecurity, water scarcity, and poverty, and is experiencing the brunt of this global threat. Over the past 50 years, Ghana's annual average temperature has increased by 1°C, exceeding the global average warming rate. This rise, coupled with erratic rainfall patterns, has led to a 20% decrease in agricultural productivity in some areas (World Bank, 2023; FAO, 2022). Water scarcity is another pressing issue, with 2.6 million Ghanaians lacking access to safe drinking water, further exacerbated by climate-intensified droughts (UNICEF, 2021). Food insecurity is also a major concern, with 19% of Ghanaian children under five suffering from chronic malnutrition. Climate change is expected to worsen this situation (World Food Programme, 2023).

70%

of children are already directly exposed to at least two climate hazards.

20

million children facing hunger due to climate change

These disruptions threaten food production, clean water access, and livelihoods, pushing vulnerable communities further into hardship. Climate-induced droughts and floods force children to miss school, impacting their educational attainment (UNESCO, 2022). Extreme heat and water scarcity increase the risk of waterborne and vector-borne illnesses among children (WHO, 2023). Moreover, climate impacts on agriculture and fisheries threaten family livelihoods, pushing children into poverty and vulnerability (ILO, 2022). Children and youth in Ghana are struggling against unique challenges posed by climate change. These challenges disrupt their education, compromise their health, threaten their access to nutritious food, and reduce opportunities for a secure future, disproportionately impacting their well-being and development (Adams & Nyantakyi-Frimpong, 2021; Opoku, 2021). As a result of climate change, erratic rainfall patterns cause droughts that parch the land, leading to school closures forcing children to travel miles to fetch water instead of learning. Floods inundate classrooms and disrupt learning schedules and jeopardise crucial educational years (National Disaster Management organisation, 2023).

Soaring temperatures sap energy and concentration, impacting cognitive development, and learning capacity among children and youth. Waterborne diseases spread rapidly in the wake of floods, keeping children bedridden and away from school (Ministry of Health, Ghana, 2023). Additionally, scorching heat and unpredictable rainfall wreak havoc on crops, leading to food shortages and malnutrition (UNICEF, 2021). This not only hampers physical development but also cognitive function, hindering children's ability to learn and reach their full potential.

The changing climate also disrupts traditional farming practices, forcing families to migrate in search of sustenance (Assan, 2018), uprooting children from their communities and educational

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1 Million

Ghanaians into poverty by 2050

settings, thereby jeopardising their future. Consequently, as farmlands turn barren, families are forced to leave their homes, disrupting children's education and social connections (Asare-Nuamah, Dick-Sagoe & Ayivor, 2021). This can lead to psychological trauma and a sense of instability, hindering their development. Furthermore, the scarcity of water and fertile land breeds conflict within and between communities, imperilling the safety and security of children (Derbile, Chirawurah, & Naab, 2022). In addition, climate change effects such as drought impacts the livelihoods of millions. Floods, on the other hand, displace an average of 45,000 Ghanaians every year (Dinko & Bahati, 2023; National Disaster Management organisation, 2023), and climate change is projected to push an additional 1 million Ghanaians into poverty by 2050 (World Bank, 2023).

At the forefront of this unfolding crisis are Ghanaian children and youth, who bear the brunt of a problem they did not create. The crisis has far-reaching consequences on critical aspects of their lives, with the potential to deprive them of a sustainable and secure future. While commendable efforts have been made by them and others to combat this threat, significant additional efforts and targeted interventions are needed to give Ghanaian children and youth the necessary support in adapting to and mitigating the impacts of climate change. The Christian faith can play a significant role in this endeavour, providing moral guidance and community support to help mitigate these challenges and build a more sustainable future for Ghana's children and youth (Dotsey & Kumi, 2020; Miller Hesed, Van Dolah & Paolisso 2020).

Amidst dealing with persistent socioeconomic disadvantage and entrenched cycles of poverty, Christian faith-based organisations that provide essential support to children and youth face an additional threat: the deteriorating effects of climate change. These effects have the potential to dampen their investments and efforts by increasing food insecurity, disrupting educational opportunities, or displacing communities. Although some organisations are taking significant steps to alleviate climate change, it is crucial to assess the effectiveness of their climate change mitigation strategies and identify opportunities for scaling up their climate adaptation efforts. This will help secure their investments and ensure a future where children and youth can thrive despite the challenges of climate change.

In the light of this, this study report, developed on behalf of Compassion International Ghana, aims to investigate how children in Ghana are affected by climate change and the role of faith-based organisations in strengthening mitigation and adaptation efforts. As a Christian-based NGO, Compassion International Ghana's mission is to support ecosystems that support every child's

and youth's growth and well-being. A major force behind moral direction, social cohesiveness, and resilience in Ghanaian culture is the Christian faith. When equipped with the necessary knowledge and resources, the Frontline Church Partners can mobilise community agents and stakeholders to advance local climate-smart solutions that foster an environment conducive to children's growth. They are powerful in their operating context.

Moreover, Christian faith organisations and institutions play a crucial role in the Ghanaian society, serving as a source of moral guidance, social cohesion, and resilience. Understanding how Christian communities and organisations are addressing the specific needs of children and youth in the face of climate change is crucial because Christian institutions have extensive networks across Ghana, providing access to communities and resources that can be mobilised for climate action. Also, Christian teachings emphasise environmental stewardship and social responsibility, aligning with the goals of climate adaptation and mitigation. Furthermore, Christian faith-based initiatives can foster agency and leadership skills in children and youth, enabling them to become active participants in climate solutions.

1.2 Study Objectives

This study aims to achieve the following objectives:

1. Identify and analyse the impact of climate change on children and youth in the operating context of CIGH

2. Identify and analyse the specific strategies employed by FCPs and other Christian organisations in Ghana to support children and youth in coping with and adapting to the impacts of climate change.

3. Identify and map out the capacity gaps among the Frontline Church Partners in climate change mitigation and adaptation solutions.

4. Identity and map out opportunities and entry points for FCPs to take ownership and leadership in elevating the voices of children and youth in developing climate smart solutions in their contexts.

5. Make recommendations for enhancing the impact of existing initiatives and scaling up successful models for wider adoption across Ghana, ensuring sustainable support for children and youth facing climate challenges.

1.5 Organisation of the Report

The report is divided into seven (7) Chapters. Following the introductory chapter is Chapter 2 which gives a detailed methodology about the work conducted, the survey design, implementation and data collection and method of analysis. Chapter 3 presents and discusses the findings on FCP characteristics, climate change literacy and impacts. The findings on climate adaptation and mitigation strategies by the FCPs are presented in Chapter 4. Following this, Chapter 5 discusses the findings on the existing capacities and gaps of FCPs in implementing climate strategies. The mapping of entry points for developing climate strategies are presented in Chapter 6. The conclusions and recommendations from the study are then presented in Chapter 7 to complete the report.

02 Methodology

2.1 Study Design

The study employed a mixed-methods approach, integrating both qualitative and quantitative methodologies. Data collection and analysis were conducted through quantitative surveys and qualitative interviews and discussions. While a mixed-methods design was used, the research team predominantly relied on qualitative inquiry to delve into scalable initiatives by Frontline Church Partners (FCPs) and other faith-based organisations for climate change adaptation and mitigation concerning children and youth in selected communities.

2.2 Data Type

Data collection utilised both primary and secondary sources. Primary data sources included responses from FCP staff, other faith-based organisations, caregivers, and youth. Secondary data were gathered through desk research of institutional documents pertaining to climate change initiatives by other faith-based organisations. A semi-structured interview guide and survey questionnaire were developed to gather data from various stakeholders. Four distinct interview guides were adapted to suit each interview category: one for cluster PFs, one for faith-based organisations, and two for focus group discussions with youth and caregivers. Additionally, a survey questionnaire was employed to gather responses from a mini survey with FCP staff.

2.3 Sampling

To ensure a representative sample of FCPs and their communities, the study applied the Solving (1960) formula for sample size determination.

$$n = \frac{N}{1+N(e^2)}$$

Where:
n=estimated sample size
N=size of the population to be sampled
e=margin of error allowed for the study

Given CIGH's collaboration with 400 FCPs across 11 regions in Ghana, a representative sample size was estimated at 200 FCPs and their communities. This sample size calculation assumed a 5% margin of error, ensuring that findings would be generalizable with 95% confidence to the entire population of FCPs and their communities.

Due to funding limitations, a mini survey of 100 FCP staff was surveyed, supplemented by in-depth interviews and focus group discussions with additional 100 participants, making a total of 200 participants for the study. However, for the purposes of the quantitative analysis of this study, we carry out the quantitative description and analysis using the 100 survey participants and the responses from the qualitative respondents to triangulate. The qualitative sample of

100 participants across the FGDs and KIIs conducted also supplemented for the shortfall in the estimated representative sample. In addition to triangulation, the qualitative data provided a deeper dimension and additional thematic areas of the study objectives that the quantitative could not.

The study stratified the operational regions of CIGH into four territories (Northern, Southern, Central-Western, and Eastern) and selected two representative clusters from each territory (Table 1). An equal proportion of 25 FCPs for each territory was assigned for each of the territories, resulting in a total of 100 FCP surveys for the study.

TERRITORY	CLUSTER
Northern	1. Kumasi
	2. Sunyani
Southern	3. Accra North
	4. Adaklu-Agotime
Eastern	5. Kwahu
	6. Asuogyaman
Central Western	7. Cape Coast
	8. Sekondi-Takoradi

Table 2.1: Clusters considered for the study

2.4 Data Collection Approaches

Three principal approaches were employed for primary data collection: survey, focus group discussions (FGDs), and key informant interviews. Additional triangulation methods, such as stakeholder consultations and observations, were used to ensure the collection of high-quality and representative data. The structure of the primary data collection approach employed is presented in Figure 2.1.

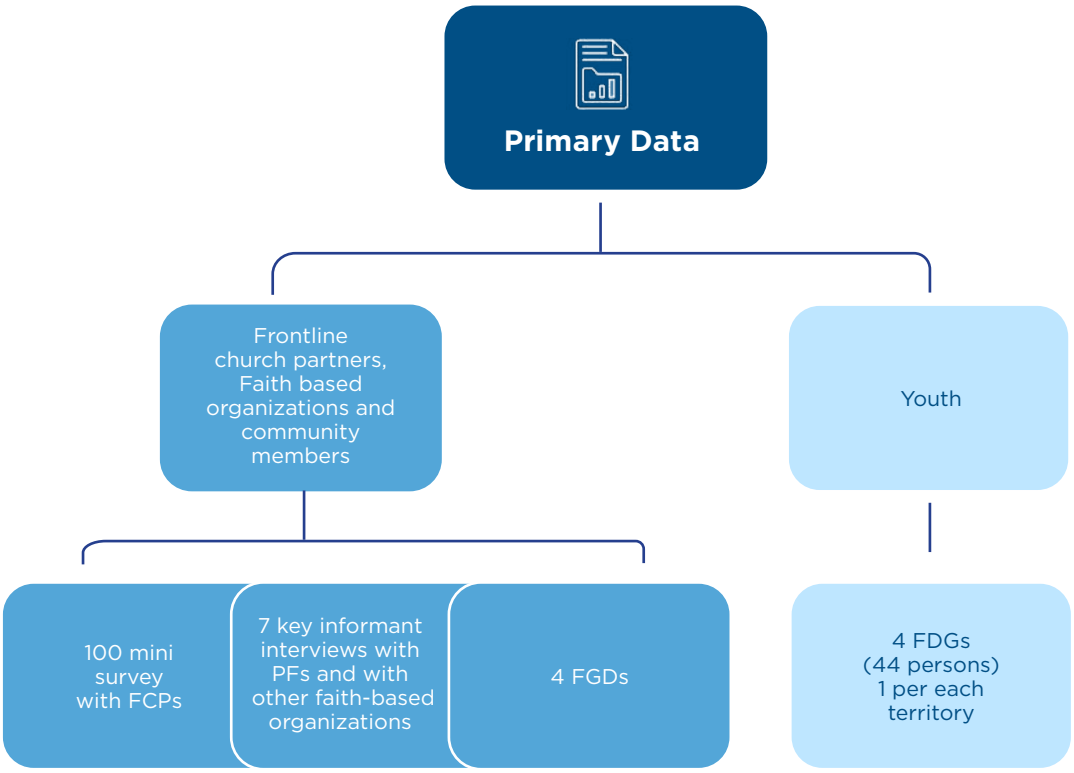


Figure 2.1: Data collection plan employed for the study

2.4.1 Surveys

Stratified and simple random sampling techniques were used for the surveys. The total population of project communities was obtained from CIGH and used to identify community selections. Stratified sampling grouped respondents into various categories for subjective and objective measures, while simple random sampling ensured each member had an equal probability of selection. A structured questionnaire was meticulously designed for the surveys. In cases of resource constraints, a convenient sample size was used to conduct the study.

2.4.2 Interviews

Key informant interviews were conducted with key stakeholders, including FCPs and faith-based organisations involved in climate initiatives. The research team employed semi-structured interview guides with evaluation questions focused on knowledge, awareness, mitigation and adaptation solutions, capacity to implement climate-smart solutions, and the relevance, effectiveness, efficiency, and sustainability of climate initiatives. A total of Nine (9) KIIs were conducted with the PFs of selected clusters and other faith-based organisation (FBOs). All

PFs of the eight selected clusters for the study were initially part of the KII list but after the 7th interview, the team reached a point of saturation as there was new insights were not coming. This is the reason the KIIs with the Cluster PFs ended with 7 interviews as opposed to the planned 8. On the other hand, 3 other FBOs were initially planned to be interviewed but the team was only successful in conducting 2 within the study timeframe due to the non-responsiveness of the third organisation. The two successful FBOs however provided good insights to the study and hence we see no limitation.

2.4.3 Focus Group Discussions

FGDs were conducted in selected CIGH communities, with each discussion involving up to 10 participants. Diverse demographic groups (youth, elders, women) were engaged to capture varied perspectives. FGDs facilitated in-depth exploration of shared experiences and the role of FCPs in addressing climate change. A total of 8 FGDs with youth and caregivers were conducted at the territory level. The classification of youth (12-22 years) and children (under 12 years) by CIGH guided the selection of FGD participants. The participants included both male and females in each group (caregivers and youth groups). The size of each FGD ranged between 10 and 14 across the selected territories. In total, the FGDs were held with a total of 91 youth and caregiver participants. The distribution of participants across the FGDs conducted is presented in Table 2.2

TERRITORY	TOTAL NUMBER OF FGD PARTICIPANTS (CAREGIVERS)	TOTAL NUMBER OF FGD PARTICIPANTS (YOUTH)	TOTAL NUMBER OF FGD PARTICIPANTS
Northern (Kumasi)	12	11	23
Southern (Accra)	14	12	26
Central Western (Takoradi)	10	10	20
Eastern (Asuogyaman)	12	10	22
Total	48	43	91

Table 2.2: Distribution of FGD participants

The gender distribution of the FGD and KII participants is also presented in Table 2.3, clearly highlighting more female participants in the qualitative study.

TERRI-TORY	FEMALE CARE-GIVERS	FEMALE CARE-GIVERS	FEMALE YOUTH	MALE YOUTH	TOTAL FEMALE	TOTAL MALE	TOTAL FGD	FEMALE KII	MALE KII	TOTAL KII
Northern	10	2	6	5	16	7	23	1	1	2
Southern	12	2	4	8	16	10	26	1	3	4
Central Western	9	1	8	2	17	3	20	1	0	1
Eastern	11	1	7	3	18	4	22	1	1	2
Total	42	6	25	18	67	24	91	4	5	9

Table 2.3: Distribution of gender in the qualitative study
Source: Field data (2024

2.5 Data Analysis

A mixed-methods design was adopted, with a balanced focus on quantitative and qualitative data analysis due to the depth of exploration required. Thematic analysis was conducted on qualitative data according to predefined and emerging themes from interviewee responses. The qualitative data was first transcribed verbatim, coded and content themes generated. Triangulation of the quantitative data was done where necessary with the qualitative data and new themes were also generated to support the discussion.

In areas where the quantitative data was lacking, the qualitative data was the main data used to discuss the findings in those sections. The qualitative data was subsequently analysed with a combination of manual and software approach using Atlas.ti to generate word clouds. Quantitative data were analysed using statistical software such as SPSS, STATA, and Microsoft Excel to generate descriptive statistics and identify patterns. Further for the quantitative data, descriptive statistical analysis was the main analytical approach adopted. We also compute a multidimensional vulnerability index (MVI) of livelihood capitals, including education, health, living standards, and financial security, to assess the impact of climate change on the vulnerability of the different FCP territories. Results are presented in tables, charts, text boxes and images.

2.5.1 Measuring vulnerability to climate change

The study adapts the Multidimensional Vulnerability Index (MVI) applied by the UNDP (2023), which is computed as the product of the incidence and the intensity of multidimensional vulnerability. The value ranges between 0 and 1, with 1 indicating that everyone is multidimensionally vulnerable and deprived in all indicators.

Dimensions

The structure of the MVI, according to the report, assesses vulnerability in three critical dimensions: Education, Health and Disaster, and Living Standards. The study in adapting this methodology, extends to include Social infrastructure and adaptation strategies.

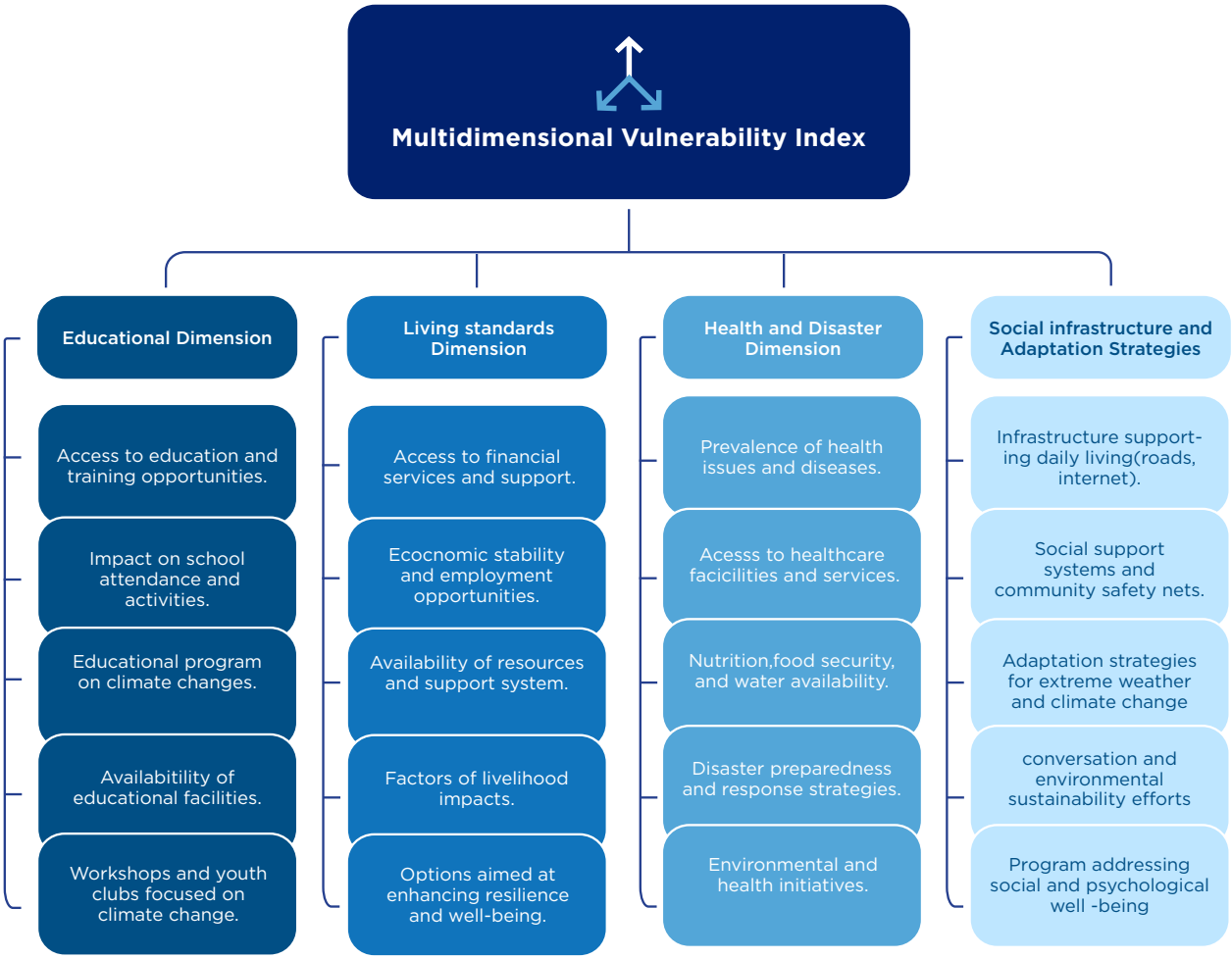


Figure 3.1: Visualisation of MVI components

The **Social infrastructure and adaptation strategies** dimension relates to the infrastructural amenities or activities a cluster may lack in reducing its vulnerability. This component is important because, although the UNDP (2023) report includes adaptive capacity as part of the health and disaster dimension in assessing the vulnerability of **individuals,** the study breaks off this component as a standalone component in assessing the perceived levels of vulnerability of an entire community. This allows for a more detailed assessment of the overall community vulnerability by focusing on specific infrastructural deficiencies and FCP activities, which are not necessarily captured in the UNDP (2023) report's combined adaptive capacity component within the health and disaster dimension.

Education as a dimension also relates to the skills and knowledge the community requires to make well informed decisions and effectively adapt to evolving circumstances.

Health and disaster dimension highlights the integral role of health and disaster resilience in determining vulnerability levels. It comprises five indicators in total, including self-reported assessments of physical health condition, access to quality water, community's food stocks and FCPs experience of natural disasters.

The **living standards** dimension is critical for decreasing vulnerability to economic shocks and ensuring a basic quality of life.

Vulnerability cutoff (k)

The Vulnerability cutoff (k) is the multidimensional vulnerability line that is a minimum value of weighted deprivations score based on which individuals or households are classified as vulnerable or non-vulnerable. It is reported as a percentage. In this study, the study chooses its vulnerability cut-off to be at 0.5 (50%). That is, a person who is deprived of 50 percent of the weighted indicators is considered multidimensionally vulnerable. The justification for this choice is to capture a broader spectrum of communities that are vulnerable, considering information from this assessment, based on the perceived vulnerability assessment by FCPs.
Weights are normalized scores (that is total weight sums up to 1) and indicate the importance of each indicator within the overall vulnerability index. The study in consonance to the UNDP report, adopted equal weights in assessing the dimensions of the multidimensional vulnerability of the clusters.

The justification for using equal weights is to ensure that each indicator is given the same level of importance within the overall vulnerability index, aligning with the UNDP report's methodology and allowing for a balanced assessment across different dimensions of multidimensional vulnerability.

Estimation technique

The Vulnerability Index is a composite index calculated from various sub-indices. The composite index is estimated as the simple arithmetic average of the sub-indices. There are four steps in constructing the index:

Step1: determining the causes of vulnerability

Step2: selecting and compiling proxy indicators

Step3: applying normalisation methodology to data

Step4: computing sub-indices and aggregating the index.

03 Characteristics of FCPs, Climate Change Literacy and Impacts

3.1 Introduction

This section presents the results of the FCP characteristics in terms of demographic, socio-economic and geographic. It also presents the level of climate change literacy and their associated impacts on children and youth among the selected FCPs.

3.2 Characteristics of Respondents

3.2.1 Location (Regions, Clusters, Rural/Urban)

Respondents are from diverse regions as shown in the Table 3.1, with notable representation from Ashanti (21% Urban, 2% Rural, 23% Peri-Urban), Greater Accra (36% Urban, 2% Rural, 8% Peri-Urban), and Eastern regions (14% Urban, 33% Rural, 23% Peri-Urban) as shown in Table 3.1. In addition, the FCP clusters were surveyed from Kumasi, Sunyani, Accra South-East, Accra North, Adaklu-Agotime, Asuogyaman, Kwahu, Cape Coast and Sekondi-Takoradi. This broad distribution indicates extensive geographic coverage, essential for addressing regional disparities in community services and climate adaptation efforts.

REGION OF RESPONDENT	FCP CLUSTERS	NUMBER OF CLUSTERS	LOCATION OF FCPS		
			Urban (%)	Rural (%)	Peri-Urban (%)
Ashanti	Kumasi	13	21.4	2.2	23.1
Bono	Sunyani	12	10.71	6.5	11.5
Ahafo			0.0	2.2	7.7
Greater Accra	Accra South-East	11	28.6	2.2	7.7
	Accra North	2	7.1	0.0	0.0
Volta	Adaklu-Agotime	13	0.0	26.1	3.9

Eastern	Asuogyaman	12	10.7	8.7	19.2
	Kwahu	13	3.6	23.9	3.9
Central	Cape Coast	13	7.1	17.4	11.5
Western	Sekondi-Takoradi	11.0	10.7	10.9	11.5

Table 3.1: Region and Location of Respondents
Source: Field Survey (2024)

Also, the substantial representation from rural areas in Volta (26%) and Eastern regions (33%) aligns with the findings of Addaney et al. (2021), which stress the need for tailored development strategies to address the unique challenges faced by rural communities.

3.2.2 Demographic characteristics

For the gender of respondents, males constitute 61% of the FCP staff respondents, while females make up 39% as shown in Figure 3.1. This gender disparity highlights the need for strategies to increase female participation and leadership within FCPs, aligning with global efforts to promote gender equity in community development and climate action (Fuseini, 2024). However, for participants in the qualitative study (FGSS AND KII), 71% against 29 percent are females and males, respectively.

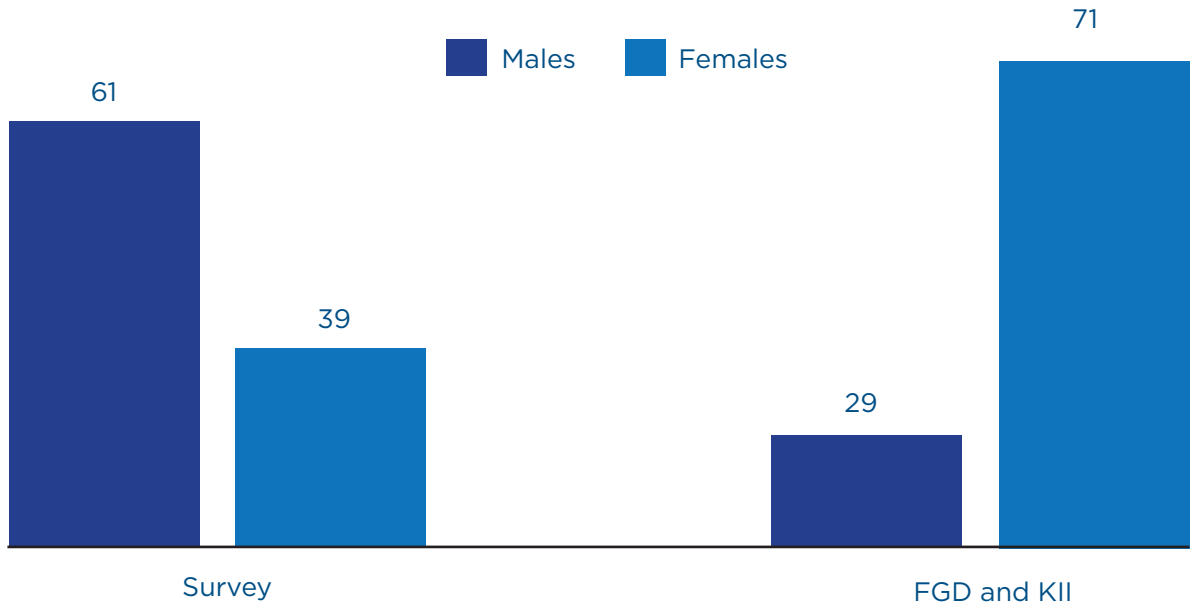


Figure 3.1: Gender of survey respondents
Source: Field Survey (2024)

FCP size

The average size of FCPs is reported as 243 members, with a standard deviation of 38.63, ranging from a minimum of 163 members to a maximum of 382 members. The variation in FCP sizes indicates differing capacities, with larger FCPs potentially having more resources and impact, while smaller ones may require additional support to scale their operations.

In terms of the **age distribution** of FCP staff, we find the average age of respondents to be 38 years, with a standard deviation of 5.95, ranging from a minimum of 25 to a maximum of 59 years. This age distribution suggests a mature and experienced group, beneficial for leadership and mentoring roles within FCPs. In addition, the different age groups bring diverse perspectives to community leadership. Younger leaders often introduce innovative ideas and technological solutions, while older leaders provide stability and long-term vision. A mix of ages within leadership teams can enhance the overall effectiveness of community programs (Wu and Konrad, 2023).

CHARACTERISTIC	MEAN	STD. DEV.	MIN	MAX
Size of FCP	242.69	38.63	163	382
Age	37.81	5.95	25	59
Tertiary education	1	0	1	1

Table 3.2: Some demographic characteristics of respondents
Source: Field data (2024

Educational level

All FCP and PF respondents have attained tertiary education, indicating a high level of formal education. This is advantageous for the implementation of sophisticated climate adaptation and mitigation strategies and other community development programs. The high level of formal education among FCP members supports findings that educated individuals are more likely to engage in and effectively implement climate adaptation and mitigation measures (Leal Filho et al., 2023). Studies by Chankseliani and McCowan (2021) also highlights the critical role of higher education in building capacity and fostering innovation in development initiatives. The 100% tertiary education level among both FCPs and PFs suggests a robust foundation for implementing complex development programs, as corroborated by McCowan (2019) who emphasises the importance of educational qualifications in the effectiveness of development work.

Roles within FCPs

The diverse participation of FCPs in the survey, particularly the high proportion of Project Directors (48%), highlight the importance of leadership in community-based organisations. Other roles interviewed include General Staff (30%), Administrators (9%), Accounts officers (8%) and Social Health Workers (5%).

Figure 3.1 indicates that diverse roles among the FCPs is crucial for the success of development projects. In other words, the varied roles indicate a multidisciplinary approach to development, which is essential for addressing complex social issues.

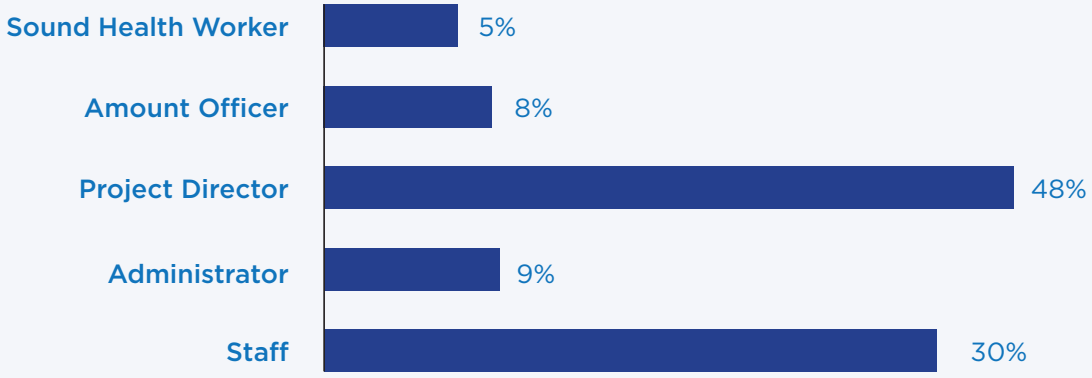


Figure 3.2: Respondents' Roles within FCPs
Source: Field Survey (2024)

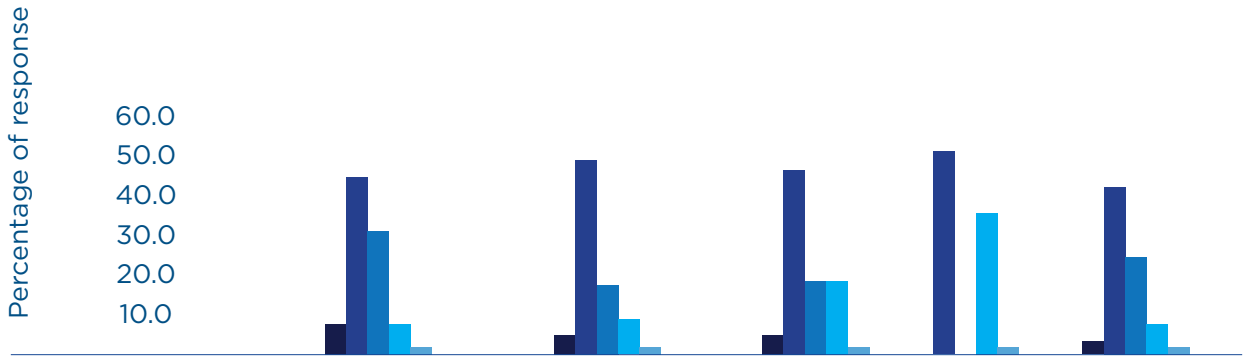
The data provides an overview of the demographic and functional profiles of FCP respondents at selected operational clusters of CIGH. The sample is well-educated, with a significant proportion holding tertiary qualifications. There is a notable presence from rural areas, although urban and peri-urban areas are also well-represented. The roles within the FCPs are varied, with a substantial number of respondents serving as Project Directors. This diversity in roles and locations underscores the broad reach and multifaceted nature of the FCPs' work across different regions and communities in Ghana.

In the context of climate change adaptation and mitigation the regional diversity, high educational attainment, and varied functional roles within the FCPs suggest a robust framework for implementing localised climate adaptation strategies. This is in line with recent literature by Bickel et al. (2020) which indicates that local knowledge and leadership are crucial for effective climate action.

3.2 Climate Literacy among FCPs

3.2.1 Understanding the Climate Change Concept

The concept of climate change is perceived by individuals differently depending on several confounding factors. Some of these factors may include the level of education of individuals, the exposure to climate events an individual has experienced, the level of awareness of the concept and in some cases some individuals may attribute climate change to biblical prophecies. The interviews with the FCP staff conducted reveal that majority of them (52%) are somewhat familiar with the concept of climate change. Their familiarity with the concept of climate change was however based on attributes of the climate they have observed and not the technical definition of the concept of climate change. In as much as there was some level of familiarity among FCP staff on the concept of climate change, about 6% indicated they were not familiar with the concept.



	NORTHERN	SOUTHERN	CENTRAL WESTERN	EASTERN	TOTAL
Not familiar	8.0	7.7	8.3	60.0	6.0
Somewhat familiar	48.0	53.9	50.0	56.0	52.0
Familiar	36.0	23.1	20.8		31.0
Very familiar	8.0	15.4	20.8	44.0	11.0
Mean	2.4	2.5	2.5	2.4	2.5

Figure 3.3: level of familiarity of FCP staff with the climate change concept
Source: Field survey 2021

FCP staff in the Eastern Territory appear to have some appreciable level of familiarity with the concept as 44% indicate they are very familiar as opposed to 8%, 15% and 21% of FCPs in the Northern, Southern and Central Western territories. A few of them (6%) however report not being familiar with the concept in these same territories and not the Eastern territory. Generally, on a scale of 1 to 4, the familiarity of the concept of climate change among FCP staff scored 2.5 which is just a little above average. A lot more education on climate science among FCP is therefore encouraged since they are the fulcrum on which the activities of Compassion Ghana revolve, if CIGH aims at rolling out Climate Change programs.

The children/youth on the other hand had a good knowledge of what climate change was, which is possibly from the lessons they receive in school. Some have even gone ahead to propose some solutions to mitigate and adapt to climate change, which will be discussed in subsequent sections of this report. The familiarity of the concept of climate change to caregivers and youth participants in the study is presented in Figure 3.4 to show the diverse and yet converging perception of the concept of climate change.

Defining climate change from the perspective of **youth** and **caregivers**

Youth

Changes in temperatures. It is hot in January,and cool inJune,July.

Changes in rainfall pattern and sometimes low rainfall (Accra FGD participant)

I have heard of climate change and it is the change in global or local weather patterns.

Sometimes when the forecasters say it will rain,it doesn't rain (Anaji Youth FGD participatants

Caregivers

We use to have specific days for training but raining but now it can rain anytime.

Now a days we cannot tell when it will rain or when it will be sunny(Kumasi FGB participant)

The calender days have shifted,nothing is predictable these days.

Increased sunshine (Asuogyaman Caregivers FGD participants)

Changes in rainfal pattern(Asuogyaman Caregivers FGB participants)

Figure 3.4: Understanding of climate change
Source: Field survey (2024)

3.2.2 Events linked to climate change

We also gather thoughts on the climate change concept from caregivers and children/youth at selected FCPs in each of the territories and we find some interesting perspectives among these groups. Whilst some participants of the FGDs attribute climate change to the activities of humans, others attribute it to the fulfilment of scripture as stated in the Bible, that there will be perilous time in the end time and the change in the climate is just one of the signs. The perception of climate events and their causes are hence varied across the various FCP actors.

Extreme weather events
Rainfall

Most caregivers and children/youth perceive climate change as the irregular occurrence of rainfall, causing floods and destruction of structures. To the beneficiaries of Compassion Ghana, they have observed the irregular timing of rainfall and its extreme downpour as something that has not been the norm and hence, they believe that something is changing about the weather patterns. For the FCP staff interviewed, about 79% of them also indicated extreme weather conditions as some of the key climate change events. This attribute recorded the highest of responses among all the categories, indicating that indeed extreme weather events are the most likely incidences that particularly are associated with climate change. This is clearly the most visible attribute of climate change and hence it was not uncommon for the FCP staff

to indicate that as well. Some of the responses from the study participants are presented in Box 1 to support the extreme weather events attribute of climate change.

Excessive heat

The prevalence of extreme weather conditions in the form of excessive heat was mentioned in all the interviews conducted, including the key informant and the focus group discussions. Participants describe recent changes in the weather pattern as unbearable and very uncomfortable to support peaceful living and learning conditions. There are repercussions of these extreme events witnessed by the beneficiaries, which will be explored in subsequent sections of this report.

...recently the rain has been falling randomly and suddenly and it affects daily activities. Maybe you want to wash or have already washed while the sun is shinning. But then suddenly it rains out of nowhere (FGD Youth Accra).

There is intensive heat so sometimes you have to sleep outside due to the heat. Sometimes the fan can be on but you'll still be feeling hot (FGD Youth Accra).

The sun can shine and you ask yourself if God is punishing you and why he is doing that to us (FGD parcipant, Accra)

Now a days the rainfall is not predictable. The winds are strong and it comes with flooding (FGD Caregivers, Kumasi)
The sun is very hot this year than last year and it is unbearable (FGD Caregivers Kumasi)

	NORTHERN	SOUTHERN	CENTRAL WESTERN	EASTERN	TOTAL
Extreme weather events	76.0	96.0	86.4	60.0	79.4
Health issues	64.0	60.0	59.1	56.0	59.8
Food and water scarcity	88.0	68.0	36.4	84.0	70.1
Displacement from homes	44.0	48.0	40.9	12.0	36.1
Loss of income and livelihoods	76.0	48.0	68.2	44.0	58.8

Table 3.3: Climate events observed by FCP staff
Source: Field survey (2024)

Changes in livelihood elements

Livelihood elements such as food and water scarcity, health, displacement of homes and loss of income and livelihoods are some elements that have been associated with climate events by the respondents. Following the majority (79.4%) response of FCP staff to the prevalence of extreme weather conditions as one of the key observed events associated with climate change, we also record 70% of them agreeing to the occurrence of food and water scarcity as the second observable events that they could be associated with climate change. For these respondents, the incidence of extreme weather conditions have led to either long periods of droughts or floods, which in both cases are detrimental to agricultural production activities. In the case of long periods of droughts, scarcity of water is also prevalent in these communities.

The percentage of response for the observance of food and water scarcity is much recorded in the Northern (88%) and Eastern territories (84%), with the Central Western territory recording the least of the responses (36.4%). From Table 3.3, though it is observed that though a higher proportion of FCP staff in the Southern and Central Western territories reported extreme weather events as their observation of climate change events, it did not follow the same trend with the food and water scarcity observation. This could be that whilst most communities in the Eastern and Northern territories are good production hubs, the same cannot be said of the southern and central western territories. This could account for why relatively less of them report events related to agricultural activities. Discussions with the youth and caregivers also revealed a similar climate related observation. Most of the caregivers interviewed were farmers and traders and there was a unanimous response to the food and water scarcity observation in recent times which they believe is what the climate change scenarios are all about.

About 59% of the FCP staff also report the loss of livelihood and income of caregivers as an associated observation resulting from climate change. This is however prominent in the responses of the FCPs in the Northern territory (76%) as compared to other FCPs. Reasons can be attributed to the Bono and Ashanti regions being major food baskets in terms of production and trade and so climate could easily disrupt their livelihood sources.

There are also reports of certain health issues associated with changes in the climate per the observations of the FCPs, which is reported by close to 60% of the FCP staff interviewed. The difference in the percentage responses across the various territories is not significant. This suggests that about 60% of the FCPs across the selected clusters believe that certain health issues, particularly flu and skin diseases, are linked to the changes in climate.

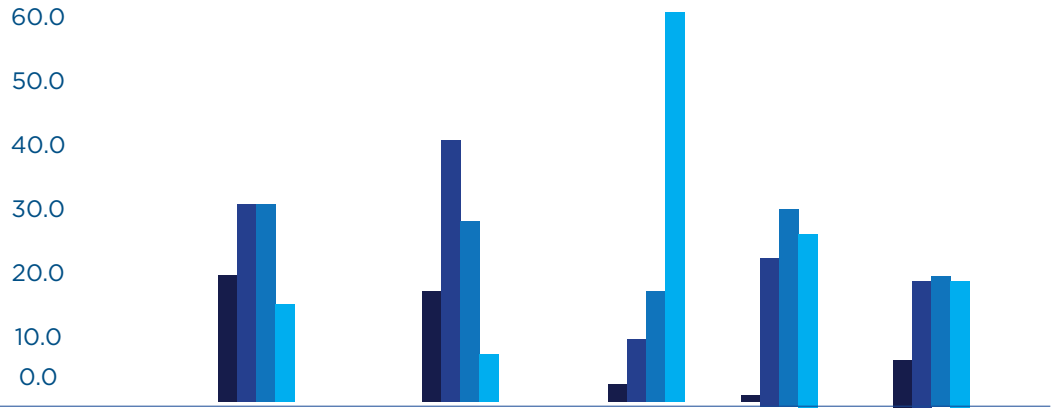
There were also few reports (36.1%) of FCPs experiencing displacement of homes of their caregivers and children due to climate events such as heavy winds and floods. Whilst around 40% of FCPs in the various territories stated this occurrence, only 12% of FCPs in the Eastern territory indicated this as an observation they have made regarding changes in climate events. FCPs in the Eastern territory appear to have less climate events disrupting their livelihood elements as a careful look at Table 3.3 shows that there are less reported cases of each of the climate associated events, except for food and water scarcity. Climate interventions for the Eastern territory can therefore target addressing issues of food and water scarcity.

3.3 Mapping Climate Incidence to Household and Children's Welfare

3.2.1 Awareness of FCPs on the impact of climate change on children

With Compassion Ghana's vision to improve the human capital and livelihood of children, with emphasis on taking them out of poverty, environmental shocks such as climate change

and its associated impact could jeopardise its efforts. Therefore, the awareness of the likelihood of such impacts is a first step to designing any intervention to absorb those shocks. In our efforts to uncover the knowledge capacity of the FCPs (staff and caregivers) in the climate impact on children and youth, we asked about their level of awareness of the possible impact it has on the beneficiaries. Responses from the staff reveal that about 12% of FCP staff are totally unaware of the effect of climate change on children and youth. Whilst this percentage may appear small, it is important to unpack that response to see which territories are driving that level of response. Figure 3.5 further reveals that the level of unawareness was prevalent in the southern (19.2%) and Northern (20%) territories compared to the Central and Eastern territories where only about 4% of the staff reported being unaware of the climate effect on children/youth.



	NORTHERN	SOUTHERN	CENTRAL WESTERN	EASTERN	TOTAL
Not aware	20.0	19.2	4.2	4.0	12.0
Somewhat aware	32.0	42.3	12.5	28.0	29.0
Aware	32.0	30.8	20.8	36.0	30.0
Very Aware	16.0	7.7	62.5	32.0	29.0

Figure 3.5: level of awareness of climate impact on children among FCPs
Source: Field survey (2024)

Close to 30% of the FCP staff are either somewhat aware, aware or very aware of the impact of climate change on children and youth. Putting them together, 88% of the FCP staff interviewed across the territories have some level of awareness of the impact of climate change on children and youth. However, a striking observation is that, the largest proportion of FCP staff in the Central Western territory (62.5%) reported being very aware of climate impact on children and youth. This is a significant proportion based on the trend of response across the various territories. It will be good to further explore the learning and capacity model that the Central and Western territory FCPs are adopting for them to have this level of awareness significantly different from the trends observed for other territories. Probing further into the unique case of the level of

awareness of Central Western FCPs reveal that some of the FCPs have had their postgraduate education in health and environment and there have been many health campaigns and education in that territory. This could possibly account for the large proportion of FCPs with a higher degree of climate impact awareness on children and youth.

Subsequent discussions with caregivers and the youth themselves also reveal some level of awareness of climate impact on children. These impacts are in the broad dimensions of health and nutrition, education and labour and migration which are explored in the proceeding section. We present the findings of the quantitative survey response with the FCP staff and support it with the qualitative findings from our focus group discussion with youth and their caregivers.

3.2.2 Food and nutrition security effects on households and children

Assessing the food securing status of FCP beneficiary households reveal that households in the surveyed territories are moderately food secure, with only about 7% reported to being very secure. This suggests that communities are generally moderately food secure with about 30% being food insecure.

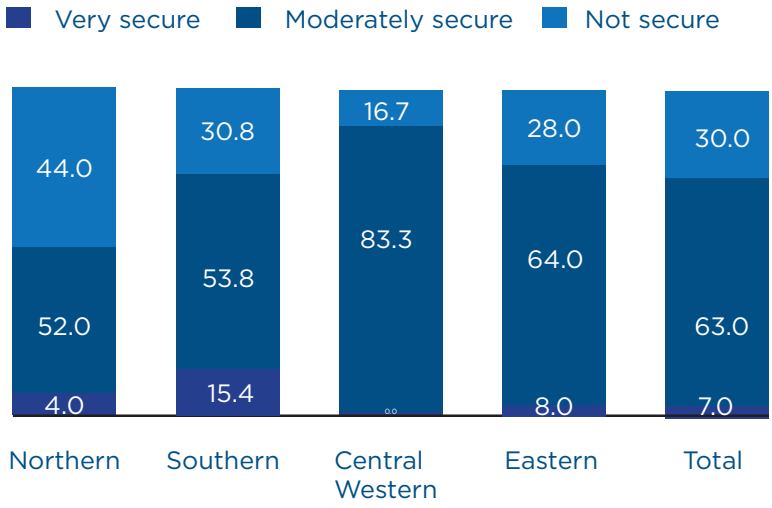


Figure 3.6: perception of the level of food security among household
Source: Field survey (2024

We also find that more FCPs in the Northern (44%) and Southern (30.8%) report food insecurity in their communities compared to the other two territories surveyed. This suggests that there is more incidence of food insecurity in the Northern and Southern territories compared to the other territories. Whilst the selected Northern clusters are known for their food production hub, making them very susceptible to climate change impact on their food production and trade, the Southern zone clusters, especially Accra is a major food trade zone. There is therefore the trickle-down effect of low food production as a result of climate change to the availability of and access to food in their right quantities and prices. Participants of the focus group discussion with the caregivers in the Accra cluster had these to say to support this effect

"THE RAINS HAVE AFFECTED THE MAJOR FOOD PRODUCTION ZONES SO THE SUPPLY TO PLACES LIKE ACCRA IS VERY LOW, MAKING FOOD VERY EXPENSIVE" (FGD PARTICIPANT, ACCRA)

"There are rather more rains in Accra than the food production areas, causing food shortage. These days we are unable to buy food in the right quantities because of the price" (FGD participant, Accra)

"Now we have resorted to preparing home meals for our children to school because their feeding fee is so expensive. That also means we have less food in the house" (FGD participant, Accra)

"I am a food stuff trader and people find it difficult to buy because of high prices. It makes it difficult for people to meet their food and nutrition needs" (FGD participant, Accra)

Whilst some caregiver participants indicated have to reduce the number of meals per day for their children or reduce the quantity given them as a way of adjusting to the food security issue at home, others were also of the opinion that nothing has changed. Such caregivers therefore resort to various coping strategies, which may either render the children food insecure, themselves food insecure or the entire household food insecure. The effect of the climate crises on food security is however real and it will be expedient for caregivers to be empowered in diversified livelihood sources to cushion their families against climate shocks on food security.

Discussions with the youth also supported some of the assertions made by the caregivers and FCP staff. There are reported cases of the youth where they indicate food rationing and the lack of dietary diversity in the meals that they consume. There are however not clear whether to attribute it to climate change effects but reported that is something they have noticed in recent times in their various households. Some of the youth interviewed in the Kumasi cluster had this to say: ***"Due to the climate change, food security becomes an issue for food crops such as yam becomes very expensive". "Sometimes the food we eat at home is measured, you cannot eat as much as you wish" "We do not get different varieties of food to eat, it is always one way. For instance only banku"***

In terms of nutrition, about 70% of the FCPs reported that climate change has a huge effect on the nutritional status of children based on the feedback they receive from the caregivers and children, as well as their personal observations. The incidence of poor nutrition was however highly reported in Northern (88%) and Eastern (98%) territory FCPs as compared to the two other territories. Central Western FCPs least reported the incidence of poor nutrition among children resulting from climate change and its associated effects. Given that the level of awareness of climate impact is very high among Central Western FCP staff, it is not surprising that about 41% of them report poor nutrition effects of climate change among the children. They might have had special programs to avert this effect to some extent. Though 41% is not a smaller proportion, it is a better reported incidence compared to 88%, 68% and 80% reported cases in the Northern, Southern and Eastern territories.

88%

Poor nutrition was reported at the Northern territory

Ironically, regarding reported cases of children going to bed hungry, there are more reported cases from Central Western (75%) FCPs compared to the other FCPs. Northern FCPs reported the least (48%) case of receiving reports of children going to bed hungry. These reported cases are still very high and they could signal the possibility of caregivers a threatening food insecurity problem among children. For the case of FCPs in the Central Western territory, it could be a case that though the number of times food consumed in day by some children may not be adequate (missing a night meal), the nutritional needs of that consumed may be adequate. With 64% or reported cases of children going to bed hungry across all the FCPs surveyed, 26% of them reported only single case, 19% reported 2 cases, 14%, three cases and 41% reported more than three incidence of such cases monthly (Figure 3.7)

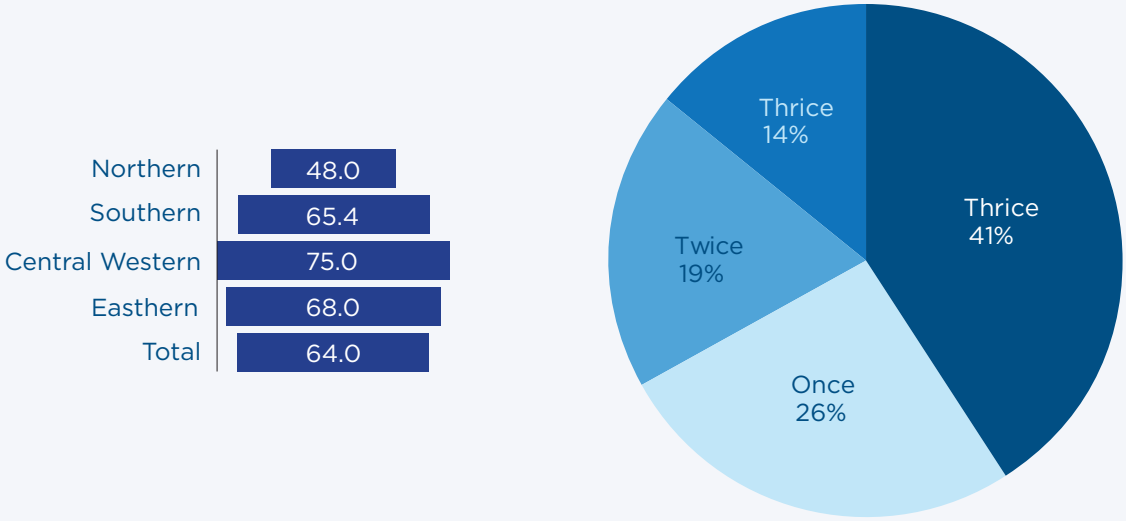


Figure 3.7: Proportion of FCPs with reported cases of children going to bed hungry and the frequency
Source: Field survey (2024)

Triangulating this feedback from the FCP staff with the caregivers, we find varying responses. Whilst some support that they have had incidences of their children going to bed hungry, others indicated that it is impossible for the children to go to bed hungry. The latter is not because there is enough food at home per se but that the caregivers were willing to rather go to bed hungry than their children going to bed hungry as supported by the following quotes. All these are coping strategies to ration food allocation in the household but points to the fact that the incidence of food insecurity is threatening among the households.

"one time there was not much food at home so what I prepared was not enough for the entire family. Because of that, I lied to my children that I ate in the market and so they can eat everything I cannot watch them go to bed hungry" (Caregivers FGD participant, Accra).

"I would not lie that my children have always gone to bed on a full stomach. Sometimes, when things are hard, we ration the food and eat in the afternoon, which carries them to the night and they sleep. It is not everyday, but it can happen" (Caregivers FGD participant, Asuogyaman)

Compassion International Ghana through its food assistance programme is also cushioning households to smoothen consumption towards lifting their food security status. In this climate induced effect era, it will be expedient on CIGH to expand this programme to reach more caregivers, as well as increase the diversity of food to meet the quantity and nutritional dimension of food security needs of these households. Whilst doing this, caregivers can also be empowered to diversify their livelihood sources to adapt to the likely consequence of climate change on their household food security and other welfare needs.

3.3.3 Health effect

3.3.3.1 Types of climate associated health effect

There are associated health effects of climate change that are reported to affect children among the FCP operating territories. Highest among the health effects reported among the FCPs are respiratory diseases (48.5%). Whilst the majority (72%) of FCPs in the Northern territory reported the incidence of respiratory diseases among the children because of the climatic conditions, only 24% of FCPs in the Southern territory indicated such incidence. These respiratory diseases are mostly attributed to long spells of dry and humid climatic conditions which has caused the accumulation of dust in the respiratory system of the children. There are even reported cases of asthma among the children as opined by this FGD participant: "It has caused a lot of respiratory diseases such as asthma among some of my friends" (Youth FGD, Anaji). A caregiver had this to say; ***"...and for some time now, whenever we take the children to the clinic, the doctors say they have some things in their lungs and that is all because of the dust they inhale during dry seasons" (Caregivers FGD, Accra).***

These all go to support the fact that climate related incidences have the potential of causing respiratory infections among both caregivers and children. There are also reported cases of water borne diseases among the children due to climate change. Close to 30% of the FCPs reported this instance, highly driven by FCPs in the Northern territory (56%) and the least reported cases are found in the Eastern territory (4%). The qualitative data obtained did not reveal much about water borne diseases across the clusters visited and so the 30% reported cases could be a true reflection on the ground, generally.

HEALTH EFFECTS	NORTHERN	SOUTHERN	CENTRAL WESTERN	EASTERN	TOTAL
Respiratory diseases	72.0	24.0	45.5	52.0	48.5
Water borne diseases	56.0	24.0	36.4	4.0	29.9
Mental health	12.0	8.0	13.0	4.0	9.3
Low participation in psychosocial activities	12.0	8.0	9.1	0.0	7.2
Recreational activities	12.0	34.6	16.7	48.0	28.0

Table 3.4: Observed climate-related health effects
Source: Field survey (2024)

An important aspect of health that is often neglected and least talked about is the mental health of individuals, especially children. In our study, we find some few (9.3%) reported cases of mental health among children resulting from changes in the weather conditions. Low participation in psychosocial activities, which is also linked to mental health was also reported in some FCPs. 7.2% of the FCP staff interviewed did report on that with no case reported among FCP staff in the Eastern territory. There are however relatively more cases reported by the FCP staff in the Northern (12%) and Central Western (9.1%) territories.

Eliciting further feedback from the youth and caregivers regarding the effect of climate change on their mental health, it is found that indeed there are some possible cases of mental health effect on the children. It may be subtle, but it is those overlooked tiny details which turn into big elephants in the room. There were reports of various dimensions of mental health among the children as listed in the embedded Figure. The caregivers also reported the same case of their mental health due to the consequences of climate change on food supply as this participant had this to say: "That thing called climate change does not only affect food but our entire lives. Look, I get BP thinking of what to do for the children, especially how to meet their daily needs" (Caregivers FGD, Accra). The cases of mental health were. There were also reports of children exhibiting mental health challenges as evidenced in this quote: ***"I saw my son sitting quietly, withdrawn from everyone. This was after he had seen the quantity and quality of food I had prepared for the entire family. I watched him and I became very sad myself. You could see he was overthinking the whole scenario" (Caregivers FGD, Accra)***

Dimensions of reported cases of mental health among children

3.3.3.2 Available support for youth and children's mental health

Structures put in place to support children's mental health at the various FCPs by Compassion International are commendable. Top on the list of mental health support provided for the beneficiaries are counselling services, which was reported by about 67% of FCPs visited, with the highest being the Northern territory (80%). The Southern territory recorded relatively the lowest (57.7%; which is still a statistical majority) response of FCPs providing counselling services for climate-induced mental health challenges in addition to their regular counselling services. In addition to regular counselling, faith-based guidance and support through sermons and ministrations are also reported as some of the support mechanisms FCPs provide for children and youth when they are distressed.

"Yes yes, they organize activities such as football for us and we really like it. Sometimes, they can also organize excursions sports for us, which we like a lot" (Youth FGD, Accra)

"Compassion does very well and with the excursions, we really feel happy for our children but what we would like to ask is why they don't take the caregivers to those trips, we want to also see things [she laughs]" (Caregivers FGD, Accra)

We also organize games and excursions for them when possible" (FCP KII, Adaklu-Agotime)

	NORTHERN	SOUTHERN	CENTRAL WESTERN	EASTERN	TOTAL
Counselling services	80.0	57.7	62.5	68.0	67.0
Support groups	24.0	3.8	8.3	8.0	11.0
Peer mentorship	8.0	19.2	12.5	20.0	15.0
Faith-based guidance and support	48.0	19.2	29.2	48.0	36.0
Recreational activities	12.0	34.6	16.7	48.0	28.0

Table 3.5: Types of mental health support for children
Source: Field survey (2024)

In addition to the two mentioned support mechanisms, organisation of recreational activities for the children/youth to participate is also one way the FCPs engage them to help them stay positive and strengthen their mental health. Positive feedback from some of the recreational activities were given by both the youth and caregivers of the study participants. The caregivers are very appreciative of the recreational activities planned for their children as they see it as a good way of exposing the children to learning about historical places with the excursion activities. For sports activities, they see it as a way of keeping them engaged as opposed to having too much free time which may tempt them into engaging in social vices. The sports activities are also ways of strengthening their physical and mental wellbeing. Some supporting quotes are found in the text box. For all the support mechanisms available there appear to be low response for support group and peer mentorship. There were reports of some level of mentorship going on but not peer to peer in structure. This could be a potential entry point for Compassion to design support that establishes peer mentorship and group support specific to climate change and its impacts. This will also allow the groups to become responsible climate advocates, as well as being and be each other's steward.

3.3.3 Other health related issues

Other health related reports from the events of climate change experienced by the children and youth are **headaches, malaria and skin diseases.** Excessive heat has been associated with headaches and migraines experienced by the children and youth, as reported by the youth, FCP staff and caregivers who participated in the study.

"The hot water causes a lot of headaches and migraines" (Asuogyaman Youth FGD)

Headaches and migraines in addition to the other climate-related health effects could also potentially affect other aspects of the lives of the youth and children, most especially on their school attendance and academic participation.

Skin diseases have been popularly mentioned among the study participants as one of the immediate health effects from climate change they have witnessed. This has been particularly associated with long spells of warm conditions. Warm weather conditions produce rashes on the skin of most children and youth and this causes skin irritation, which are reported to be very disturbing. One other related incidence is the incidence of malaria as the heat makes it uncomfortable for them to be in mosquito nets. Staying away from indoors to avoid the excessive heat and sleeping without mosquito nets exposes the children to mosquito bites. Mosquito bites come with skin irritations and malaria, which is a serious health consequence on the children.

"...and the weather gets so bad that the children get a lot of rashes on their skin because of heat" (FCP KII, Adaklu-Agotime)

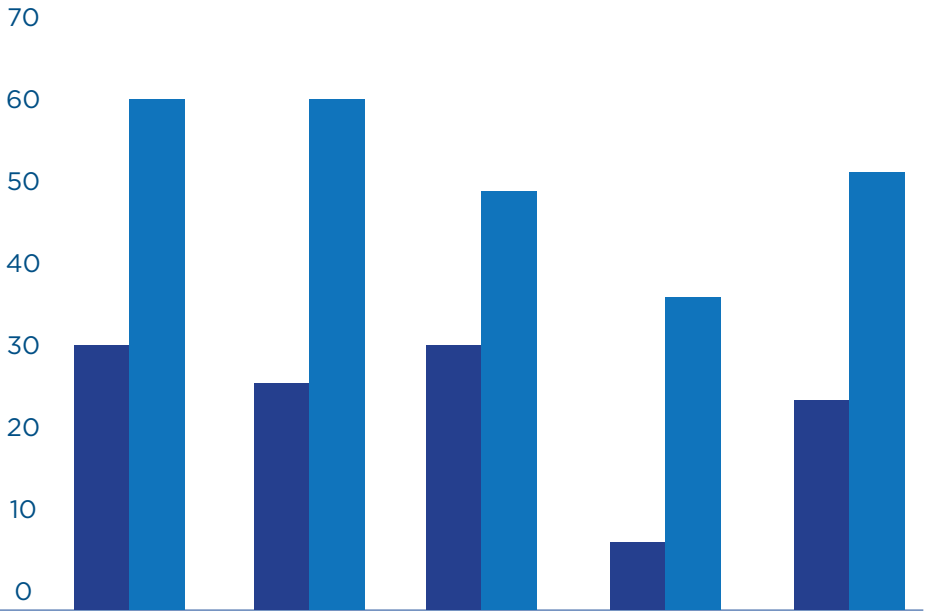
> *"Malaria also worries them a lot due to the mosquito bites during bad weather. They stay outdoors to get fresh air and that exposes the children to mosquitoes" (Caregivers FDG, Acraa).*

3.3.4 Education

Another important dimension of climate change's effect on children's social and economic outcomes is education. The study found various incidences and reports where the impact of climate change has potentially disrupted the education of children/youth in the study clusters. These effects are resulting from periods of excessive heat to periods of heavy rains. The effects are in two dimensions; i) poor access to educational facilities and ii) low school attendance.

Low school attendance

Interviews with study participants reveal that low school attendance is the most reported effect of climate change on children's education. More than 50% of the respondents across the study areas stated the low school attendance as the main effect of climate impacts, compared to about 24% reporting poor access to educational facilities.



	NORTHERN	SOUTHERN	CENTRAL WESTERN	EASTERN	TOTAL
Poor access to educational facilities	32	24	31.8	8	23.7
Low school attendance	60	60	5.0	40	52.6

Figure 3.8: Effect of climate change on children's education
Source: Field survey (2024)

The proportion of FCPs reporting low school attendance of the children due to climate-induced impact are highest in the Northern (60%), Southern (60%) and to some extent, Central Western (50%) territories, as compared to the Eastern territory (40%). Triangulation with the qualitative data also supports the quantitative results obtained. School attendances are reported to be heavily affected by climate change events, especially rains. Given that none of the children are being driven to school by their caregivers, nor go with the school bus, the occurrence of heavy

rains totally disrupts their school attendance. Attempting to attend school amid the rains may either get them soaked in rains which may render their class participation difficult when they eventually get to school.

CHILDREN AND CAREGIVERS PERSPECTIVE ON CLIMATE IMPACT ON SCHOOL ATTENDANCE

"The irregular and heavy rains affect our school attendance" (Asuogyaman Youth FGD)

"During hot weather, some of the teachers do not come to class as well as students become uncomfortable in class and affects concentration levels" (Asuogyaman Youth FGD)

"Yeah it did affect my friends and I because even in the classroom, we found it diffficult to concentrate because of the heat" (Accra Youth FGD)

In June and July it gets flooded in this community, therefore the students cannot go to school. (Kumasi Youth FGD)

"We know school is important but when it rains, we need to secure their safety first. So is it means they missing school, then they would" (Caregivers FGD, Accra)

Figure 3.9: supporting quotes from caregivers and youth on the effect of climate change on school attendance
Source: Field survey (2024)

Second and most important reason why they avoid school during the heavy rains is for their safety and protection. Caregivers made it clear that they have advised their children to stay wherever they will be when it begins to rain heavily. Therefore, once they are home before the onset of heavy rains, they remain home and when they are on the school premises, they are made to remain there until the rains have significantly subsided. Rains are not the only climate event that affect school attendance and participation. Excessive heat has also been reported to affect school attendance and even the active participation in academic activities during sessions. As can be noted in the quotes provided from the youth and caregivers, warm climatic conditions disrupt academic participation for both the students and teachers. There are reports where the teachers stay out of the classroom due to the uncomfortable weather conditions. The children are also unable to concentrate due to extremely warm climatic conditions. These have repercussions on their overall academic performance and hence adaptation strategies should be developed for these children to cope with such climate-induced events.

These strategies could include the provision of cooling conditions such as planting more trees to allow fresh air flow to the classrooms and installation of cooling fans in the classrooms where feasible.

Poor access to educational facilities

In addition to the low school attendance impact of climate change events, there are also incidences where accessing educational facilities becomes a hurdle due to the weather conditions. Though this effect was least reported compared to the low school attendance, about 24% of the FCPs (Figure 3.8) interviewed highlighted this. There are however more reports of poor access to educational facilities in the Northern (32%) and Central Western (32%) territories as compared to the Southern and Eastern territories. Further probes with the participants which are found in the text box reveal that there have been the following incidences causing access to school facilities poor:

- The roof of school buildings being ripped off, rendering accessing academic facilities challenging and even risky;
- Aside the roofs of school structures ripping off, there are also reports of parts of school buildings caving in when there are heavy storms;
- There are also cases where roads become inaccessible when there is heavy downpour. This may either be due to a fallen tree in the middle of the accessible road to school, a heavily eroded path or a broken-down bridge.

"The school buildings that are weak break down. I saw it in the news and it happened in the Volta Region. Anaji Estate Primary school had its roofing sheets come off when it rained heavily some time ago. The staff common room of Anaji Anglican school also got destroyed by heavy rains" (Youth FGD, Anaji).

"We have not experienced it in this school, but we have seen on the TV is that school buildings get destroyed during heavy rains. When that happens, the students are unable to go to school. For me, I will be even scared to sit under such structures until they are fixed" (Youth FGD, Accra).

"Some of the community bridges that link the roads to school get destroyed during heavy rains and so some children don't go to school" (FCP KII, Adaklu-Agotime).

*"Floods led to a halt in school days for some weeks"
" (Caregivers FGD, Asuogyaman)*

All these incidents do have an impact on children's education. Poor access to educational facilities leads to low school attendance and low school attendance will further imply missing a number of lessons. The quality of education that children are supposed to receive are therefore in jeopardy with the climate-related incidents causing access to education challenging. This has not only been observed in this study but previous studies have also reported the displacement and low attendance impact of climate change on children's education. A study by UNESCO (2019) found that climate-induced displacement affects millions of children annually, leading to prolonged absences from school. Displacement disrupts the educational continuity and emotional stability of children, making it harder for them to return to school. Muttarak and Lutz (2020) also highlight that extreme weather events damage school infrastructure, leading to temporary or permanent school closures. This physical damage to educational facilities directly interrupts children's learning processes.

Climate-induced displacement affects millions of children annually, leading to prolonged absences from school.

3.3.5 Other effects

Migration

Some reported cases of migration due to climate change impact are also evident, though not highly reported, with about 30% of the FCPs interviewed indicating there has been climate-induced migration among the youth. This is however prevalent in the Northern territory (Kumasi and Sunyani), compared to the other territories. With 48% of the Northern territory FCPs reporting this effect, only 16% reported cases are found in the Southern territory.

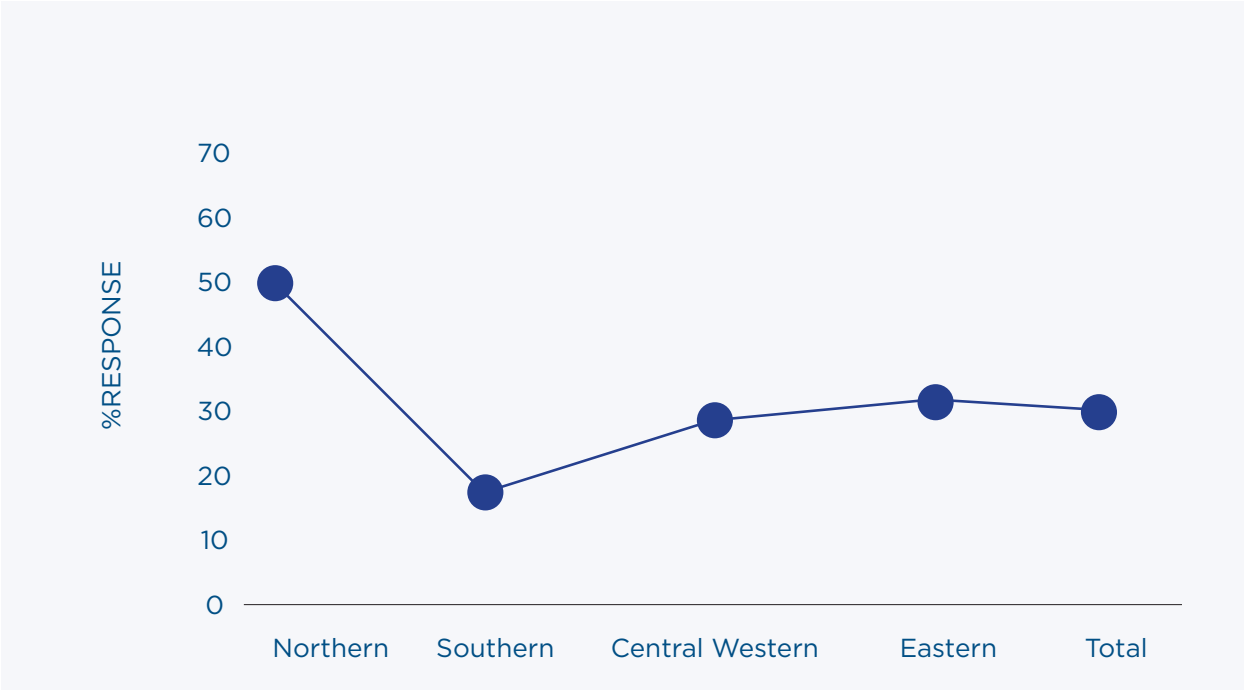


Figure: Proportion of FCPs reporting cases of climate-induced migration
Source: Field survey (2024

This is probably due to the South (especially Accra) being a major out-migration destination for most youth. When agricultural activities are badly affected by climate impacts, coupled with the seasonality of agricultural labour, youth tend to migrate to find other livelihood sources. For any intervention targeted at curbing migration of youth in these areas, focus should be directed at diversifying their livelihood sources, creating attractive incentives in their communities-incentives that get them committed to building their communities (community stewards). Given youth in the Northern territory is prone to migration, more targeted interventions should be designed to reduce the incidence of migration among youth due to climate impacts on livelihood sources.

Labour exploitation

There are also some reported cases of labour exploitation of children due to climate-induced impact, particularly water scarcity. Though this challenge was not highly reported among the FCPs, we record about 24% of reported cases across our study participants, with the highest cases reported among 36% of FCPs in Central Western territory. The Eastern territory recorded the least number of reported cases by about 12% of the study participants.

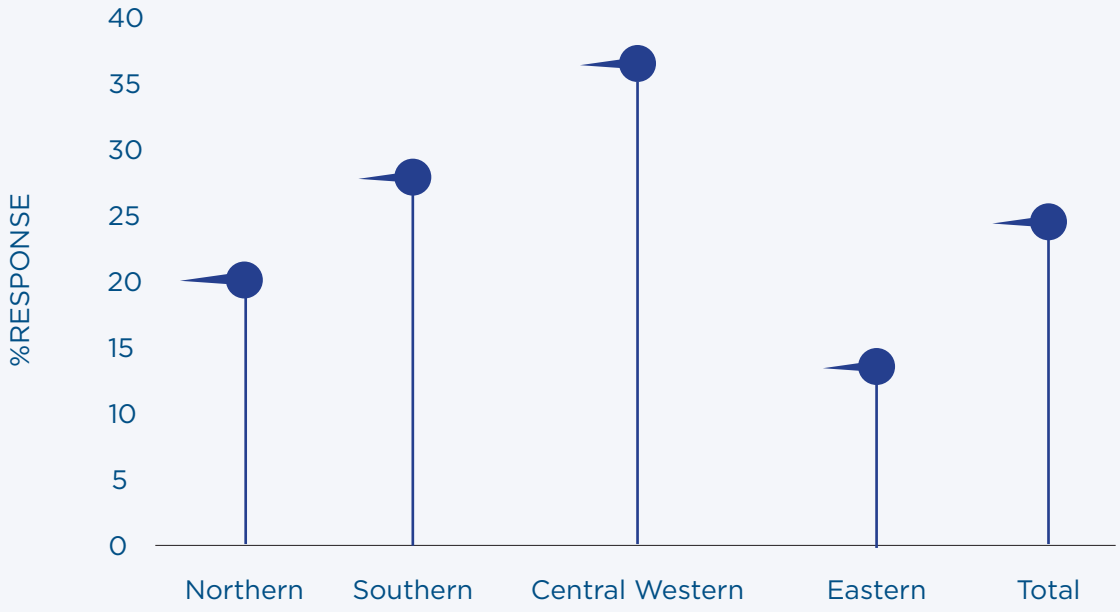


Figure 3.9: proportion of FCPs reporting climate-induced labour exploitation
Source: Field survey (2024

The reported cases of labour exploitation are mainly associated with water scarcity which forces children to either delay attending school in search of water for household use. Some participants had this to say: ***"Yes, sometimes when water becomes very scarce in the community, the people rely on the stream which is a bit far from home. The children are made to help us fetch water and this may cause them to miss school or arrive at school late" (KII FCP, Adaklu-Agotime)***

This suggests that children are either intentionally or unintentionally exploited as an adaptation to the climate impact on water availability for household use.

3.4 Vulnerability of Communities to Climate Change

3.4.1 Livelihood strategies of caregivers

Livelihood strategies, as depicted in this study, relates to employment opportunities, reliance on ecosystem services and opportunities for alternative income generating activities caregivers typically engage in to reduce their vulnerability to climate and climate induced impacts, from the informed perspectives of FCPs.

The dominant employment type in the communities of the FCPs, was recorded to be agriculture engaging a third of the respondents. While trade and commerce employ relatively similar proportions. Further significant employment avenues included the private sector and other specified livelihood activities such as "okada" or taxi diving, artisanal work or mining. The percentage of unemployment was also reported to less than a tenth (Figure 3.10). Generally, the FCPs reported that members of their communities had alternative sources of income, as over 70% indicated that they are engaged in secondary employment activities. This indicates some level of diversity in employment opportunities since caregivers across different territories are often engaged in a secondary employment. The results further corroborate this explanation as 61% of the FCPs indicate that livelihood strategies in their communities are somewhat diversified, 5% indicating that they are very diversified, while the remaining third answered that livelihood strategies in their communities are not diversified.

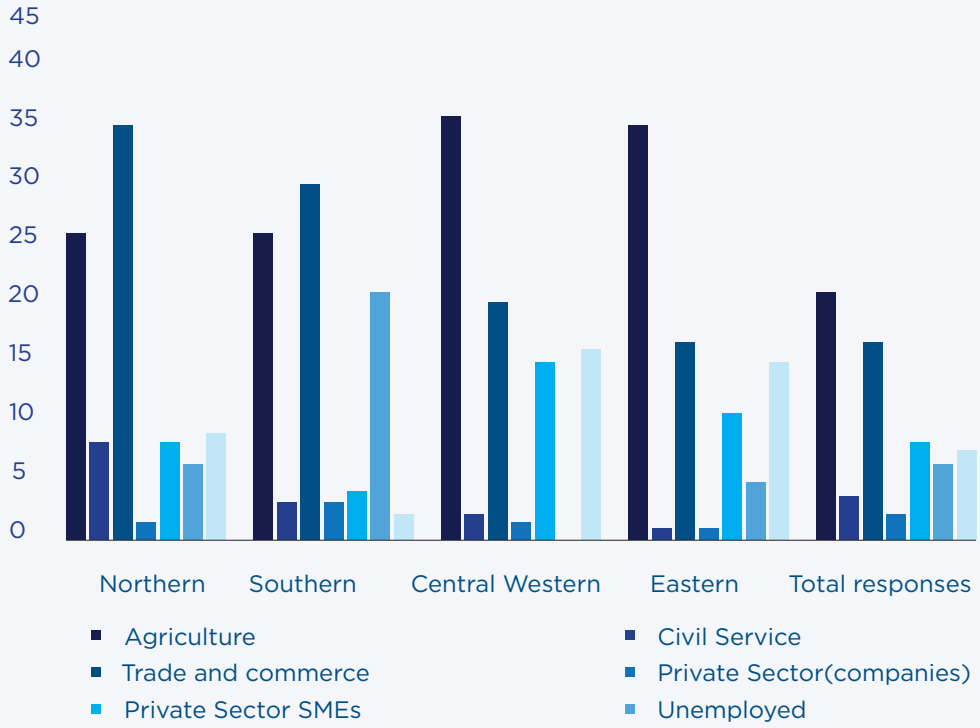


Figure 3.10: Main occupation of caregivers in the FCP territories (% of responses)
Source: Field survey (2024)

Among the employed, the FCPs reveal that agriculture, trade and commerce are the dominant employment avenues for communities in the territories. Averagely, 33% and 28% of the responses were noted for agriculture and trade/commerce respectively. While agriculture is perceived to employ the highest in the Central-Western and Eastern territories (< 35%), trade and commerce also employs the highest proportions in the Northern and Southern territories. Further, other significant employment opportunities specified by FCPs include artisanry, taxi and "okada" driving, mining and kente weaving. Especially in the Eastern region, the other specified employment opportunities form almost a quarter of the main types of employment opportunities. The small and medium scale private sector accounts for 12% of the general perceived employment. With its highest proportions observed in the Central-Western (16%) and Eastern territory (13%), while the lowest proportions of employment in the small and medium scale private sector are recorded as 9% in the Northern territory and 7% in the Southern territory. Conversely, employment opportunities in the corporate private sector and civil service were recorded at an average of 3% and 5% respectively.

The study further shows that livelihood opportunities were largely somewhat diversified. That is, the FCPs observe that there is some bit of variation in the types of livelihood opportunities available to the economically active population in the territories. It indicates that the jobs available predominantly fall within a limited range of types or sectors. This suggests that individuals in the territories may have just a little varied options compared to a scenario where opportunities are very limited, but the range of choices may not cover a wide spectrum of sectors or skill levels.

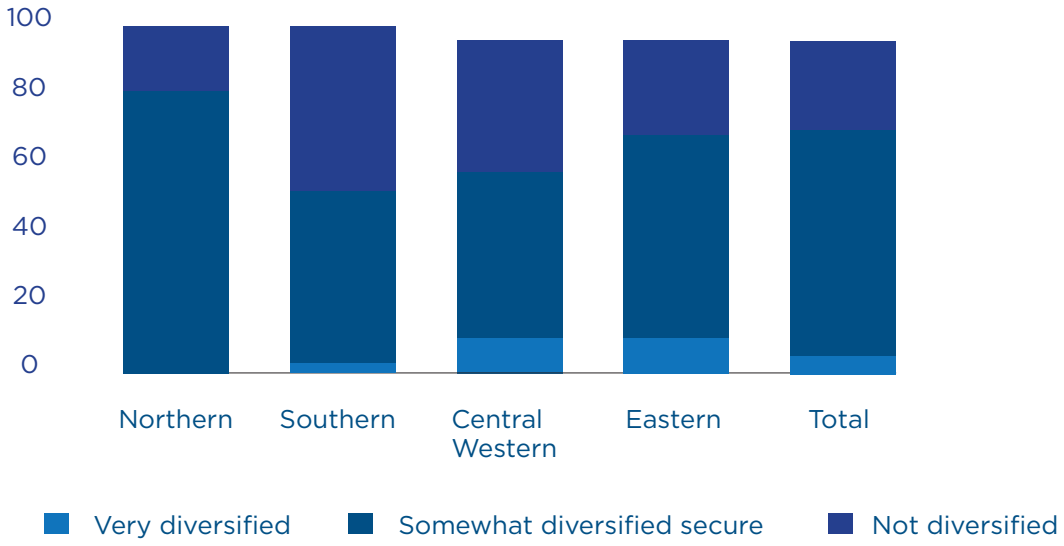


Figure 3.11: Perception of how diversified livelihood strategies in the territories are
Source: Field survey (2024)

Furthermore, FCPs generally perceive that there are low rates of unemployment, at 9% among the adults in the communities of their operations (Figure 3.12). Relatively less than Ghana's national unemployment rate 14.7%, according to the first three quarters survey of household's income and expenditure by the Ghana Statistical Service in 2023. Nonetheless, unemployment was shown to be highest in the Southern territories (Greater Accra and Volta regions) at 22%. Moreover, the study assessed FCPs perception of if residents in their communities across territories typically engage in secondary employment or significantly depend on ecosystem services for income, food or livelihood resources. Alternative or secondary livelihood opportunities enhance the adaptive capacity of people by diversifying income sources, thereby reducing vulnerability to climate shocks (Mohammed et. al., 2021).

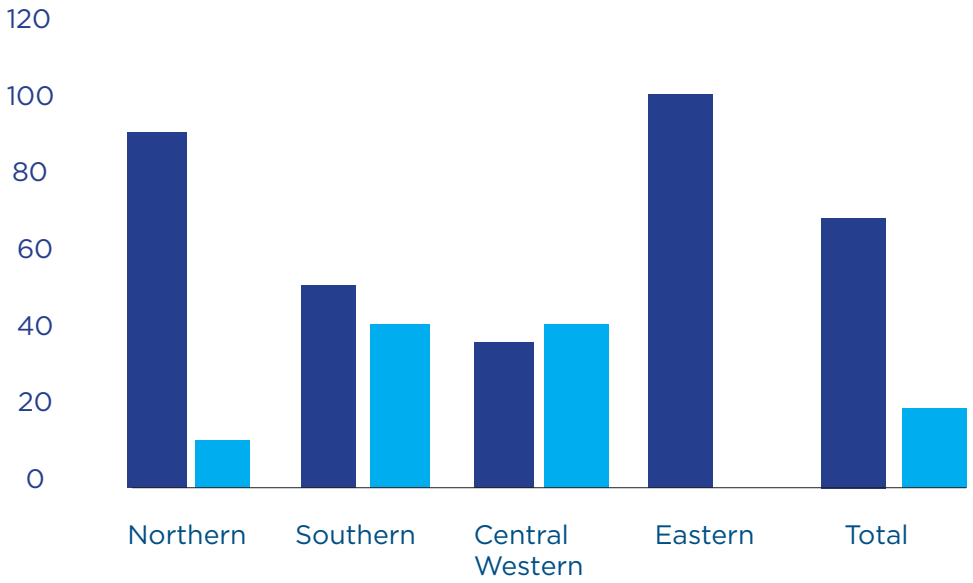


Figure 3.12: Secondary Employment of caregivers in the territories
Source: Field survey (2024)

3.4.2 Dependence of ecosystem services

Ecosystems services are the benefits that humans derive from natural capital resources. Ghana's diverse ecosystem ranges from coastal mangroves, tropical rainforests to savannas and wetlands. These resource areas provide a multitude of direct and indirect services such as food, water resources, medicine, fuelwood, reed and other resources that are essential for daily living and economic activities.

The results show that ecosystem services are very crucial for communities in the FCP communities. Less than a fifth of FCPs answered that their communities do not depend on ecosystem services. The remaining 84%, largely indicate that communities very often depend on ecosystem services for livelihood (Figure 3.13), indicating the significance of ecosystem services for livelihood sustenance.

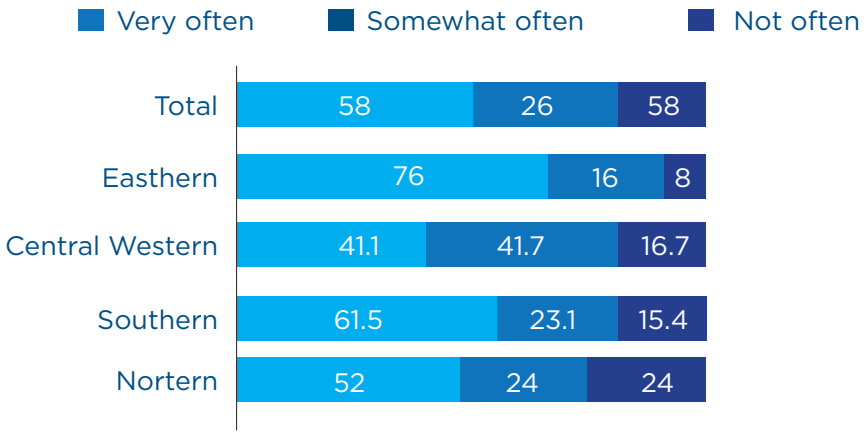


Figure 3.13: Dependence on ecosystem services
Source: Field survey (2024)

In the Northern territory, ecosystem services in the Kumasi and Sunyani clusters include food, water, game, medicine, fuelwood and earth minerals from the tropical rainforests, mines and rivers. Similarly for the Eastern territory with Kwahu and Asuogyaman clusters, ecosystem services include food, water, game, medicine and fuelwood from the River Volta and surrounding semi-deciduous forests. In Central-Western and Southern territories with the Cape Coast and Sekondi-Takoradi clusters and Accra South-East, North and Adaklu-Agotime clusters respectively, ecosystem services typically relate to food, fresh water, fuelwood, reed harvesting from mangroves, wetlands and the coast. According to Duku et. al., (2022) while assessing the wetland ecosystem services and human wellbeing nexus in the Keta Lagoon Complex Ramsar Site, observed that majority of the respondents identified fuelwood, including firewood and charcoal, as their primary cooking fuel. Farming and fishing were the predominant occupations among respondents. Additionally, many relied on regulated groundwater aquifers for their main source of drinking water.

The results reveal that caregivers in the FCP clusters and territories, depend on ecosystem services for food, fresh water, reed, game, medicine and income The dependence on ecosystem services was observed to be highest in the Eastern territories.

3.4.2 Multidimensional Vulnerability Index (MVI)

The MVI provides a comprehensive assessment of the vulnerabilities across different territories, considering four critical dimensions: Living Standards, Health and Disaster, Social Infrastructure and Adaptation Strategies, and Education (both General and Climate-related). The overall MVI scores reflect the cumulative vulnerabilities, offering a clear picture of where each territory stands. Summary of the MVI analysis is presented in Table 3.6.

NAME OF TERRITORY	LIVING STANDARDS	HEALTH AND DISASTER	SOCIAL INFRASTRUCTURE AND ADAPTATION STRATEGIES	EDUCATION (GENERAL & CLIMATE RELATED EDUCATION)	OVERALL
	0.51	0.55	0.70	0.42	0.54
Northern	0.25	0.29	0.42	0.28	0.31
Southern	0.38	0.45	0.70	0.01	0.39
Central-Western	0.49	0.55	0.82	0.49	0.59
Eastern	0.41	0.46	0.66	0.30	0.46
Overall					

Score: 0 – Lowest level of vulnerability; 1 - Highest level of vulnerability

Table 3.6: Indication of MVI scores across dimensions and Territories
Source: Authors' computations Field survey (2024)

Northern Territory

The Northern territory has an overall MVI of 0.54, indicating a moderate level of vulnerability. The highest vulnerability is seen in Social Infrastructure and Adaptation Strategies (0.70), suggesting significant weaknesses in infrastructure and the capacity to adapt to changing conditions. Health and Disaster also present notable challenges with a score of 0.55, pointing to issues in healthcare, disaster preparedness and incidence of extreme events. Living Standards and Education, scoring 0.51 and 0.42 respectively, show moderate vulnerabilities, suggesting some deficiencies in quality of life and educational infrastructure. The Northern territory's high MVI score of 0.54 can be largely attributed to significant deficiencies in social infrastructure and adaptation strategies. The territory struggles with widespread issues in resource availability. The absence of adequate food and water security projects according to the FCPs, coupled with insufficient environmental conservation activities and community engagement, underscores the territory's heightened vulnerability. These factors contribute to its overall high MVI, highlighting the need for improved infrastructure and FCP led community-based initiatives to mitigate these challenges.

Southern Territory

The Southern territory, with an overall MVI of 0.31, is the least vulnerable among the territories analysed. It exhibits relatively low vulnerabilities across all dimensions, with the highest score being 0.42 in Social Infrastructure and Adaptation Strategies. This indicates that while there are

some areas needing improvement, the Southern territory is comparatively well-equipped in terms of living standards, healthcare, disaster preparedness, and education. The lower scores in Living Standards (0.25), Health and Disaster (0.29), and Education (0.28) reflect a generally higher resilience and better quality of life. The Southern territory, with the lowest MVI score of 0.31, reflects relatively better conditions in social infrastructure and adaptation strategies. While there are still areas needing improvement, such as the availability of food and water security projects and community engagement initiatives, the territory generally has better resource availability and more comprehensive health and wellness programs. These strengths contribute to its lower overall vulnerability, making the Southern territory more resilient compared to the other regions. The lower MVI score underscores the territory's relatively strong infrastructure and adaptive capacity.

Central-Western Territory

The Central-Western territory has an overall MVI of 0.39, reflecting moderate vulnerability. The dimension of Social Infrastructure and FCP Adaptation Strategies, however, shows the highest vulnerability at 0.70 in the territory. Indicating substantial deficiencies in infrastructure and adaptation measures. Health and Disaster also present challenges with a score of 0.45. The least vulnerable dimension is in Education, which scores an extremely low vulnerability of 0.01, highlighting increased existence of educational infrastructure and resources, through sensitisation workshops organised by FCPs. Living Standards, with a score of 0.38, suggest moderate vulnerability. This was influenced as well by the perceived levels of unemployment according to the FCPs.

Eastern Territory

The Eastern territory is the most vulnerable with an overall MVI of 0.59. The highest vulnerability is in the Health and Disaster dimension (0.82), indicating significant challenges in social infrastructure, disaster preparedness and incidence of extreme events. The Health and Disaster dimension also shows high vulnerability at 0.55, pointing to weaknesses in infrastructure and adaptation capacity. Both Living Standards and Education have moderate vulnerabilities, scoring 0.49 each, suggesting areas needing improvement in quality of life and educational provisions.

The territory is severely lacking in critical areas such as food and water security, health and wellness initiatives, environmental conservation, and community engagement. The complete absence of certain infrastructure and programs, such as rainwater harvesting and youth climate clubs, highlights the territory's extreme vulnerability. These widespread deficiencies are directly reflected in its high MVI score, emphasising the urgent need for comprehensive development efforts to build resilience and reduce vulnerability.

The **Eastern territory** is the most **vulnerable** with an overall MVI of 0.59

The results show that Northern and Eastern territories exhibit significant challenges in resource availability and community initiatives, leading to higher MVI scores. The Central-Western territory also faces notable deficiencies, though to a slightly lesser extent. In contrast, the Southern territory's relatively better infrastructure and adaptive capacity are reflected in its lower MVI score.

Generally, the results showed that the social infrastructure and adaptation strategies dimension was the most vulnerable across all the territories of study, with an index of 0.66. While the education dimension is revealed to be the least vulnerable dimension. This suggests a significant gap in communal infrastructure and effective strategies to adapt to climate change impacts in these communities.

The dimensions on livelihood standards and health and disaster are observed to be mildly vulnerable. This shows that FCPs experience that the communities they work in are sufficiently resilient in livelihood and health and disaster needs. That is, there are some challenges, these communities generally have adequate resilience in terms of their livelihood conditions and their ability to handle health-related issues and disasters. Research has shown that resilience in livelihood and health significantly reduces community vulnerability. Strengthening these areas helps communities better withstand and recover from adverse conditions, contributing to overall stability and development (Sanusi et. al., 2024)

Whereas activities such as communal sensitization workshops, community engagements and other educational facilities such as schools, are shown to be the least vulnerable. Despite the education dimension being the least vulnerable, it presents a valuable opportunity for NGOs to leverage educational platforms for awareness and capacity building. Schools and other educational fora can be effectively utilised to integrate climate change education into curriculums, raising awareness among students from an early age.

Compassion Ghana and other stakeholders can use these insights to prioritise and implement targeted interventions to address the specific needs of each territory, thereby enhancing overall resilience and reducing vulnerabilities.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04 Climate Adaptation and Mitigation Strategies by FCPs

4.1 Introduction

This Chapter presents findings on the various climate adaptation and mitigation strategies that are being implemented by the sampled FCPs. This is to understand what is already existing and what can be done to build and strengthen such actions. It also presents findings on some local collaborative efforts that are being taken at the FCP level towards climate-related actions.

4.2 FCP Level Climate Adaptation and Mitigation Strategies

The study evaluates the level of FCP climate adaptation and mitigation strategies by observing if FCPs have specific activities or programs related to climate adaptation and mitigation, the types of programs run and mode of and perceived impacts. Almost two thirds (63%) of the FCPs note that they operate specific programs or initiatives aimed at addressing climate impact issues (Figure 4.1). FCPs without such specific activities explained that this was due to an array of reasons. Chief among them include the lack of financing resources, lack of awareness by the FCP, lack of attention by the cluster towards climate issues and the lack of specific direction to focus on climate change from their PFs.

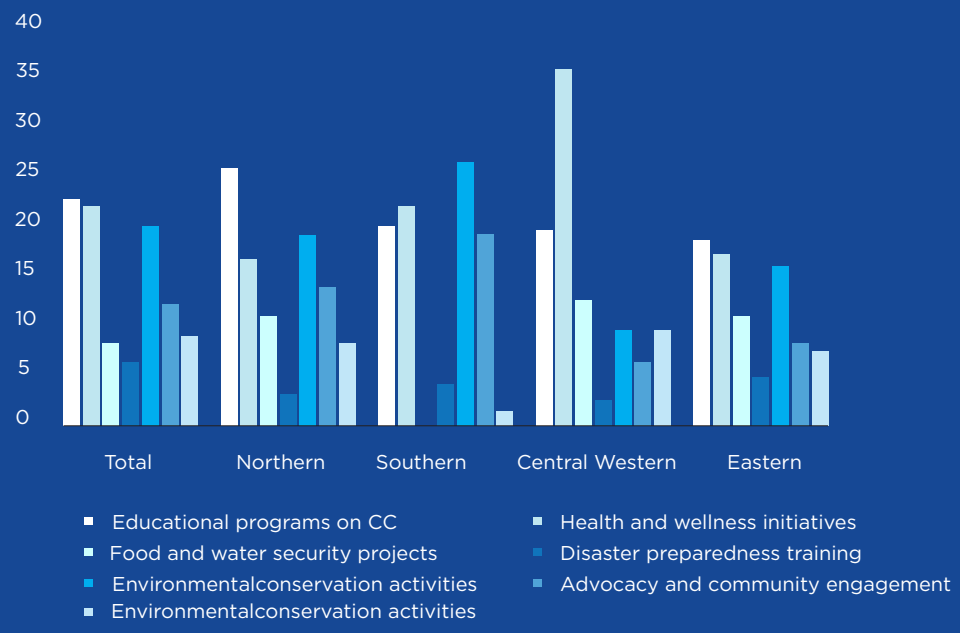


Figure 4.1: Proportion (%) of FCPs with different climate-related activities
Source: Field survey (2024)

For FCPs that have specific activities or programs related to climate adaptation and mitigation, the types of programs run include educational programs in climate change, which is the highest form of implemented strategy, followed by health and wellness initiatives and environmental conservation activities. The results also show that strategies on disaster preparedness and training and other specified adaptation options such as the provision of financial support and agricultural support, were the least implemented strategies, operated at 5% and 8% of the time, respectively (Figure 4.1).

Strategies on educational programmes pertain to sensitization campaigns, community engagement and education activities for beneficiaries. Health and wellness initiatives include health campaigns, communal health screening, payment of health bills, etc. Health and wellness strategies and educational activities were revealed to be the most implemented strategies. While food and water security projects pertaining to empowering caregivers who are farmers with inputs, training opportunities, soft grants and other agricultural initiatives and disaster preparedness training are among the least implemented strategies particularly in Southern territories. Particularly for disaster preparedness training strategies, this was not mentioned more than 5% averagely, across all FCPs. Indicating the lack of focus in preparing beneficiaries and the community at large for emergency preparedness measures. Although this is also explained by the sporadic occurrence of extreme weather events as indicated by the FCPs. Hence demoting such strategies to the lowest priority.

A breakdown of the activities or strategies of FCPs at the territory levels follows.

Northern Territory

The clusters in the Northern territory, Kumasi and Sunyani, reported varying rates of activities implementation. In the Kumasi cluster, 85% of the FCPs note that they have specific activities related to climate impact adaptation and mitigation while half of FCPs in the Sunyani cluster admitted the same. The FCPs without activities relating to climate impact explained that they lacked knowledge of such activities. Whiles others cited funding and resource constraints. Few of the FCPs nonetheless opined that specific climate related activities are not being implemented because, the effect of climate change is very low in their communities.

"The effects are very low. So, the issues are being addressed as and when they come" – FCP, Kumasi

"There haven't been any concerns on climate change or awareness" – FCP Sunyani

The low level of climate streamlining into specific activities of the FCPs speak to the lack of proper understanding of the direct and indirect impacts of climate change by the FCPs. However, for FCPs that affirmed that their areas run such programmes mentioned that climate related activities are largely down through four frameworks – educational programmes on climate change, health and wellness interventions, food and water security projects, environmental conservation activities and advocacy and community engagement. Among these, the results show that the educational programmes on climate change, environmental conservation activities and health and wellness interventions are the top three strategies through which climate adaptation and mitigation actions are undertaken. Accounting for over 70% of all responses.

Southern Territory

In the Southern territory as well, while less than half of the FCPs in the Adaklu-Agotime and the Accra South-East noted that they implement climate impact related activities, all the two FCPs in the Accra Northern cluster indicated that they do implement climate impact related activities. The FCPs explained that the low implementation of climate impact related activities was mainly as a result of low knowledge, lack of attention, and the lack of clear direction or mandate from the PF on such matters. One FCP in Adaklu-Agotime added that climate action was beyond their control, implying a low input perceived role of the FCP in effective climate change.

"Most of the climate change problems affecting the community is beyond our control, because it takes the landowners and the district assembly to stop the gravel winding at the community" – FCP, Adaklu-Agotime

Further, the FCP explained the mode through which their climate impact activities are implemented. They identified that the main adaptation strategies employed by order of occurrence include environmental conservation activities, health and wellness interventions, educational programmes on climate change and advocacy and community engagement. There was very little mention of food and water security projects. Although one FCP indicated that, there had been an instance whereby an Agriculture extension agent was invited to educate caregivers who are farmers. Aside from these, other prominent activities with the aim of improving the adaptive capacity of caregivers include providing them with soft grants and alternative livelihood training.

Central-Western Territory

For Central-Western territory, while over half of the FCPs in Cape Coast cluster noted that they do implement activities related to climate impacts on mitigation and adaptation, less than half of the same responses were recorded for the Sekondi-Takoradi cluster. Health and wellness initiatives remained the largest climate impact activities conducted in both clusters of the Central-Western territory. This entailed annual or bi-annual health screening campaigns and contributions towards the full or partial payments of medical expenses.

During the interview, several health-related activities and concerns were highlighted by the participants in Anaji town, of the Sekondi-Takoradi cluster. The primary health issue discussed was the proliferation of mosquitoes due to flooding and stagnant water in poorly managed gutters, leading to diseases such as malaria and skin rashes. Participants noted that the heat during dry spells also exacerbates skin conditions. Furthermore, there were reports of general unhygienic conditions, including inadequate waste disposal and the lack of proper drainage systems, which contribute to the spread of diseases. Some FCPs have attempted to address these issues by seeking assistance from local authorities and participating in educational sessions about hygiene and disaster preparedness, though attendance has been limited. The community has a health centre, but the inadequate infrastructure and lack of financial resources continue to hinder significant improvements in public health.

Participating in educational sessions about hygiene and disaster preparedness, though attendance has been limited.

The FCPs in this territory further noted that, they sometimes engage the communities and caregivers in communal waste and environmental conservation activities, organise sensitization workshops for the caregivers and the community, as well as provide livelihood support through trainings alternative income generating ventures or support through grants in their farming or retail occupations.

Figure 4.2 illustrates the comprehensive approaches to climate change adaptation and mitigation prominent in the Sekondi-Takoradi cluster of the Central-Western territory. The strategies largely involved waste management, water resource management, health interventions, community engagement, infrastructure development, and financial planning. Community engagement and awareness campaigns are key, indicating the importance of involving local populations in climate action and raising awareness. Infrastructure development, including sanitation facilities such as public toilets were noted as essential needs for enhancing resilience against climate impacts.

Figure 4.2: Word cloud of activities of FCPs in Sekondi-Takoradi Cluster, Central-Western territory
Source: Field survey (2024)

Financial support and planning are crucial for the successful implementation of these activities. Waste and disposal are significant, highlighting concerns around proper waste management as a crucial aspect of mitigating climate change effects. Water management and drainage improvements are also prominent, pointing to needs for infrastructure in managing water resources and infrastructure to prevent flooding and other water-related issues. Mosquito control, sanitation, and health initiatives are noted, reflecting actions taken to address health risks exacerbated by climate change.

Eastern Territory

Moreover, in the Eastern territory, the study reveals relatively, the highest responses of the FCPs confirming the implementation of climate adaptation and mitigation strategies. Majority, more than 80% of the FCPs in both Asuogyaman and Kwahu clusters affirmed this. The results show that the territory performs activities related to educational programmes on climate change, health and wellness interventions, food and water security projects, environmental conservation activities and advocacy and community engagement. Activities on disaster preparedness were reported at the least. The study in an engagement with youth beneficiaries observed that, the youth perceive that FCPs largely engage themselves, caregivers and the larger community through four main areas;

- Support and Training: A significant focus is placed on providing support and training to enhance the capacity and awareness of individuals and communities regarding climate change. Training programs aim to equip people with the skills and knowledge necessary to address climate-related challenges effectively.
-
- Waste and water Management: Proper waste disposal and water management are crucial elements of climate adaptation and mitigation efforts. Activities include organising campaigns to promote better waste management practices, implementing waste segregation, and improving waste disposal systems to minimise environmental impact. As well, efforts towards improving drainage systems, harvesting rainwater during heavy rains, and storing harvested water to mitigate the effects of prolonged dry periods were discussed.

- Health and Sanitation: Health interventions focus on controlling diseases such as malaria through mosquito control measures and promoting sanitation to prevent illness. Public health campaigns raise awareness about hygiene and clean environments, contributing to overall community well-being.

- Community Engagement: Community involvement is a key aspect of climate adaptation and mitigation. Activities include tree planting to prevent soil erosion, community clean-up campaigns, and public education initiatives. Engaging communities helps build resilience and encourages collective action against climate change.

The FCPs also occasionally conduct training on fish farming and mushroom production as a livelihood strategy to increase resilience. However, they are sometimes constrained with funding, but primarily, expertise to engage on a wider scope to improve their clusters' resilience.

4.3 Collaborative Strategies

For faith-based organisations such as Compassion International-Ghana, collaborating with local stakeholders is a crucial strategy to enhance aid program effectiveness and sustainability. By leveraging the expertise and knowledge of local actors, FCPs can design and implement programs that are more likely to succeed as involving local stakeholders fosters trust and buy-in from the community, increasing participation and support for the initiatives (Azmat, 2019). Also, partnerships with other nonprofits can also prevent the duplication of efforts, allowing organisations to complement each other's strengths and address gaps more effectively (Chowdhury et. al., 2019). Such multi-stakeholder collaboration ensures a more holistic

approach to development, pooling resources and knowledge to tackle complex challenges in a more coordinated and impactful manner.

As such, the study assessed from PFs the forms and strategies of collaboration their territories engage in. The results show that generally, less than half of the FCPs perceive that their clusters collaborate with local or international actors to address climate change impacts on children and youth (Figure 4.3).

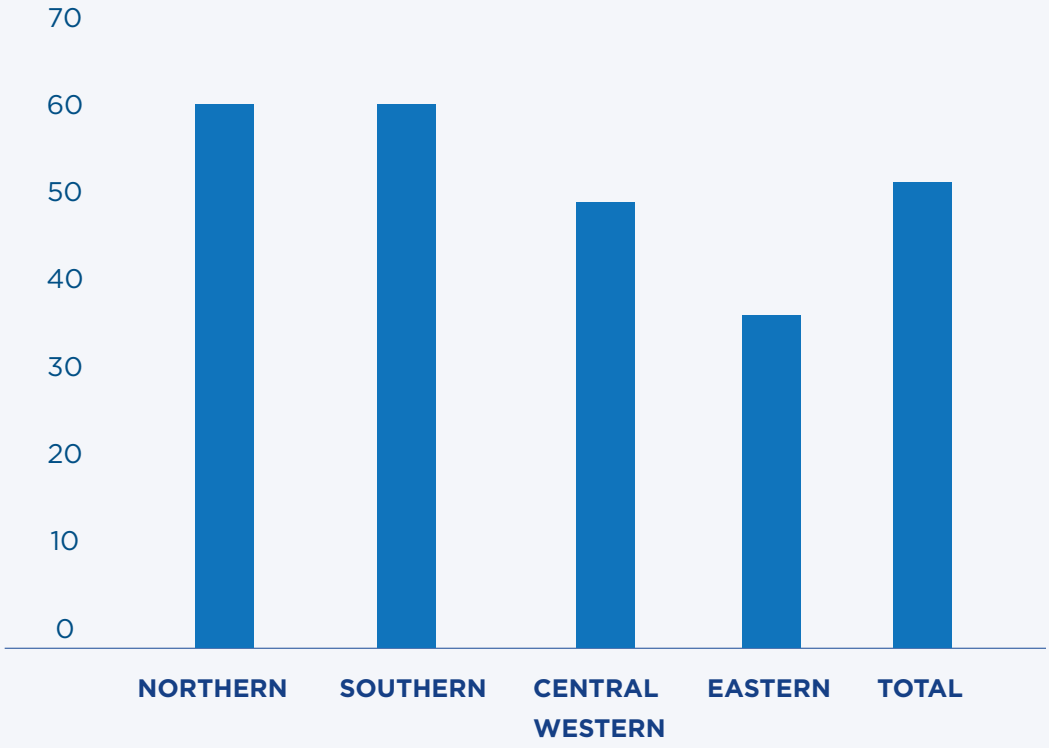


Figure 4.3: Proportions of FCPs collaborating with local institutions
Source: Field survey (2024)

Initiative to promote tree planting...

Green Ghana Day

In detail, there are high levels of collaboration at 69% and 60% with stakeholders in the Northern and Eastern territories respectively. According to the PF in Asuogyaman, collaboration in climate impact activities relates to efforts to increase climate literacy among children and youth in the community through education with church partners and observing global climate dates. Initiatives like the Green Ghana Day promote tree planting, though sustaining the trees remains challenging. This is often through collaborations with the Forestry Commission to provide seedlings. Yet he observed a noticeable lack of other faith-based organisations (FBOs) contributing locally.

The primary capacity gap among Faith-Based organisations (FCPs) is insufficient knowledge on climate change, necessitating more training. Youth participation is encouraged through tree planting and environmental cleanliness, with FCPs leveraging their influence and resources to educate communities.

While in the Central-Western territory, less than half (46%) of the FCPs indicate that they do collaborate with local and international stakeholders. However, this is observed to be particularly low in the Cape-Coast cluster and relatively high in the Sekondi-Takoradi cluster, all in the Central-Western territory. The PF for Sekondi-Takoradi explains that the collaborations with local stakeholders, such as health facilities, forestry commissions and district assemblies are mainly aimed at supporting various activities like health education, clean-up exercises, and tree planting.

Further, the level of collaboration is observed to be low in the Southern territory, as 81% of FCPs, particularly in the Adaklu-Agotime cluster, noted that there are no level of collaboration with local stakeholders.

The results highlight that FCPs typically employ a dual approach to collaboration with local stakeholders. Involving general communiques shared with all partners and context-specific interventions tailored to individual communities' needs. They work closely with health facilities for education and screenings, forestry commissions for tree planting, and district assemblies for logistical support in cleanup activities. The collaboration extends to engaging opinion leaders and leveraging community and church platforms to advocate for climate and environmental issues. Additionally, integrating climate education into the FCP curriculum and fostering partnerships with government agencies and other organisations helps enhance their impact.

across the same cluster collaborating on the same activities as a PF recount that; ***"My cluster is spread across seven administrative districts and if you want to collaborate with them, it is a bit difficult because everybody has their own expectations and the kind of alliance that they would want to strike with you. Few of them were willing to give out their machines, equipment, and even some personnel to support the intervention."***

Generally, the study observes that the FCPs face significant challenges in collaboration due to difficulties in accessing actors on one side and the other side, the lack of skills or need to liaise effectively with other organisations and varying expectations from potential partners. The alignment of interests often poses a hurdle, as observed in collaborative attempts in a cluster where equipment and personnel were inconsistently provided. Additionally, the FCPs struggle with gaining support from opinion leaders and integrating environmental awareness into their existing frameworks. The capacity gaps in knowledge and implementation of climate change strategies further hinder their ability to form productive collaborations and achieve sustainable outcomes.

"The cluster once collaborated with zoomlion in a cleaning exercise with the children in some communities" – PF1

"We have collaborated with the Forestry commission for seedlings" – PF2

"The collaborations between the FCPs and the faith-based organizations so far are not specifically based on the environment, or the climate change as being discussed but most of them are for the spiritual growth and nurturing of the participants.... For most of us, the collaboration is mostly between the health facilities and the personnels who support in the education and other activities. For others too, there was some sort of collaboration with the forestry commission and relations with opinion leaders like the assemblymen who are periodically concerned about the sanitation of our environment for cleanup exercises." – PF3

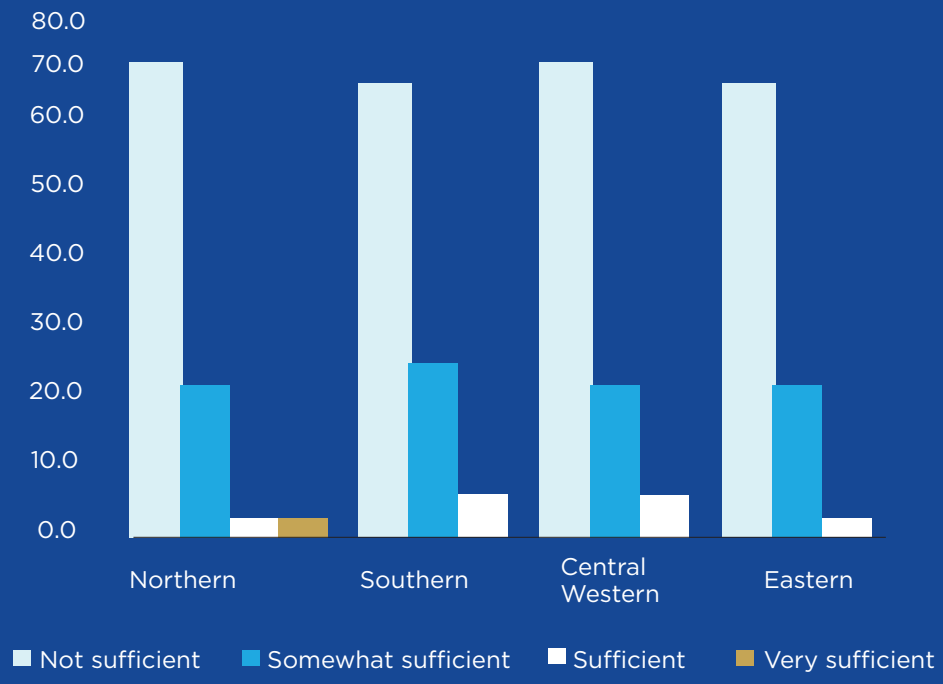
05 Available Capacity and Gaps of FCPs in Addressing Climate Change

5.1 Introduction

This Chapter presents the findings on the available capacities of FCPs in implementing climate change initiatives, the capacity gaps and the challenges in building community resilience. This analysis integrates both the qualitative and quantitative data obtained to assess the available capacities and gaps of FCPs in addressing climate change.

5.2 Existing Capacities of the FCPs

The data collected from respondents across Northern, Southern, Central Western, and Eastern territories of Ghana provides insights into the sufficiency of knowledge and skills among FCPs. The findings as shown in Figure 5.1 reveals a significant gap in the sufficiency of knowledge and skills required to implement effective climate change strategies. Most respondents in all territories report their capacities as either “not sufficient” or “somewhat sufficient,” highlighting a need for targeted capacity-building initiatives.



Moreover, the capacities vary significantly across different territories as shown in the Figure 5.2, indicating uneven distribution of skills and knowledge. The Northern territory shows relatively higher competence in climate science and impacts, while the Southern and Eastern territories demonstrate stronger capacities in project planning and management, and technical skills, respectively. However, the Central Western territory consistently shows lower percentages across most skill areas. The overall data as shown in the table above clearly indicates a widespread perception of insufficient knowledge and skills among FCPs for implementing effective climate change mitigation and adaptation strategies. This highlights significant gaps in current capabilities that need to be addressed. A significant portion of FCP respondents (68%) feel their knowledge and skills are inadequate (not sufficient). While a moderate percentage of FCPs (24%) believe their skills are somewhat sufficient. Meanwhile, a relatively smaller group (7%) considers their skills sufficient. While a minimal number of respondents (1%) feel highly confident in their abilities.

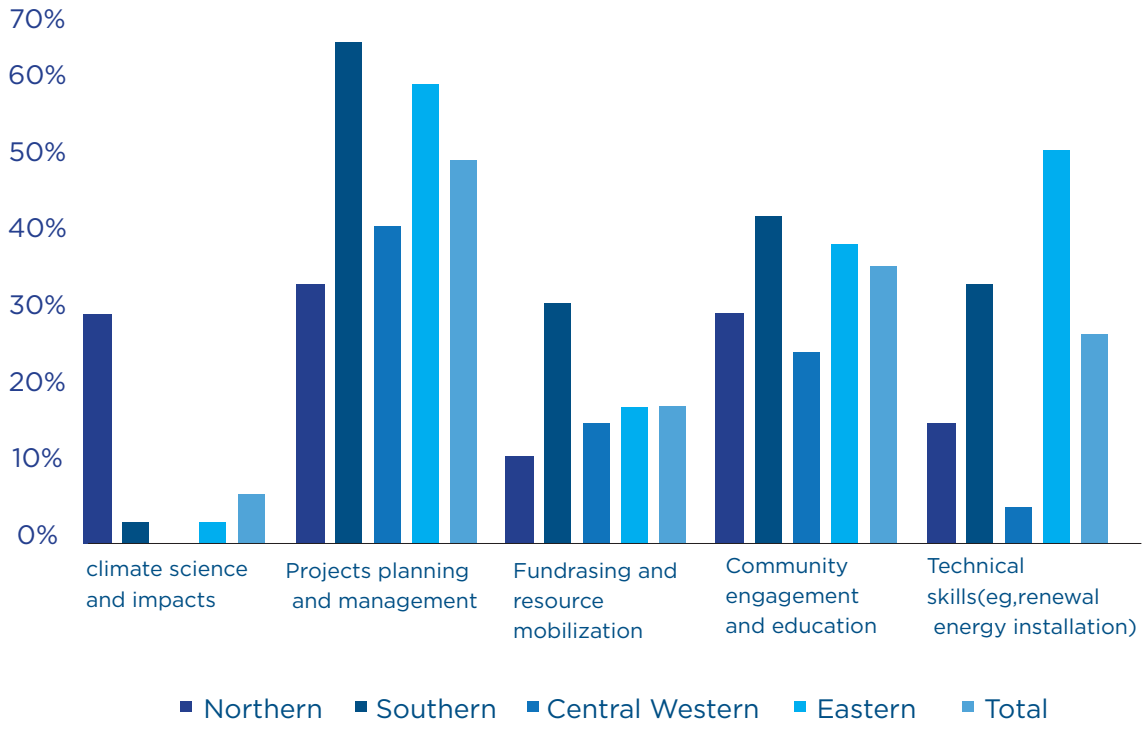


Figure 5.2 Existing FCP Capacities in Knowledge and Skills
Source: Field Survey (2024)

The findings underscore the urgent need for capacity enhancement among FCPs in Ghana. Despite the critical role these partners play in community education and engagement, the existing knowledge and skill levels are insufficient to address the complex challenges posed by climate change effectively. Strategic interventions focusing on capacity building in key areas such as climate science, project management, fundraising, community engagement, and technical skills are imperative.

The existing knowledge and skill levels are insufficient to address the complex challenges posed by climate change effectively.

Largely, the data in the table above reveals that while there are some existing capacities in project planning and management, and community engagement, there are significant gaps in critical areas such as climate science, technical skills, and fundraising (Figure 5.2). These gaps indicate a need for targeted capacity-building efforts. The existing capacities of FCPs in various areas critical for climate change response includes:

- Climate science and impacts: Limited capacity (9%) across most respondents.
- Project planning and management: Moderate to high capacity (50%) in this area.
- Fundraising and resource mobilisation: Generally lower capacity (20%) compared to project planning.
- Community engagement and education: Varied capacities (38%), with some territories showing strength.
- Technical skills (e.g., renewable energy installation): Capacity (27%) in technical skills is generally lower.

5.3 Capacity Gaps of FCPs

The proficiency of FCPs in climate-related skills and knowledge areas varies significantly, reflecting both territorial disparities and overarching gaps in capacity are presented below.

1. Climate Science and Impacts: Understanding the science of climate change and its impacts is crucial for developing and implementing effective mitigation and adaptation strategies. The proficiency and knowledge levels required in the territories are notably high in the Central-Western (100%) and Eastern (96%), while the Northern territory stands at 72%. The Southern territory also shows strong skills and knowledge requirements at 96%. The KII interviews reiterated this capacity gap; in the Central-Western (Cape Coast cluster), Northern (Kumasi Cluster) as well as the Eastern territories (Asuogyaman cluster).

"I see that not everybody is well abreast with issues about climate change and the environment itself" (Cape Coast Cluster).

"Most FCP staff are not very well educated in climate issues and are not able to relay the information to the participants and the community. Climate issues are very technical and need a lot of effort and constant learning to understand" (KII Kumasi Cluster).

"Inadequate knowledge on the subject of climate change and its effects on the communities" (KII Asuogyaman Cluster).

2. Project Planning and Management: Effective climate initiatives require robust project planning and management skills. The Southern (35%) and Eastern (40%) territories fare slightly better but still show room for improvement. The Northern (68%) and Central-Western (58%) territories show significant gaps in this area, which could impede the successful implementation and sustainability of climate projects.

3. Fundraising and Resource Mobilization: Successful climate projects often hinge on the ability to mobilise financial and other resources (Bhandary, Gallagher and Zhang 2021). While the Northern (88%), Central-Western (83%) and Eastern (80%) territories demonstrate relatively weak capabilities in fundraising and resource mobilisation indicating a need for enhanced skills in this critical area, the Southern territory (69%) depicts a little less weak skill or knowledge in this area. This capacity gap was reiterated during the KII interviews, for instance in Northern territory (Kumasi cluster).

"FCPs are very much under-resourced to take up the challenging issue of climate change because it's very expensive to deal with its adverse effects. FCPs do not have any funding from anywhere to tackle these issues." (KII Kumasi Cluster)

4. Community Engagement and Education: Engaging and educating communities about climate change is essential for fostering adaptive and mitigative behaviours (Khatibi et al, 2021). The Central-Western (71%) and Northern (68%) territories show weak capacity in this area compared to the Southern (54%) and Eastern (56%) territories, which indicates a need for targeted efforts to improve community engagement and education. During the KII interviews this capacity gap was emphasised within the Central-Western (Cape Coast), Northern (Kumasi Cluster) and Southern territories (Adaklu-Agotime).

"Increasing our education and sensitization would build the capacity of people in climate change matters" (KII Cape Coast Cluster).

"This climate change should be a community concern and should be addressed as such but sometimes people are just lazy and unconcerned about issues like these " (KII Kumasi Cluster).

"I think everything starts with the awareness creation. If people don't know that this is happening, and they don't know the effects or the negative impacts, then they don't know anything about it" (KII Adaklu-Agotime Cluster).

5. Technical Skills (e.g., Renewable Energy Installation): Technical skills, such as those needed for installing renewable energy systems, are vital for implementing practical climate solutions (Mataya, Vincent & Dougill, 2020). The Central-Western (92%) and Northern (84%) territories show less capacity in this area compared to the Eastern (52%) and Southern (65%) territories.

The general outlook from the study indicates that the most critical gaps in skills or knowledge areas for FCPs' climate change initiatives are in climate science and impacts, fundraising and resource mobilisation, and technical skills. Community engagement and project planning are also important but less emphasised. The table above highlights these areas where FCPs need improvement:

- Climate science and impacts: High demand (91%) for knowledge improvement.
- Project planning and management: Moderate demand (50%) for improvement.
- Fundraising and resource mobilisation: Significant need (80%) for enhanced skills.
- Community engagement and education: Considerable need (62%) for better skills.
- Technical skills: Strong need (73%) for improved technical skills.

5.4 Types of Resources Needed (Financial, Technical, Human)

The critical role of financial, technical, and human resources in climate initiatives cannot be overemphasised. The provided data in the Table 5.1 reveals significant resource gaps across all territories. Generally, financial and technical resources are acknowledged as critical needs across all regions. Human resources, while still important, are less emphasised, particularly in the Southern and Central Western regions. The resources that FCPs require to effectively implement climate initiatives:

- Human resources: High demand (73%) for skilled personnel.
- Technical resources: Critical need (95%) for technical equipment and expertise.
- Financial resources: Universally (100%) recognized as a crucial requirement.

TERRITORY OF RESPONDENT (% RESPONSE)					
Resources	Northern	Southern	Central Western	Eastern	Total
Human	82.6	62.5	58.3	91.30	73.4
Technical	91.3	95.8	91.7	100.0	94.7
Financial	100.0	87.5	100.0	87.0	100.0

Table 5.1: Resources Needed

Human Resources: There is a noticeable need for more human resources, especially in the Eastern (91%) and Northern (83%) territories. Also, the Central-Western and Southern territories indicate a 58% and 62% respectively of inadequate human resources.

Technical Resources: All territories indicate a high need for technical resources, with the Eastern territories at 100%.

Financial Resources: The lack of financial resources is a major constraint, with 100% of respondents from Central Western as well as Northern, Southern and Eastern territories indicating 92% need for financial support. During the KII interviews these required resources were substantiated.

"Capacity gaps include limited technical expertise in climate science, insufficient funding for long-term projects, and the need for continuous training on sustainable practices" (KII Kwahu Cluster).

"There are also a lack of logistics to help tackle the issues at stake, for those willing to offer support, they are sometimes not financially capable." (KII Kumasi Cluster).

5.5 FCPs Training or Capacity-Building Activities in Addressing Climate Change

Capacity-building through targeted training activities is essential for enhancing FCPs' effectiveness and Table 5.2 points to the specific training or capacity-building activities requirements by the FCPs in the various territories.

5.5.1 Training or Capacity-building Activities

Table 5.2 outlines the preferred activities for enhancing FCP capacities

a) **Workshops on Climate Science and Impacts:** These workshops are of a high value across all

territories, with Central Western (100%) and Eastern (96%) territories showing the highest demand.

b) **Training in Sustainable Practices:** Sustainable practices training is crucial for long-term climate resilience. The Eastern (88%) and Central Western (88%) territories show high interest in such training.

c) **Access to Educational Resources and Materials:** Providing access to educational resources can significantly enhance climate literacy and engagement (Johnston, 2020). Both the Northern and Eastern territories (88%) highlight this need.

d) **Networking with Other organisations:** Networking can facilitate knowledge exchange and collaborative efforts. The Northern (84%) and Southern (73%) territories show a strong interest in networking opportunities.

ACTIVITIES	NORTHERN	SOUTH-ERN	(%RE-SPONSE) CENTRAL WESTERN	EASTERN	TOTAL
Workshops on climate science and impacts	92.0	92.3	100.0	96.0	95.0
Training in sustainable practices	72.0	80.8	87.5	88.0	82.0
Access to educational resources and materials	88.0	80.8	83.3	88.0	85.0
Networking with other organisations	84.0	73.1	62.5	68.0	72.0

Table 5.2: Training or Capacity-building activities
Source: Field Survey (2024)

The assessment reveals that while FCPs possess certain capacities to address climate change, significant gaps remain, particularly in resources, training, and comprehensive understanding of climate issues. Addressing these gaps requires targeted interventions, including capacity-building workshops, improved access to educational materials, and enhanced resource mobilisation efforts. By addressing these gaps, FCPs can play a more effective role in community-based climate change mitigation and adaptation initiatives.

5.6 Challenges of building community resilience toclimate change

5.6.1 Local or Communal Strategies to Address Climate Change Impacts

The survey data presented in Figure 5.3 indicates a significant variation in the presence of such strategies, with the Eastern territory showing the highest percentage of affirmative responses (60%) and the Northern territory the lowest (28%). Whilst the Southern and Central-Western territories acknowledged the presence of strategies as indicated by 42% and 54% respectively. Overall, less than half (46%) of the respondents across the territories acknowledge the presence of local or communal strategies to address climate change impacts, indicating a moderate level of existing community initiatives. On the other hand, a slight majority (54%) believe that there are no local or communal strategies in place, suggesting a gap in community-led climate action.

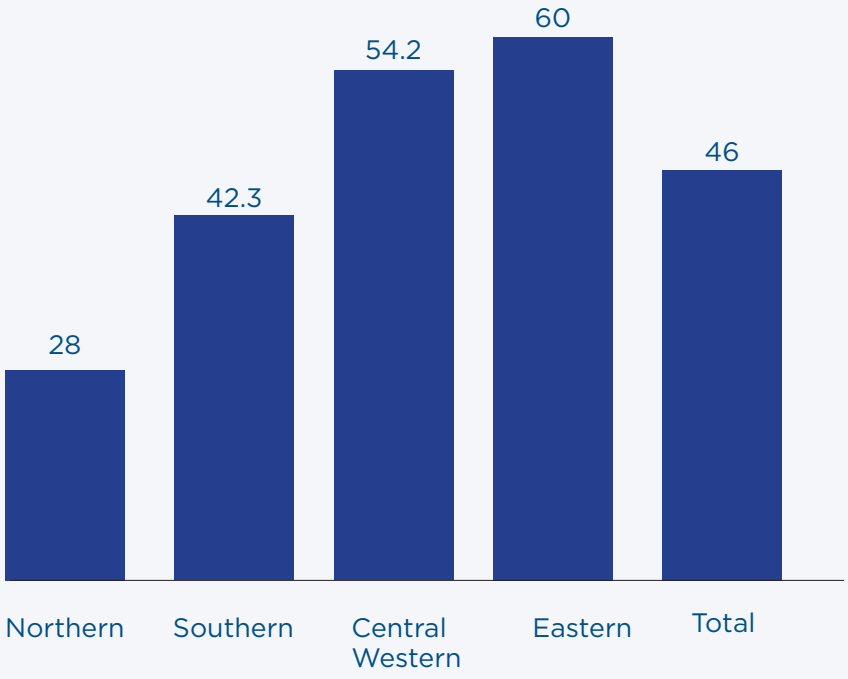


Figure 5.3: Existence of local or communal strategies to address climate change impacts
Source: Field Survey (2024)

Some of these strategies were corroborated during the focus group discussions as evident in the supported quotes below.

"Some of the strategies within our community are tree planting at school, tree planting by Compassion International Ghana. The trees planted prevent soil erosion within the catchment areas planted" (FGD Youth and Children, Asuogyaman Cluster).

"We engage in tree planting, gathering and separation of waste, communal labour in cleaning community market, proper disposal of waste and home gardening by some caregivers and community members" (FGD Caregivers, Asuogyaman Cluster)

Local and communal strategies are essential in enhancing resilience to climate change. Community-based adaptation (CBA) has been recognized as a vital approach involving local communities in planning and implementing adaptation strategies. CBA empowers communities, utilises local knowledge, and ensures that adaptation measures are relevant to local needs (Kirkby, Williams, & Huq 2017).

5.6.2 Effectiveness of Local Governance Structures

The effectiveness of local governance structures in implementing and enforcing climate adaptation measures varies significantly. The Central Western territory reports the highest effectiveness, with 62% rating it as "Somewhat Effective" and 15% as "Effective." In addition, the Eastern and Northern territories report a rating of 60% and 57% respectively as "Somewhat Effective" of the local governance structures. In contrast, the Southern territory also shows a higher percentage of respondents rating local governance as "Not Effective" (55%). This variation points to a mixed perception of local governance effectiveness, with the Southern territory expressing the highest dissatisfaction as shown Figure 5.4.

Figure 5.4 also suggests that while a majority (54%) find the program somewhat effective, there is a significant portion (26%) who do not find it effective at all. The low percentages of respondents who find the program to be either effective (13%) or very effective (7%) highlight the need for a thorough evaluation of local governance structures in implementing climate adaptation measures to better meet the needs and expectations of the clusters.

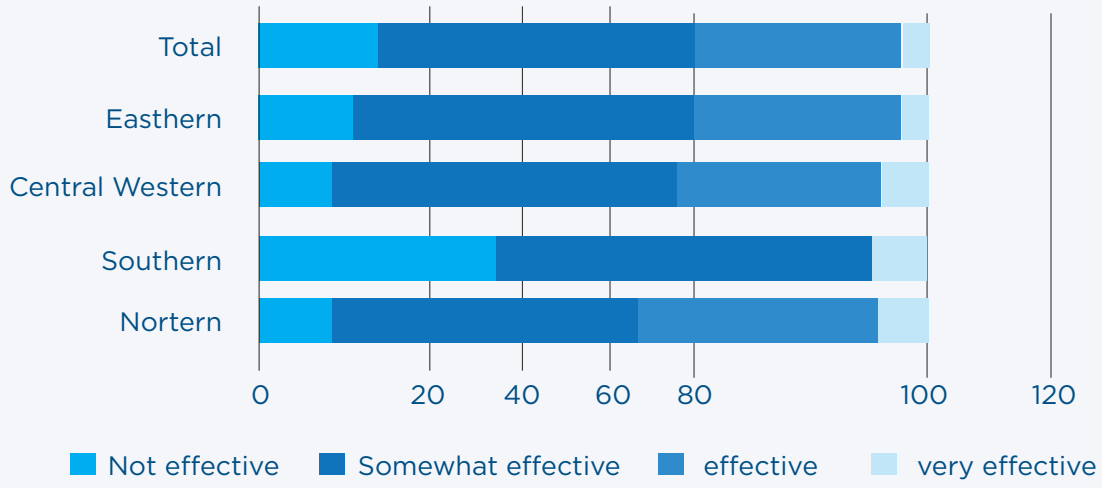


Figure 5.4: Effectiveness of local governance structures
Source: Field Survey (2024)

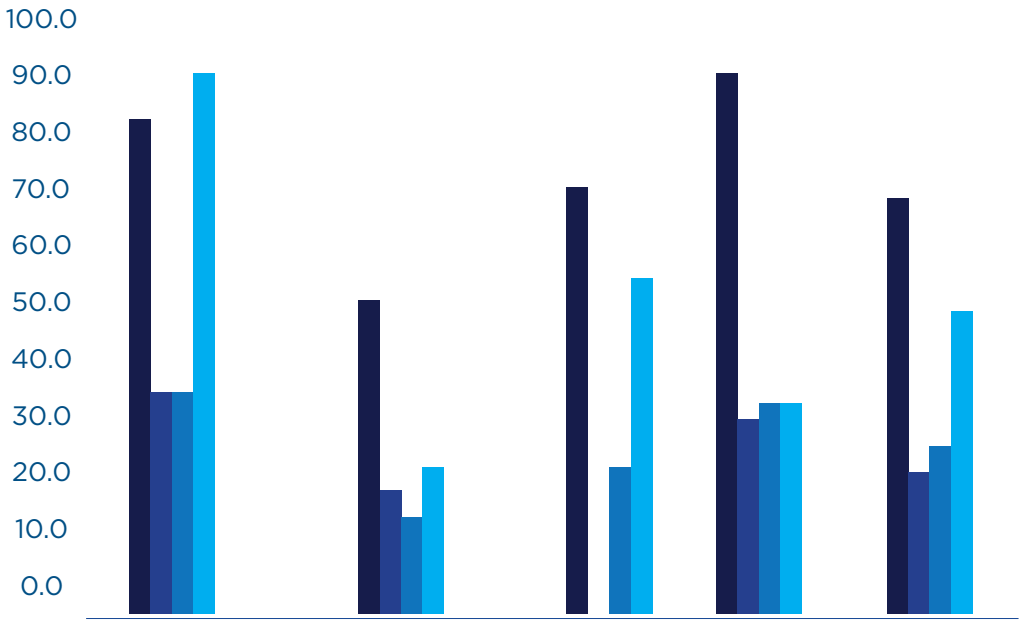
Effective local governance is critical for the successful implementation of climate adaptation measures. Governance structures that are transparent, inclusive, and accountable tend to perform better in climate adaptation. In many developing regions, including parts of Africa, local governance faces challenges such as limited financial resources, lack of technical expertise, lack of awareness and support from higher governance structures often impede the effectiveness of these strategies (Andrijevic et al., 2020).

Some level of effectiveness of these local structures were highlighted in the focus group discussions in the Eastern territory.

"These strategies are helping our community deal with climate change such as Free flow of water in gutters to avoid flooding, checking of erosion in some parts of the community, reduction in the force of the winds since trees are serving as wind breaks, shade provision from the planted trees as well as reduction of malaria in the community" (FGD Caregivers, Asuogyaman Cluster).

5.7 Challenges in Implementing Climate Change Strategies

In general, a significant majority of respondents (76%) indicate that Frontline Church Partners (FCPs) face specific challenges in implementing climate change strategies for children and youth. This suggests that these challenges are prevalent and likely impactful across various territories (Figure 5.5).



	NORTHERN	SOUTHERN	CENTRAL WESTERN	EASTERN	TOTAL
Presence of challenges	84	50.0	79.2	92.0	76.0
Lack of time	32.0	23.1	-	44.0	25.0
Lack of interest	32.0	15.4	33.3	48.0	32.0
Lack of resources	92.0	34.6	58.9	48.0	58.0

Figure 5.5 Specific challenges FCP's faces in climate change strategies for children and youth
Source: Field Survey (2024)

The proportion of FCPs reporting challenges with children and youth regarding their participation in climate activities was very high for the Eastern territory (92%) and relatively lower for the Southern territory (50%). The lack of resources has been the major challenge against children's participation in climate initiatives. The results however did not find children and youth not having time for such activities as a key challenge. These suggest that time and interest may not be the key obstacle to children participating in climate initiative but resources to catalyse the implementation of such activities.

5.7.1 Challenges faced by the youth and children

Further discussion with the youth and caregivers also highlights that, the other key challenges against their participation in climate initiatives pertain to the awareness of climate change and resources to carry out climate related activities. The caregivers are also very clear on their support for the activities of Compassion Ghana and hence they would not prevent their children from participating in any of their initiatives. Moreover, while some of the youth see climate and environment activities as labour demanding, they still have a positive affinity towards environmental stewardship and so are willing to embark on such activities as opined by this participant:

"Cleaning the environment is very laborious. I don't particularly like it because it is tiring but when I think about it, it is for my own good, so I have no option but to put effort into it. Compassion teaches us stewardship towards our society and environment so we are willing to do anything to protect the climate" (Youth FGD, Accra).

92%

of the youth in the Eastern territory are actively participating in climate activites

Children and youth are among the most vulnerable groups to climate change impacts, necessitating targeted strategies to support their adaptation and resilience. Studies emphasise the importance of integrating climate change education into school curricula and engaging youth in climate action initiatives. However, challenges such as insufficient integration of climate change issues in educational policies often impede these efforts (Sanson & Burke 2020).

5.7.2 Challenges of Frontline Church Partners (FCP) staff

The FCPs also outlined a number of challenges faced in implementing climate change strategies, including lack of awareness and understanding, insufficient funding, limited technical skills, community resistance or lack of interest, and policy and regulatory barriers (Table 5.3). Notably, lack of awareness and understanding is a predominant challenge across all territories, particularly in the Northern (90%) and Eastern (91%) territories. Also, insufficient funding is notable in the Northern (86%) and Central Western (89%) territories as well as limited technical skills is significant in the Northern (81%) and Central Western (68%) territories. Moreover, community resistance or lack of Interest is prominent in the Northern (52%) and Eastern (61%) territories. Lastly, policy and regulatory barriers are highest in the Northern (38%) territories as shown in Table 5.3.

On the other hand, the Southern territory's main challenges are lack of awareness and understanding (69%) as well as insufficient funding (62%) in implementing climate change mitigation and adaptation initiatives. In general, the data indicates that lack of awareness and understanding (76%), insufficient funding (71%), and limited technical skills (66%) are the predominant challenges faced by FCPs in implementing climate change mitigation and adaptation initiatives across the territories. Community resistance (41%) and policy/ regulatory (20%) barriers are also present but to a lesser extent.

CHALLENGES	NORTHERN	SOUTHERN	CENTRAL WESTERN	EASTERN	TOTAL
Lack of awareness and understanding	90.5	69.2	47.4	91.3	76.3
Insufficient funding	85.7	61.5	89.5	47.8	71.1
Limited technical skills	81.0	38.5	68.42	65.2	65.8
Community resistance or lack of interest	52.3	30.8	10.5	60.9	40.8
Policy and regulatory barriers	38.1	15.4	21.1	4.4	19.7

Table 5.3: Challenges FCP face in implementing climate change mitigation and adaptation initiatives
Source: Field Survey (2024)

Frontline organisations, including religious institutions, play a crucial role in community-level climate change mitigation and adaptation. They often serve as trusted entities that can mobilise caregivers and other community members and resources. However, their efforts are frequently hampered by similar challenges identified in the document. Capacity building, increased funding, and stronger policy support are essential to overcome these obstacles. Additionally, fostering community engagement and education can help mitigate resistance and enhance the effectiveness of adaptation strategies (Salvador Costa et al., 2022).

5.7.3 Approaches by FCPs in addressing the challenges

Various strategies are employed by different territories to address the challenges in implementing climate change measures. These include mass education through information centres, collaboration with other agencies, one-on-one engagements, and continuous sensitization (Figure 5.6).

Figure 5.6: Word Cloud Showing Various Strategies
Source: Field Survey (2024)

Some specific methods by FCPs to address challenges employed across territories are
a) Northern territory: Use of information centres for mass education, collaborations with MMDA agencies, and seeking assistance from community leaders.

b) Southern territory: Domestic funding, one-on-one talks, and engagement in recreational activities.
c) Central Western territory: Touching on climate change issues during talk sessions,
use of mass communication, and seeking community head assistance.

d) Eastern territory: More education, mass communication, and collaboration with community leaders.

Furthermore, common strategies to be adopted across territories include increasing education and awareness, engaging with community leaders, and collaboration with other agencies and organisations. Effective strategies for addressing climate change challenges at the community level often involve a combination of education, community engagement, and partnerships. Information dissemination through local media, workshops, and community meetings can significantly enhance awareness and understanding of climate change issues (Kumpu, 2022). Lastly, collaboration with governmental and non-governmental organisations can provide additional resources and technical expertise needed for effective implementation.

06 Mapping Existing Entry Points/Opportunities for Developing Climate Solutions

6.1 Introduction

The section seeks to map current points of access and opportunities inside the networks of the FCPs for creating scalable and feasible climate solutions. FCPs have the potential to significantly contribute to the promotion of sustainable practices, climate justice advocacy, and community resilience by recognising and seizing these opportunities. The section will as well examine several elements, such as existing efforts for climate adaptation and mitigation, the function of faith-based initiatives, and the possibility of policy and community interventions.

6.2 Existing Climate Initiatives by CIGH FCPs

Interactions with FCPs clearly reveal that though their activities and programmes carried out for the beneficiaries are not totally climate-blind, there is a lot that the FCPs can do to remain climate sensitive in their programming. There are few programming areas that are environmentally focused, which would ultimately address climate adaptation and mitigation actions. Table 6.1 indicates that 63% of the FCPs report having one form of climate initiative or the other. Majority (84%) of the FCPs in the Eastern territory report having climate initiatives as compared to the other territories with.

	Northern	Southern	Central Western	Eastern	Total
Climate initiatives	68.0	50.0	50.0	84.0	63.0
Educational programs on CC	60.0	34.6	25.0	64.0	46.0

Health and wellness	36.0	38.5	41.7	60.0	44.0
Food and water security	24.0	0.0	16.7	32.0	18.0
Disaster preparedness training	12.0	7.7	4.2	16.0	10.0
Environmental conservation	44.0	42.3	12.5	56.0	39.0
Advocacy and community engagement	32.0	30.8	8.3	28.0	25.0

Table 6.1: Existing best practices among FCPs?
Source: Field survey (2024)

This is encouraging given that more than half of the surveyed FCPs have climate related initiatives. Further, there is a unique case for the FCPs in the Eastern territory regarding their climate initiatives and their activities in general that could be further studied. FCPs in the Eastern territory could have some special support or capacity that is giving them an urge over the other FCPs and it will be interesting to study their models further to understand what is driving their efforts.

For most of the FCPs, It is however good to note that most of the climate change initiatives mainly have to do with tree planting exercises as part of the Green Ghana Day or the World Environmental Day initiatives that Compassion encourages the FCPs to partake in. Given that CIGH is planning towards climate sensitive program development, it is imperative for all FCPs to have climate initiatives. The specific initiatives adopted by the various FCPs include the following as outlined in Figure 6.1.

The proportion of FCPs implementing specific climate initiatives however is relatively smaller than the average response for if they implemented any climate initiative. The most reported cases were that of educational programmes on climate change (46%) and health and wellness (44%) with the least reported cases being disaster preparedness training and food and water security initiatives.

Most of the climate change initiatives mainly have to do with tree planting exercises as part of the Green Ghana Day

Figure 6.1 Existing climate initiatives by FCPs
Source: Field survey and interviews 2024

6.2.1 Educational programmes on climate change

The FCPs in the Northern and Eastern territories are very notable in relation to existing educational programmes on climate, with 60% and 64% of them reporting so, respectively. As compared to these FCPs, only 35% and 25% of FCPs in the Southern and Central Western territories report having educational programmes. The educational programmes as enquired from the KIIs and FGDs are mainly in the following areas:

- Community education and sensitization about climate change, its challenges and risk factors
- Sensitization of environmental stewardship through Sermons, seminars and workshops.
- Awareness creation during the celebration of world environment day with the children and the public.
- There are also collaborations with the District Assemblies to educate the communities on environmental protection, especially during harmattan seasons.

It must however be noted that awareness creation and educational programs on climate change are not very popular among the FCPs. The educational programs responded to, are mostly climate related and not climate focused. Prominent among the educational programs is the environmental stewardship responsibility of the FCPs towards their beneficiaries. The effectiveness of these educational programmes is however not positive as FCP staff indicate the beneficiaries do not usually practise what they are taught. Sustaining interest is therefore a key action that needs to be taken after capacities are built.

Point of entry

In-depth conversations with the FCPs reveal that climate education and literacy is quite low and hence it will be important to design new collaborative education programs. There are existing collaborations such as one with the Environmental Protection Councils at the local levels and can be further strengthened to design climate education programmes. Curriculum review and development to incorporate climate literacy into the children's educational programmes. This will also require collaboration with educational institutions. This is not for only mainstream education but the various educational programmes of CIGH. Educational programmes can include using audiovisuals to tell the story of climate impact, which are easily absorbed and understood.

6.2.2 Health and Wellness Initiatives

There are existing health and wellness programs that FCPs implement, mostly in collaboration with health agencies or on their own, for those with expertise in health and wellness and 44% of FCPs do implement such initiatives. FCPs in Eastern territories are observed to lead in the proportion of FCPs implementing most of the climate initiatives and it is observed in the health and wellness, among the other initiatives as well. FCPs implement a number of malaria campaigns in collaboration with the health directorates of the various districts and that is one way of leveraging existing partnerships to strengthen the health and wellness activities at the FCP levels.

6.2.3 Food and water security

Only 18% of the FCPs interviewed report that they do have food and water security initiatives as a way of adapting to the unlikely events of climate induced food and water insecurity.

From the FGDs with caregivers and interviews with the various FCP staff, it is apparent that most of the FCPs operate a periodic food distribution programme for their beneficiary members. These are mainly raw food items that the caregivers can prepare to feed their children and other dependents to resolve food insecurity. CIGH also has water projects for the various FCPs on water access. Some FCPs have benefited from borehole construction to provide potable drinking water for the communities. In cases where there are already boreholes without treatment, treatment facilities are installed for such systems. These water security projects have been highly commended by some of the FCPs as before such interventions, the only source of water was the stream and rivers in their communities as opined by this participant: ***"...the water in the community was very bad so when Compassion came to construct the borehole for us, it meant a great deal for us. Imagine drinking from a stream that animals also use, the exposure to all kinds of water borne diseases...but now we are free and grateful to Compassion" (Survey participant, Adaklu-Agotime).***

For example, in the Adaklu-Agotime cluster, there were reports of non-functional boreholes that have been constructed by the CIGH. Given the urgency of ensuring water security for the programme beneficiaries, it is imperative for actions to be taken to ensure all water projects are functioning to serve the respective communities.

Some FCPs also implement sustainable agriculture practices to adapt and mitigate against climate change and its consequences. These efforts among others are good entry points that can be adapted and upscaled into the programming of all FCPs. The Southern territory clusters considered in the study however have low reports of implementing food and water security initiatives. Given the nature of livelihood activities in Accra, it is not very surprising that the water security initiatives are not implemented since access to potable water is not a heavy challenge. However, for the Adaklu-Agotime cluster, these are initiatives that should be promoted, especially for sustainable agriculture and home gardening.

There is also the supply of inputs by CIGH to the caregivers who are farmers for their agricultural production. To restore soil health and nutrients in the face of harsh climatic weather conditions that stifle crop productivity, CIGH supplies fertilizers and weedicides to their beneficiary caregivers to hedge against climatic shocks and impact.

Entry points:

Expansion and carefully designing all these projects with a climate lens will be impactful towards building community resilience and adaptation to climate change. Therefore, there should be expansion of the sustainable agricultural practices promotion, food distribution programme, and borehole and water treatment projects. To ensure food and nutrition security, redesigning the food distribution programmes for the beneficiaries that begins with needs assessment through active community engagement. This new design can prioritize local procurement of climate-resilient crops (distribute improved seeds as part of the input support programme), balanced and fortified diets, and efficient storage and distribution. Regular monitoring and feedback should be incorporated to ensure continuous improvement.

Building farmers' capacities in good climate-smart agricultural practices such the right planting period, access to mechanization, irrigation can also serve as an adapatation strategy against climate impacts.

A scalability plan that will promote long-term success is key and CIGH can have a pilot phase, leverage partnerships and secure funding from diverse sources to enhance food security and resilience for its vulnerable populations.

6.2.4 Disaster preparedness training

The proportion of FCPs who implement disaster preparedness training are only 10% across the selected FCPs for the study. Once again, Eastern (16%) and Northern (12%) territories record a higher proportion of FCPs implementing such an initiative, with the least being Central Western, with about 4%. Emergency preparedness is a life-saving act anyone would need to survive amid adversary and hence it will not be out of place to have such training for the programme beneficiaries. Given the various climate impact lived experiences of the beneficiaries, including flooding, windstorm, displacement of educational and residential facilities, it is important that their capacities are built to strengthen their resilience and preparedness to these climate impacts.

Strengthening capacity building in emergency preparedness could be a point of entry for design climate programmes. Building the capacity of youth and their caregivers in emergency preparedness against climate impact is crucial for resilience. This involves providing education on climate risks, training in emergency response skills, and promoting awareness of safety protocols. Engaging youth through interactive workshops, simulations, and community-based activities ensures they understand the importance of preparedness. Additionally, equipping caregivers with resources and knowledge to support their children during emergencies strengthens family and community resilience. Collaborative efforts with schools, local governments, and NGOs can enhance outreach and effectiveness, fostering a proactive approach to climate-related emergencies and safeguarding future generations.resilience for its vulnerable populations.

6.2.5 Environmental conservation

Environmental conservation programmes such as tree planting and cleanup programs are the commonest initiatives practised by the FCPs interviewed. The FCP staff feel very positive about the tree planting exercises promoted by CIGH through the Green Ghana Day commemorations. Some FCPs report that they used to not practise such until CIGH made it a part of their programming and hence through the awareness and sensitization created by the Commemoration of the day, they now have tree planting programmes. It is also inspired by the Environmental Stewardship agenda promoted by CIGH, which is a good starting point to expand on existing or create new environmental protection initiatives. Majority (56%) of FCPs in the Eastern territory report having such initiatives, with 44% and 42% of FCPs in the Northern and Southern territories reporting the same. On the other hand, only about 13% of FCPs in the Central Western territory indicate they have environmental conservation initiatives.

Whilst some FCPs report success with their tree planting exercises, others report otherwise. Some trees planted did very well but others died because they were not taken care of properly by the children/youth the way it was supposed to. There is also the mention of ownership and sense of responsibility by the children and youth when they were made to plant and care for the trees. The tree planting exercise provided them with a psychological sense of responsibility, which is good for their mental health as well.

One key **entry point** with this initiative is to have the **One Child One Tree (1C1T) campaign**. The 1C1T campaign will aim to promote environmental stewardship by encouraging children to plant and care for trees. Key components include educational programs in schools, community tree planting events, and partnerships with local governments, NGOs, and corporate sponsors. The campaign will provide resources such as tree saplings, planting kits, and educational materials, while also leveraging social media and local media for publicity. Progress will be tracked through monitoring and evaluation, with **incentives like certificates and awards to motivate participants.** This initiative will seek to instil a sense of responsibility and foster long-term environmental awareness in the children and youth.

The **environmental stewardship** campaign/project of CIGH should be thoughtfully designed to incorporate a lot of climate actions to get all stakeholders involved.

6.2.6 Advocacy and Awareness Creation

There are evidently low levels of climate change awareness creation campaigns among the various FCPs as only 25% of the FCPs report having climate advocacy and awareness creation. This runs from the FCP staff to the beneficiaries and their caregivers. Whilst the proportion of FCPs in the Northern, Southern and Eastern is roughly close to 30%, less than 10% of Central Western FCPs report implementing such programmes. Hence, whilst the advocacy and awareness programmes are generally low across the FCPs, it was worse for Central Western FCPs. More efforts and attention should be paid to that territory in terms of building climate adaptation and resilient activities. Possessing adequate level of awareness of something provides one with a good level of absorptive capacity to adopt a certain set of strategies to adapt to climate change.

Behavioural factors are mentioned as some of the key underlying causes of climate change and FCPs believe that there should be a strong campaign to change human behaviour.

Point of entry:

A new Climate Change Advocacy and Awareness Program for the FCPs will aim to educate and empower communities through stakeholder engagement and comprehensive training. The program will integrate climate literacy with faith-based teachings, conduct community workshops, and launch multimedia awareness campaigns. It will equip FCPs with advocacy tools for community engagement and promote sustainable practices through community mobilization.

CIGH can also implement the Compassion Climate Ambassador Program (CCAP) that allows the youth to become climate change ambassadors to their peers and their entire communities.

6.3 Existing Best Practices of Other Faith-based organisations

Faith-based organisations (FBOs) generally play a crucial role in societal challenges, including climate change adaptation due to their deep community roots and moral authority. They can effectively mobilise communities, raise awareness, and advocate for climate-friendly policies (Haynes & Lyons, 2020). FBOs implement sustainable practices, provide humanitarian aid, and offer spiritual and psychological support to those affected by climate change (Arnall, Hilson, & McKendrick, 2018). Additionally, they build local capacity by facilitating training programs and fostering collaborations among stakeholders (Tomalin, 2020). Through these efforts, FBOs enhance community resilience and contribute significantly to global climate adaptation, promoting long-term sustainability and justice for vulnerable populations.

Interactions with other FBOs reveal that unlike CIGH, they have specific projects and policies that are aimed at strengthening communities' adaptation to climate change, increasing advocacy and building resilience of communities. At the heart of the work of Compassion Ghana is the emphasis on children, which can be used at its advantage since other FBOs approach their activities in generic capacities and not necessarily on children. Once the foundation of climate change advocacy and awareness are built on these children, it becomes an intergenerational investment. The other FBOs include children and youth as part of their programmes and actions beneficiaries but are not their main focus. The programmes and actions are mainly at three levels; the organisational level, community level and national level (Figure 6.2).

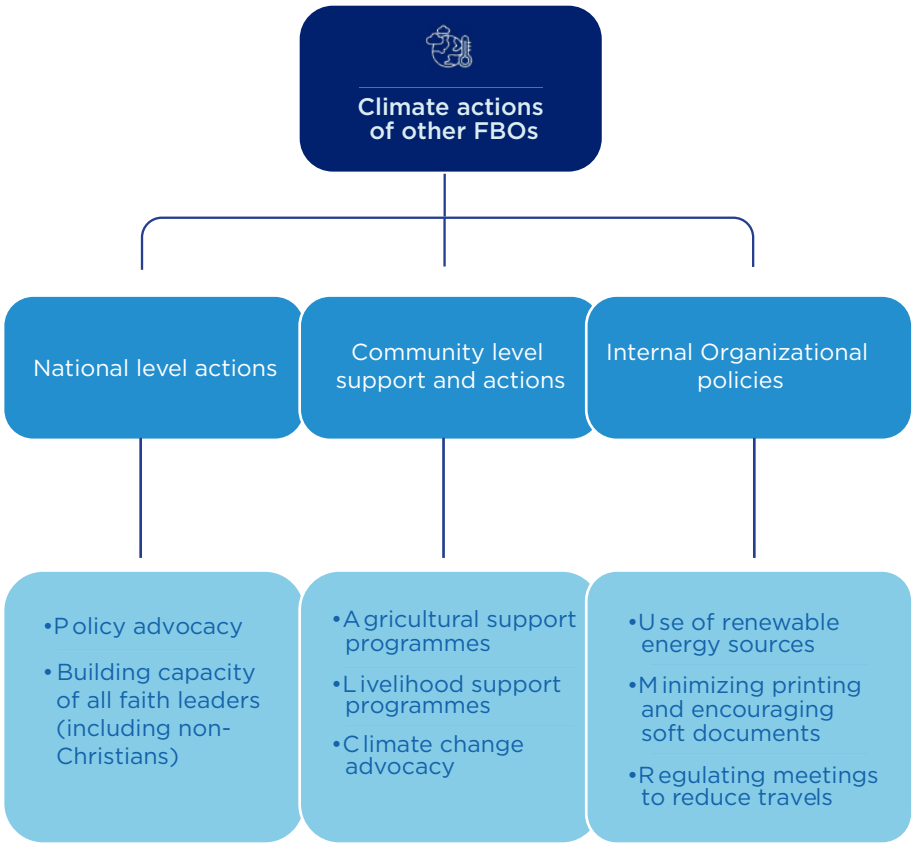


Figure 6.2: Climate programmes and policies by other FBOs
Source: Field interviews (2024)

6.3.1 National level actions

At the national level, FBOs have policy advocacy actions as well as capacity building of faith leaders on various developmental challenges, including climate change. They create avenues for policy dialogues with policy making institutions on climate change and general environmental protection issues. Their policy support programmes are mostly in food security and emergency preparedness actions against climate change. Whilst some are already doing these, others are not laying the programming structure to begin these actions. The policy advocacy actions by other FBOs have not been fully developed yet by all but it is something that is being considered for their upcoming programmes and actions on climate change issues.

There are also capacity building programmes for faith leaders as they see the need to involve faith actors in the fight against climate change. They use an integrated approach where all faith groups, including non-Christians are brought together to build their capacity in leading the fight against climate change. Through a model called the empowered worldview, they create programmes and actions for faith leaders that will allow them to examine their beliefs and actions based on their sacred scriptures (E.g. Bible for Christians and Quran for Muslims). There is also capacity building for faith leaders, using their umbrella organisations (E.g Christian Council) to integrate issues of climate change into their preachings. They are empowered to develop their theological foundations or theological literature that helps them and their colleagues to stand in a position of integrating issues of climate change into their sermons. This they believe would allow them, influence the behavioural thoughts and actions of their congregants, which in turn will influence their behaviour in the light of the stewardship God has called them into, including being environmental stewards.

"So, let's say when a pastor stands up to preach, the pastor wouldn't just be focusing on, let's say, the spiritual development of his or her congregation. Rather, they would integrate that into their preaching. By that they are able to expose God's mindset or the views of God when it comes to creation or when it comes to taking good care of the environment or being good stewards of the environment" (KII, FBO 1, Accra)

Point of Entry

Compassion Ghana can adapt this **capacity building model for the FCP staff,** child development center leaders and church leaders that they work with. Interactions on the field suggest that there have not been direct efforts towards building the capacity of the FCPs in climate change actions and so this can be adopted. The environmental stewardship campaigns of CIGH should extend beyond the staff and the children but to the church leaders in emphasizing on community responsibility in environmental management the way God wants us to take care of his creation. CIGH can plan **policy advocacy actions, beginning with a policy dialogue with policy makers** on how they can contribute to climate adaptation and mitigation actions.

6.3.2 Community level actions (Water, Agriculture, Children and Advocacy Programmes)

Other Faith-based organisations (FBOs) interacted with (World Vision International and Catholic Relief Services) and implement specific community projects that are aimed at contributing to both adaptation and mitigation strategies towards climate change and its impact. Within these projects also lie child-responsive components to build capacity of children to be environmental stewards. There are some agriculture and livelihood support programmes that are implemented by other FBOs. Whilst some of these programmes are generic to all agricultural activities, some are value chain specific. Embedded in these programmes are also community advocacy actions against climate change and environmental stewardship in general. Some of the projects include the Farmer Managed Natural Regeneration (FMNR), FMNR Eco School Clubs, Regreening Africa Project, WASH Integrated Projects and the ENOUGH Project (Figure 6.3).

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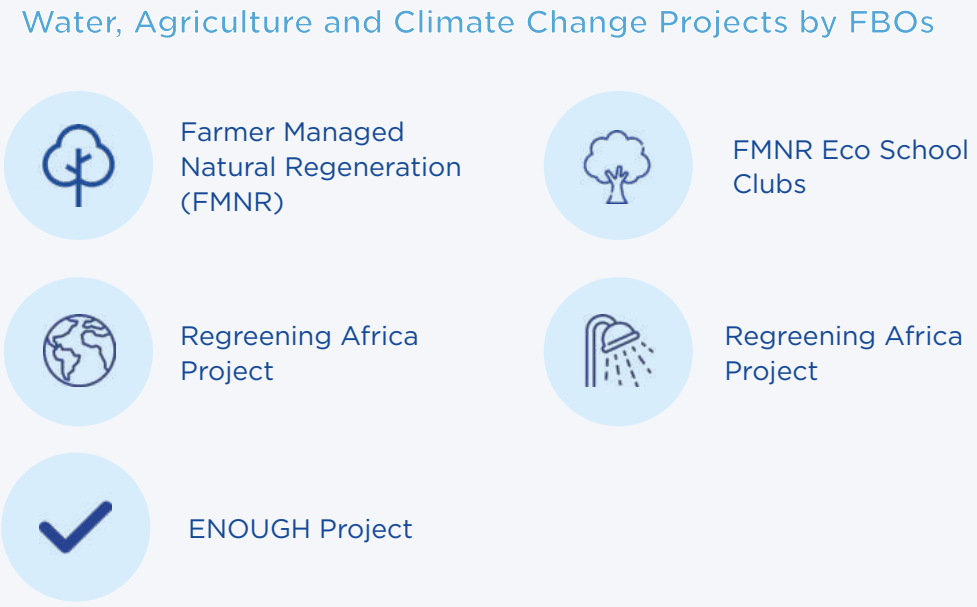


Figure 6.3: Food and water programs by other FBOs
Source: Field interviews (2024)

Agriculture programmes

FBOs implement agriculture programmes as actions to adapt and mitigate against climate change and any environmental impact. For the enumerated agriculture programmes highlighted by these FBOs, the target has been on restoring vegetative cover, re(afforestation) and value chain development. Incorporated in these programmes are also advocacy components. The FMNR project for instance is seen more of a social movement than a technical one as farmers are trained to adopt these practices that seek to restore trees in their environment. The ENOUGH project also posits on a similar view where advocacy against the impact of climate change is highly emphasised, amidst policy influence.

Farmer Managed Natural Regeneration (FMNR)

"Farmer Managed Natural Regeneration (FMNR) is the systematic regeneration of trees from tree stumps, seeds and roots. It is based on the amazing gift of nature, which gives most of the indigenous trees an inherent ability to re-sprout after they have been cut down. In cases where trees are cut so close to the ground, it may be difficult to differentiate the young shoots from weeds when the tree stump coppices or re-sprouts. Farmers are encouraged to identify, prune and protect the sprouts or naturally growing tree seedlings which could be found on the landscape (cropland or grazing land). The FMNR model taps into this underground forest, by drawing the attention of farmers to this great opportunity that exists on their land, challenging them to change practices towards growing indigenous trees, and encouraging them to allow more trees on their farms. FMNR is more of a social movement, than a technical one. It involves both awareness creation and behaviour change, together with the physical practice of restoring and managing trees on degraded land. It makes a lot of difference to initiate this behaviour change with children in their earliest years for them to cultivate the habit of regenerating and growing trees" (Sumaila and Bugre, 2021; pg. 2)

Farmer Managed Natural Regeneration (FMNR)

FBO 1 has witnessed the impact of their FMNR programme where a beneficiary has begun writing a column on climate in a particular newspaper. Farmers are also exhibiting stewardship towards the environment and their agricultural lands. Beneficiary farmers in one of the deprived districts in Northern Ghana have also recorded good social returns on investment. About 37 percent (574) of households in the said district adopted the FMNR approach. Out of this number, it is reported that 157 adopted fuel-efficient stoves as a result of the climate change awareness creation and capacity building, they have been taken. The interesting part of this energy efficiency impact dimension of the project is the fact that, aside from the distribution of 90 fuel-efficient stoves by the project to some households, the 77 remaining households spontaneously adopted. This shows how the knowledge spillover from early adopters of the technology, as well as the knowledge gained through the various activities of the programme. In addition to these, all beneficiary communities established natural resource management regulations and cases of increased soil fertility, reduced erosion and generation of more wild fruits and food were recorded (Weston and Hong, 2013).

Such programmes are investments whose impact can travel far in the future if properly sustained. This is the reason the FMNR programme has been sustained by FBO 1 and its partners over the years and by recreating other models such as the FMNR Eco School Clubs.

FMNR Eco School Clubs

The FMR Eco clubs are a particularly interesting model FBO 1 uses to inspire the spirit of environmental stewardship among school children. It seeks to involve schools in activities which improve the school environment, increase environmental knowledge of pupils and enable them to serve as champions and advocates of sound environmental practices within the local community and beyond. This is very similar to the Compassion Youth Climate Ambassadors proposed by some of the FCPs during the study. The activities of the Eco clubs help pupils understand environmental concepts and facts, develop basic tree management knowledge and skills, form helpful attitudes and behave positively towards conserving the natural environment. The programme does not only target the children but also builds the capacity of teachers in the FMNR approach and principles to enable them deliver holistic environmental education in and out of the classroom (Bugre and Sumaila, 2021).

Regreening Africa Project

This project is aimed at restoring the vegetative cover of community lands through various practices and interventions. The project also had a latent objective of creating jobs for young people across the shea value chain in Northern Ghana. The stages of the value chain that were under focus were the production practices, harvesting and processing. The youth were the main targets of this project so whilst protecting the vegetative cover of the community to withstand climatic shocks, there were also other latent benefits of livelihood empowerment. Under this project, beneficiaries were supported with seedlings, good agronomic practices, water management (through the provision of pumps) and the cocreation of a manually-driven carriage as smart shea picking technology. The beneficiary Communities were also empowered to develop their own bye-laws to guide their environmental protection as opined in the comment from this participant.

In terms of the use of wood fuel, the project also empowered beneficiaries to help reduce the incidence of falling trees for the purpose of wood fuel. This they did by encouraging them to rather use pruned wood for their fuel instead of falling an entire tree so as to not harm the vegetative cover and the environment. This is a very simple, yet impactful forest management practice to reduce the incidence of deforestation. If these are adopted in various communities, it will go a long way in reducing the incidence of deforestation.

"The project has seen a significant improvement of the community's vegetative cover, reduction in incidence of burning. There has been an improvement in the indiscriminate burning in the community because it was part of the bye-laws they developed and they are religiously adhering to them" (KII FBO 2, Tamale).

"And the use of firewood, how they were using firewood, we taught them a different technology where they are taught the importance of pruning and how they can in turn use the prunes as firewood instead of destroying an entire tree for firewood. This is also going well so far" (KII FBO 2, Tamale)

Water, Sanitation and Hygiene (WASH) Projects

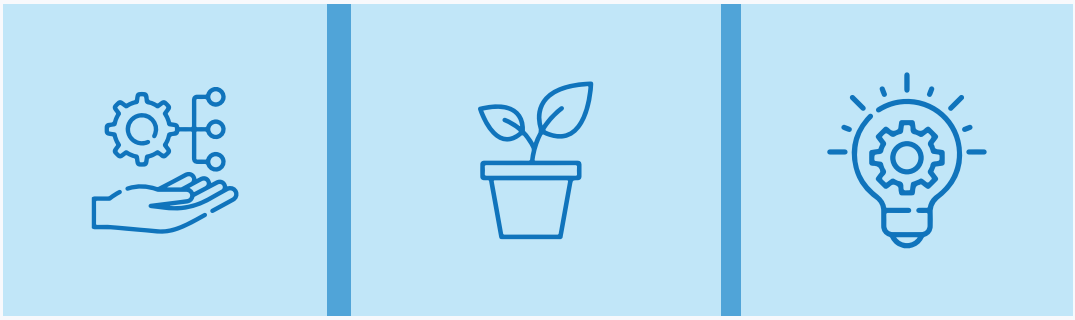
Similar to what was found to be the key actions implemented by Compassion Ghana in the area of WASH, the other FBOs interviewed shared similar interventions being run to improve the water and sanitation conditions of the various communities, especially for children. The projects are aimed at the following:

- Protecting of main water sources from pollutants such as sand-winning
- Construction of boreholes
- Construction of public toilets

According to the participant of FBO 2, severe

sand winning took over one of their operational areas, polluting the water bodies and in an attempt to reverse the effects, the communities have been supported to build “waterfronts” to be able to manage all the water. This they do by encouraging them to plant seedlings (supplied by FBO 2) along the banks of the rivers. This creates a buffer for people not to wind sand along those water bodies. Additionally, they guide them in developing their own bye-laws which prohibit people from destroying the water source or the river bed.

The CREMA Model



One main model highlighted in the development and implementation of the various interventions is the use of the community resource management areas (cremas) approach.

This approach posits that “if natural resources are given “value” and communities are given the “authority” to “manage” then they will have the “incentive” to sustainably manage and conserve natural resources”.

So in this context, when communities develop their own bye-laws and strategies to protect the environment and reduce the impact of climate change, especially on their children, it is believed that it will work.

CIGH can then use this same development approach to design most of the climate projects and strategies they intend to roll to reduce its impact on children and youth.

Figure 6.4: The CREMA model
Source: Field interviews 2024


Bishop
Brandon, Jr.

The CREMA can surely be adopted by any development practitioner to sustain community commitment towards any long-term investment and climate change efforts are worth adopting this model.

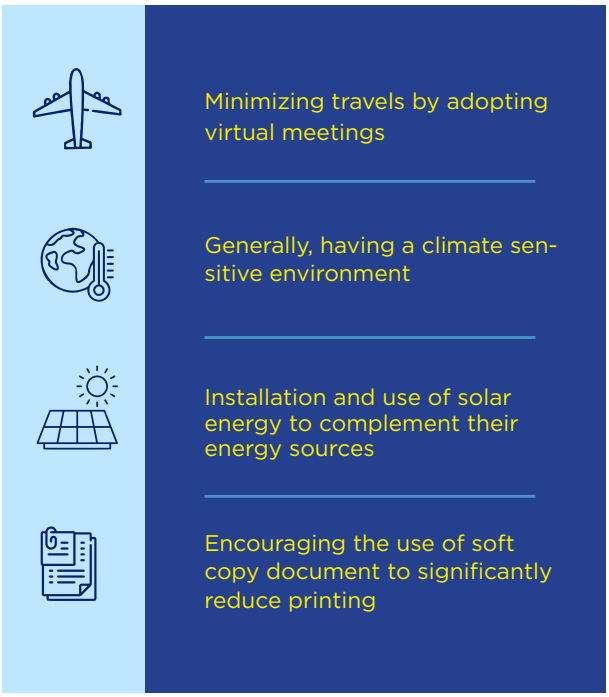
The ENOUGH Project

There are also other projects aimed at ending hunger and malnutrition which also are climate change sensitive. FBO 1 for example just launched the ENOUGH (End Child Hunger and Malnutrition) Campaign which is aimed at ensuring that "every child enjoys enough nourishing food so they can thrive (End child hunger and malnutrition – SDG2)". It is a three-year campaign which will be implemented across their operational areas in Ghana. The campaign's strategic goals are to enable children to be actively visible and heard in hunger, nutrition and food security related policies at all levels; and secondly to ensure more children benefit from improved food security, nutrition and resilience, through prioritised services. Hence, there will be a number of advocacy actions and climate resilience strategies under this project to ensure that children have ENOUGH.

6.3.3 Corporate climate policies

Corporations play a critical role in climate change adaptation and mitigation through targeted organisational policies. Adaptation policies which focus on risk assessment, infrastructure resilience, business continuity planning, employee training, and sustainable resource management help organisations identify vulnerabilities, upgrade infrastructure, develop contingency plans, educate employees, and manage natural resources sustainably (IPCC, 2021; OECD, 2015).

Mitigation policies aim to reduce greenhouse gas emissions by promoting energy efficiency, adopting renewable energy, encouraging sustainable transportation, reducing waste, and investing in carbon offset projects. Examples include upgrading to energy-efficient technologies, installing solar panels, promoting electric vehicles, implementing recycling programs, and supporting reforestation projects (UN Global Compact, 2015; World Bank, 2010). This was no different from the other FBOs interviewed. They each have workplace policies that guided their climate-smart actions. Some of the mitigation strategies that the FBOs use include Installation and use of solar energy and the regulation of meetings to reduce travels. There is also the reduction and control of printing documents to protect the environment from excess waste.



Integration of adaptation and mitigation strategies involves sustainable supply chain management, green building standards, corporate social responsibility (CSR) initiatives, and research and innovation. organisations can ensure supply chain resilience, construct eco-friendly buildings, engage in community climate action, and develop innovative climate solutions (WBCSD, 2020).

Points of Entry:

CIGH can focus on specific climate adaptation and mitigation programmes especially in environmental, food and water security. These specific programmes can strengthen their targeted efforts towards increasing climate change literacy and adaptation among its beneficiaries. WASH and Climate sermon guides can also be developed for the FCPs. Internal corporate policies can also be made more climate sensitive if they are not already. National level contribution to policy advocacy through programmes and projects can also be considered. At the community level, the CREMA model can be integrated in all programming to increase sense of ownership of programmes and ensure sustainability.

6.4 Summary of Models and Entry Points that can be Adopted

The various entry points discussed in this section are summarized and presented in Figure 6.4. This includes pre-existing strategies by the FCPs that can be remodelled and upscaled; pre-existing strategies of other faith-based organisations; and newly proposed strategies.

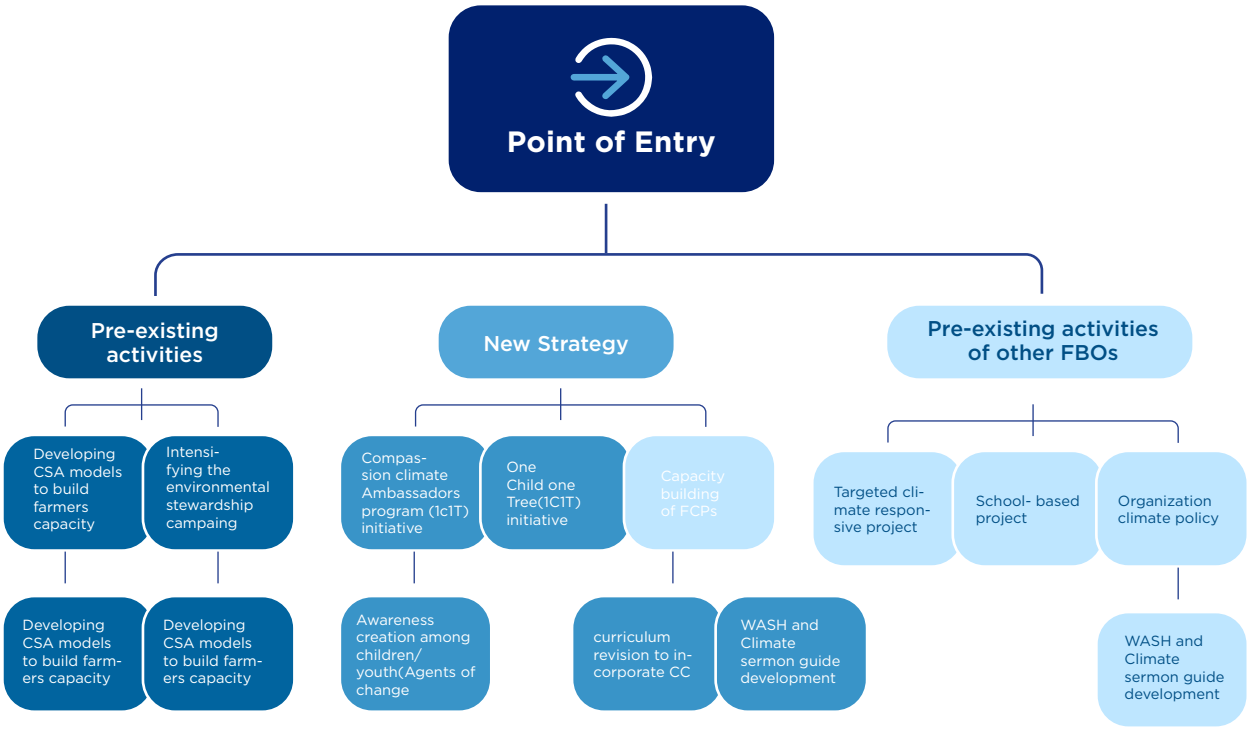


Figure 6.5: Adaptable models and entry points for climate initiatives
Source: Authors' construct

6.5 Future Strategies

In terms of future strategies towards FCP activities becoming more climate-responsive, increasing funding and resource mobilisation for such activities is the priority of close to 60% of the survey respondents. Closely following that is the development of include programs for vulnerable children against climate change. This suggests that though the FCPs recognize the need to address climate change and build resilience for their communities and beneficiaries, the vulnerable youth are of great concern. This is because the intersectionality between climate change effect and children living in more vulnerable conditions is an important concern since vulnerability entrenches and exacerbates the impact of climate change on such youth and children.

Figure 6.4: proposed future strategies by the FCPs
Source: Field survey (2024)

As has been proffered in the earlier sections of this report, the expansion of educational programmes to include climate-responsive models is very important and that is something that 40% of the survey respondents suggest should be done as part of future strategies to being climate-responsive and sensitive. Interestingly, the same proportion of the respondents indicated there should be increased access to mental health support for children. Mental health effects were not observed by many of the FCPs but it is encouraging to know that a good proportion of the FCPs believe there should be an available support for children and youth's mental health as a result of climate change impacts. Community based solutions as well as research and data collection on climate change are also suggested by FCPs important activities they should be looking at for future strategies. Youth climate leadership programmes, awareness campaigns, enhanced resilience training in climate change, are also among some of the suggested future strategies.

07 Conclusion and Recommendations

7.1 Conclusions

The activities of CIGH are not completely climate-blind. However, they are not targeted and intentional in addressing climate change at the community level. FCPs are highly vulnerable in social infrastructure and adaptation strategies towards climate change. There are existing models of CIGH that can serve as points of entry for designing climate-sensitive interventions. Best and workable models can be adapted from other faith-based organisations. The FCPs are very willing and expectant to build their capacities on climate change adaptation and mitigation and so that is a big window of opportunity that can be leveraged. We make conclusions based on the objectives of the study. The first objective highlighting the impact of climate change on children and youth, second objective dealing with existing strategies; third objective dealing with capacity gaps of FCPs in implementing climate strategies; fourth objective dealing with the feasible entry points for climate strategies. The final objective which touches on recommendations, is handled in the recommendations section of the report.

The study concludes that climate change significantly impacts children and youth in the operating context of Compassion International Ghana (CIGH) territories. The livelihoods of these young populations are highly vulnerable due to their dependency on ecosystem services, agriculture, and trade. Regions such as the Eastern and Northern territories, which rely heavily on agriculture and natural resources, are particularly susceptible to climate-induced changes. These changes manifest as reduced agricultural productivity, water scarcity, and increased incidences of climate-related health issues, exacerbating the vulnerabilities of children and youth. The Multidimensional Vulnerability Index (MVI) scores reflect this, with the Eastern territory showing the highest level of vulnerability, indicating severe deficiencies in healthcare, disaster preparedness, and social infrastructure. Education outcomes are also heavily affected by climate change that is exhibited in low school attendance and infringing on access to educational facilities. There are also health effects, manifested in respiratory diseases, skin diseases, malaria and mental health. The high proportions of undiversified employment opportunities further compound the problem, limiting alternative livelihood options for the youth. High unemployment rates in some territories, especially the Southern regions, increase the susceptibility of caregivers to the adverse effects of climate change. Additionally, inadequate infrastructure, such as poor drainage systems and insufficient access to clean water and sanitation, contributes to heightened health risks. Overall, the young populations in these territories face significant challenges in maintaining their livelihoods and well-being due to the pervasive and multifaceted impacts of climate change.

The study reveals that while 63% of Frontline Church Partner (FCP) organisations have climate related adaptation and mitigation programs, significant barriers persist for the remaining 37%. These barriers include insufficient resources, lack of awareness, and inadequate guidance on climate issues. Key strategies employed by active FCPs include educational programs on climate change, health and wellness initiatives, and environmental conservation efforts. These strategies aim to raise awareness, promote community health, and protect the environment. However, disaster preparedness and agricultural support are less frequently implemented, indicating a gap in comprehensive climate resilience efforts. The

most common approaches involve community engagement through sensitization campaigns, communal health screenings, and educational activities. Health initiatives often address immediate concerns like disease control and sanitation, particularly in areas prone to flooding and poor waste management. Environmental conservation activities, such as tree planting and waste management campaigns, are also prominent. Overall, the study highlights the need for increased funding, better resource allocation, and enhanced expertise to support FCPs in expanding their climate adaptation and mitigation efforts. A more unified and well-supported approach could significantly improve the resilience of communities against climate change impacts.

There are significant gaps in the capacity of FCPs to address climate change effectively. The disparity in knowledge, skills, and resources across various territories underscores the need for targeted interventions. The majority of FCPs reported insufficient or only somewhat sufficient capacities in critical areas such as climate science, project planning, fundraising, community engagement, and technical skills. This lack of capacity hampers their efforts to implement effective climate change mitigation and adaptation strategies, thereby limiting their potential impact on community resilience and youth welfare. The uneven distribution of capacities highlights specific territorial strengths and weaknesses. For instance, the Northern territory shows relatively higher competence in climate science, while the Southern and Eastern territories exhibit stronger capacities in project planning and technical skills, respectively. However, the Central Western territory consistently lags in most skill areas, indicating a need for more focused capacity-building efforts in this territory

The existing entry points and opportunities for developing climate solutions within the framework of Compassion International Ghana's Frontline Church Partners (FCPs) reveals a significant potential for enhancing climate-sensitive programming. Despite the encouraging findings that 63% of FCPs already engage in some form of climate initiative, the scope and depth of these initiatives vary considerably across different territories. The Eastern territory stands out with 84% of its FCPs involved in climate initiatives, suggesting a model that warrants further study and potential replication in other regions. The predominant climate initiatives, such as tree planting exercises tied to Green Ghana Day and World Environmental Day, highlight an initial awareness and engagement with environmental stewardship. However, the relatively limited range of climate initiatives—primarily focused on educational programs and health and wellness—indicates a need for more diverse and comprehensive climate actions. Notably, educational programs, though reported by a significant proportion of FCPs, often lack a focused and sustained impact, pointing to the necessity for improved strategies in sustaining interest and practical application of climate education.

Similarly, food and water security initiatives, though less prevalent, are critical in regions where climate-induced food and water insecurity poses a significant threat. The effective implementation of sustainable agricultural practices and borehole projects exemplifies the tangible benefits of targeted climate interventions. Advocacy and awareness creation efforts are notably deficient, particularly in the Central Western territory, indicating a pressing need for comprehensive climate advocacy campaigns to build community resilience and behavioural change. Interactions with other faith-based organisations (FBOs) reveal that while Compassion International Ghana focuses primarily on children, other FBOs adopt a more holistic approach, integrating climate adaptation and mitigation strategies at organisational, community, and national levels. The success of initiatives such as the Farmer Managed Natural Regeneration (FMNR) and the Regreening Africa Project demonstrate the potential for significant environmental and social returns through sustained and integrated climate actions.


Letter to my
Margaret - 05408451
Brad and Amy - 01135544
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Translation

7.2 Recommendations

It is recommended that Compassion Ghana takes a critical look at the various entry points that have been listed in previous sections based on pre-existing initiatives of the various FCPs that of other faith-based organisations, as well as new strategies that are proposed based on the field data. In addition to these recommended entry points, we propose the following consolidated actions:

Develop Targeted Climate Interventions

CIGH should integrate specific and intentional climate change interventions into their activities to address community-level impacts. This can be achieved by conducting a thorough assessment of the specific climate vulnerabilities faced by each community. Based on the findings, CIGH can design tailored interventions that address these vulnerabilities. For instance, if a community is prone to flooding, CIGH could implement flood management programs that include building resilient infrastructure, creating early warning systems, and providing flood education. Additionally, integrating climate change education into existing programs can raise awareness and empower communities to take proactive measures. By collaborating with local governments, NGOs, and other stakeholders, CIGH can ensure that these interventions are comprehensive and sustainable. This targeted approach will not only mitigate the immediate impacts of climate change but also enhance the long-term resilience of communities. Specific climate interventions. Other FBOs have increased their climate-related activities because they built specific programs related to responding to climate change adaptation and mitigation.

Leverage Existing Models

CIGH can enhance climate-sensitive interventions by adapting successful models from other faith-based organisations. This involves identifying and evaluating climate adaptation and mitigation models, such as the Farmer Managed Natural Regeneration (FMNR), for applicability to CIGH communities. Creating a repository of best

CIGH can enhance climate-sensitive interventions by adapting successful models from other faith-based organisations.

practices and facilitating knowledge-sharing among FCPs will promote effective model adoption. By learning from other organisations, CIGH can avoid pitfalls and accelerate successful interventions. This collaborative approach fosters innovation and improves climate-sensitive programming effectiveness within CIGH. Detailed case studies of successful initiatives will help CIGH understand success factors, which can be shared through workshops, publications, and online platforms to facilitate knowledge transfer. Adapting these models to specific regional contexts ensures relevance and effectiveness. Providing technical support and resources to regions replicating these models enhances implementation. Replicating successful models as well, will scale up effective climate actions and improve resilience across all operational areas. Additionally, mentoring and supporting children and youth with innovative climate ideas will help refine and upscale their concepts, further contributing to CIGH's overall climate resilience strategy.

Increase Funding and Resources

Allocating more funds and resources to support climate adaptation and mitigation programs for FCPs is essential. This can be achieved through a multi-faceted approach that includes fundraising, grant applications, and partnerships with local and international organisations. CIGH can organise fundraising events and campaigns to generate resources and engage the broader community in their mission. Additionally, applying for grants from government agencies, international bodies,

and private foundations can provide substantial financial support. Establishing partnerships with businesses, NGOs, and other stakeholders can also unlock additional resources, including technical expertise and in-kind contributions. By securing adequate funding and resources, CIGH can scale up their climate programs, ensuring that FCPs have the necessary tools and support to implement effective climate adaptation and mitigation strategies.

Enhance Awareness, Guidance and Advocacy Campaigns

Providing targeted guidance and awareness programs to FCPs lacking climate initiatives is critical. This involves creating comprehensive awareness campaigns that educate FCPs on the importance of climate action and the specific ways they can contribute. Developing easy-to-understand guides and toolkits can help FCPs integrate climate considerations into their activities. Additionally, organising workshops and seminars led by climate experts can provide FCPs with the knowledge and skills they need to implement climate initiatives effectively. Regular follow-ups and support from CIGH can ensure that FCPs stay on track and feel supported in their efforts. By enhancing awareness and providing clear guidance, CIGH can empower more FCPs to take proactive steps in addressing climate change. CIGH can also develop comprehensive advocacy strategies that include public awareness campaigns, community workshops, and engagement with local leaders. Utilising various communication channels, such as social media, radio, and community meetings, can reach a wide audience and raise awareness about climate issues. Partnering with other organisations and stakeholders can amplify the impact of the campaigns. Providing training to caregivers on advocacy skills and encouraging grassroots participation can also foster a sense of ownership and collective action.

Expand Disaster Preparedness and Agricultural Support

Developing and implementing comprehensive disaster preparedness and agricultural support programs is essential for building community resilience. CIGH can start by conducting vulnerability assessments to identify the specific risks and needs of each community. Based on these assessments, tailored disaster preparedness plans can be developed, including the creation of early warning systems, emergency response training, and the establishment of safe shelters. For agricultural support, CIGH can introduce sustainable farming practices, provide training on climate-resilient crops, and offer financial assistance to farmers. Collaborating with agricultural experts and local authorities can ensure that these initiatives are well-informed and effective. By focusing on disaster preparedness and agricultural support, CIGH can help communities withstand and recover from climate impacts more effectively. This could include adding another layer of support to the CIGH input support program-climate tolerant crop varieties for farmers as an adaptation strategy. General training on Climate-Smart Agriculture (CSA) is highly recommended.

Build Targeted Capacity-Building Programs

Implementing targeted capacity-building programs to address specific skill gaps in different territories is crucial for effective climate action. This begins with a thorough assessment to identify areas needing improvement. Tailored training programs can be developed to address these needs, such as specialised sessions in climate science for regions lacking expertise. Continuous support through online platforms and mentoring programs ensures ongoing development. Prioritising capacity-building in climate science, project planning, fundraising, and technical skills is essential. CIGH can organise specialised training sessions, workshops, and practical exercises in these key areas. Collaborating with universities, research institutions, and climate experts will provide access to the latest knowledge and best practices. Additionally, creating a network for peer support and knowledge-sharing among FCPs will facilitate idea exchange and experience sharing. By building expertise in these critical areas, CIGH can enhance FCPs' ability to design, implement, and sustain effective climate adaptation and mitigation projects, ultimately improving community resilience.

Strengthen Weak Territories

Providing additional support to territories with significant capacity gaps is essential for balanced development. CIGH can prioritise these territories for targeted interventions, including intensive training programs, mentorship, and resource allocation. Regular monitoring and evaluation can help track progress and identify areas needing further support. Establishing local partnerships with organisations that have expertise in specific areas can also provide valuable resources and knowledge. By focusing efforts on the weakest territories, CIGH can ensure that all regions have the necessary capacities to effectively address climate change, leading to more equitable and comprehensive climate resilience across their operational areas.

Diversify and Deepen Climate Actions

Expanding the range of climate initiatives beyond tree planting and environmental stewardship to include more diverse and comprehensive actions is crucial. CIGH can introduce programs that address various aspects of climate resilience, such as sustainable agriculture, water management, and renewable energy projects. Engaging with caregivers to identify their specific needs and priorities can ensure that the initiatives are relevant and impactful. Additionally, fostering partnerships with other organisations and experts can bring in new ideas and resources. By diversifying and deepening their climate actions, CIGH can create more holistic and effective interventions that address the multifaceted impacts of climate change on communities.

Sustain Impact of Educational Programs

Developing strategies to sustain interest and practical application of climate education is vital for long-term success. CIGH can create interactive and engaging educational programs that involve hands-on activities, community projects, and regular follow-up sessions. Incorporating climate education into school curricula and community events can ensure continuous learning and reinforcement. Collaborating with educators, local leaders, and climate experts can enhance the quality and relevance of the programs. Providing resources such as educational materials, toolkits, and online platforms can support ongoing learning. By sustaining the impact of educational programs, CIGH can foster a culture of climate awareness and action within communities.

Expand Food and Water Security Initiatives

The most pronounced impact of climate change has been reflected within the food systems. Therefore, increasing focus on food and water security initiatives in regions with significant threats is essential for building resilience. CIGH can implement programs that promote sustainable agricultural practices, such as crop diversification, soil conservation, and water-efficient irrigation techniques. Providing training and resources to farmers on climate-resilient crops and farming methods can enhance food security. Additionally, improving water management through rainwater harvesting, efficient use of water resources, and the construction of boreholes can ensure reliable access to clean water. Collaborating with agricultural experts and local authorities can ensure the effectiveness and sustainability of these initiatives. By enhancing food and water security, CIGH can help communities withstand and adapt to climate-induced challenges.

Develop Youth climate programs to increase awareness and sustain interest of youth and children

Compassion Climate Ambassador Program (CCAP): Compassion Ghana should establish a Climate Ambassador Program to foster local climate leadership. This program would involve selecting and training individuals from each Frontline Church Partner (FCP) to serve as climate ambassadors. Selection criteria should focus on interest in environmental issues, leadership qualities, and community service commitment. Comprehensive training should be provided in climate science, sustainable practices, project planning, and community engagement, leveraging partnerships with universities and climate experts. Continuous support through online learning platforms, mentoring programs, and regular workshops will ensure ambassadors stay updated. Creating a network for these ambassadors to share ideas and best practices will foster collaboration. Monitoring and evaluation metrics will assess

the program's effectiveness and provide feedback for improvement. This program will empower local leaders to drive climate action and environmental stewardship within their communities.

One Child One Tree (1C1T) Initiative: Compassion Ghana can launch a One Child One Tree (1C1T) initiative to involve children in environmental conservation. Educational programs should teach the benefits of trees, incorporated into school curriculums and extracurricular activities. Organising tree planting events with local schools, FCPs, and community groups will engage children in planting and caring for trees. Providing care guidelines and resources, supported by parents, teachers and the community will ensure ongoing maintenance. Recognition programs to celebrate successful tree care and partnerships with environmental organisations and nurseries for resources will support the initiative. Incentive packages for good stewards of the 1C1T can be incorporated to reward commitment. This program will instil environmental responsibility in children, contribute to reforestation, and enhance community sustainability.

7.3 Limitations of the Study

The study is not without limitations, though efforts were made to minimize the effect of the limitation on the quality of the findings being reported. The key limitation was the resource constraint that did not allow for a full census data collection across the 400 FCPs.
The findings' capacity to be generalised may be restricted by the limited sample size of 100. Larger samples usually reflect the population better. However, the mixed study approach adopted for the study ensured a robust data collection, analysis and reporting were done to give a true representation and reflection of the state of climate-related efforts at the FCP levels. Though the sample size for the survey was smaller, the extra 100 qualitative participants through key in-depth interviews, key informant interviews and focus group discussions increased the robustness of the study as findings were adequately triangulated. The responses from the qualitative interviews reached a point of saturation, where the responses from one territory or group to the other were no longer different. This provides some form of quality assurance to the generalizability of the findings at all the FCP level. A full census of all 400 FCPs is recommended for future studies for a more robust quantitative analysis to be conducted.

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Appendices

LIVELIHOOD AND LIVING STANDARDS	NORTHERN	SOUTHERN	CENTRAL-WESTERN	EASTERN
%without durable materials (blocks,bricks)	0.22475	0.23075	0.4359	0.58745
%without access to internet connectivity	0.04165	0.15385	0.15705	0.12935
% without access to good roads	0.52885	0.3077	0.48075	0.47205
% clusters that have experienced displacement from home	0.42625	0.1923	0.1218	0.4658
% clusters that have experienced loss of income or livelihood	0.7628	0.1923	0.4455	0.6966
% clusters that have experienced labor exploitation of children	0.2051	0.08335	0.12235	0.43055
% clusters that have experienced low participation in psychosocial activities	0.11855	0.04165	0	0.08335
%Unemployed	0.85155	0.15385	0.16665	0
% do not often depend on ecosystem services	0.23075	0.03845	0.16025	0.1748
% with impact on food production or availability due to climate change	0.83975	0.4231	0.91665	0.78675
% without secure food supply	0.4519	0.15385	0.27565	0.8252
% households where children went to bed hungry	0.48395	0.34615	0.6827	0.75525
% clusters without Enhanced Resilience	0.9231	0.5	0.7628	0.74825
% clusters without Economic Benefits	0.84295	0.5	0.83655	0.83915

%clusters without Food Distribution Programs	0.27885	0.5	0.1218	0.77275
%without financial institutions	0.7596	0.3077	0.3173	0.24475
%with difficulty accessing credit	0.6795	0.15385	0.4359	0.38815

HEALTH AND DISASTER	NORTHERN	SOUTHERN	CENTRAL-WESTERN	EAST-ERN
% clusters that have experienced extreme weather events	0.7532	0.46155	0.59935	0.8846
% clusters that have experienced health issues	0.6378	0.3077	0.5609	0.63675
% clusters that have experienced respiratory diseases	0.72115	0.125	0.53495	0.48615
% clusters that have experienced water borne diseases	0.5641	0.125	0.04545	0.4167
% clusters that have experienced poor nutrition and food security	0.88145	0.375	0.83915	0.44445
% clusters that have experienced mental health	0.11855	0.04165	0.03845	0.15275
% without health facility in their communities	0	0.1154	0.1218	0.12235
Number of health facilities in the community	0.367381	0.05	0.29	0.245
% without access to safe sanitation	0.41345	0.3846	0.35895	0.6014
%clusters without disaster prepard-ness training	0.8846	0.5	0.83655	0.95455
% clusters without Health and Well-being	0.6378	0.5	0.64425	0.6329
%clusters without Emergency Re-sponse Plans	0.6154	0.5	0.5609	1

SOCIAL INFRASTRUCTURE AND ADAPTATION STRATEGIES	NORTHERN	SOUTHERN	CENTRAL-WESTERN	EASTERN
% clusters that have experienced food and water scarcity	0.8846	0.3846	0.83655	0.41025
Number of public toilet facilities in the community	0.240632	0.23	0.282333	0.435
% without water availabity	0.5641	0.23075	0.4359	0.4266
%clusters without health and wellness initiatives	0.65065	0.46155	0.40065	0.58745
%clusters without food and water security projects	0.7628	0.5	0.67625	0.8252
%clusters without environmental conservation activities	0.5609	0.3077	0.4423	0.87065
% clusters without Fostered Community Engagement	0.76925	0.46155	0.60895	0.95455
% clusters without Access to Resources	0.83975	0.5	0.95835	1
% clusters withoutYouth Involvement	0.59935	0.3846	0.9199	0.8322
% clusterswithout Policy and Advocacy	0.96155	0.5	1	1
% clusters without Climate Change Workshops	0.71795	0.5	0.83975	0.87065
%clusters without Youth Climate Clubs	0.9231	0.5	0.96155	1
%clusters without Tree Planting and Conservation Projects	0.2404	0.26925	0.40385	0.9091
% clusters without Interactive Workshops	0.8045	0.5	0.83655	0.9231
%clusters without Sustainable Agriculture Programs	0.66665	0.5	0.4391	0.96155

%clusters without Community Gardens	0.96155	0.34615	1	1
%clusters without Rainwater Harvesting	0.71475	0.5	0.875	1

EDUCATION	NORTH-ERN	SOUTH-ERN	CETRAL -WESTERN	EASTERN
% clusters that have experienced poor access to educational facili-ties	0.3173	0.16665	0.12235	0.36115
% clusters that have experienced migration of youth	0.4872	0.04165	0.5035	0.25
% clusters that have experienced low school attendance rate	0.60575	0.29165	0.3636	0.56945
% without formal training/ sensitization on climate change	0.9231	0.46155	0.9199	0.87065
% clusters without accessible education facilities	0	0	0.0801	0
% with disruption to school activities as a result of climate change	0.23395	0.15385	0.3974	0.2657
% with no programs aimed at addressing climate change	0.3269	0.26925	0.16025	0.5035
%clusters without educational programs on climate change	0.40385	0.46155	0.35895	0.75525
% clusters without Increased Awareness	0.16345	0.4231	0.16025	0.74825
% without sufficient knowledge and skills	0.7276	0.5	0.6859	0.6259

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