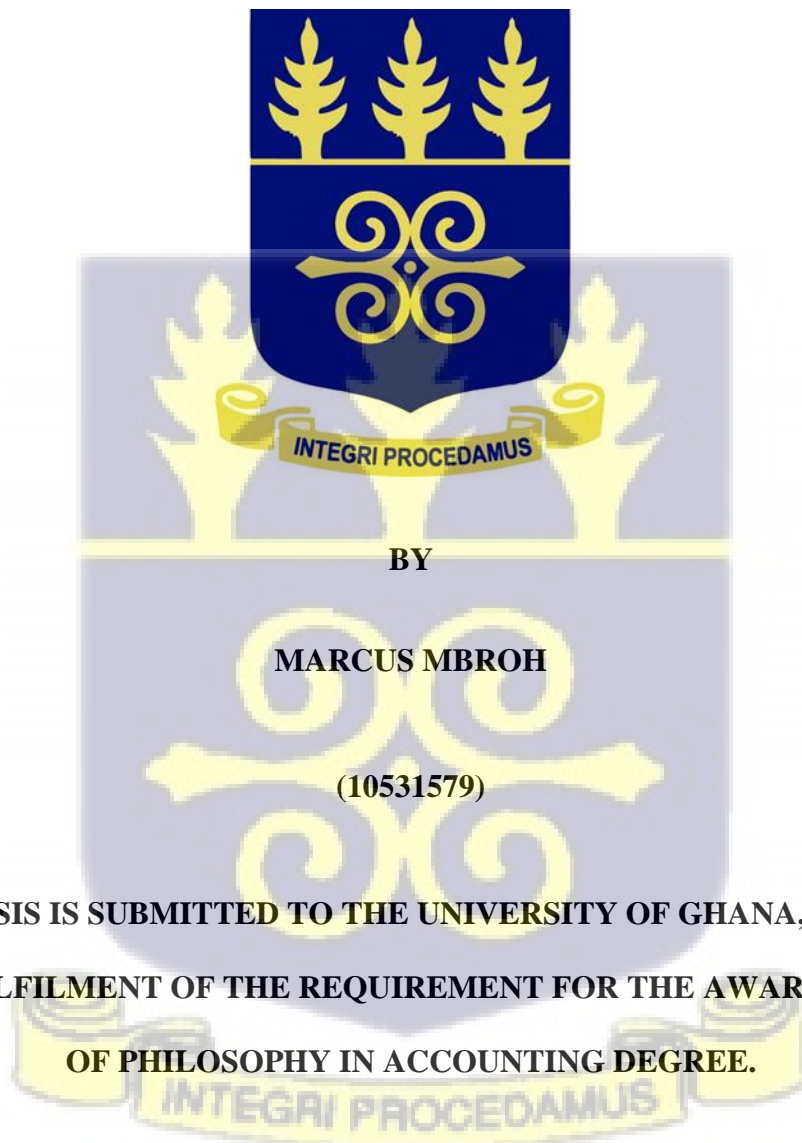


University of Ghana <http://ugspace.ug.edu.gh>

UNIVERSITY OF GHANA

COLLEGE OF HUMANITIES

**CLIMATE CHANGE ACTION AND REPORTING: THE ROLE OF THE  
ACCOUNTING PROFESSION**



BY

MARCUS MBROH

(10531579)

**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON, IN  
PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER  
OF PHILOSOPHY IN ACCOUNTING DEGREE.**

**DECEMBER, 2021**

## DECLARATION

I, Marcus Mbroh, do hereby declare that this thesis is a result of my research and has not been presented for any academic award in any other University. All references have been duly acknowledged.



MARCUS MBROH  
(10531579)

19<sup>th</sup> August, 2022

DATE



**CERTIFICATION**

I hereby certify that this thesis was supervised following procedures laid down by the University.



19<sup>th</sup> August, 2022

.....  
DR. CLETUS AGYENIM-BOATENG

.....  
DATE

(SUPERVISOR)

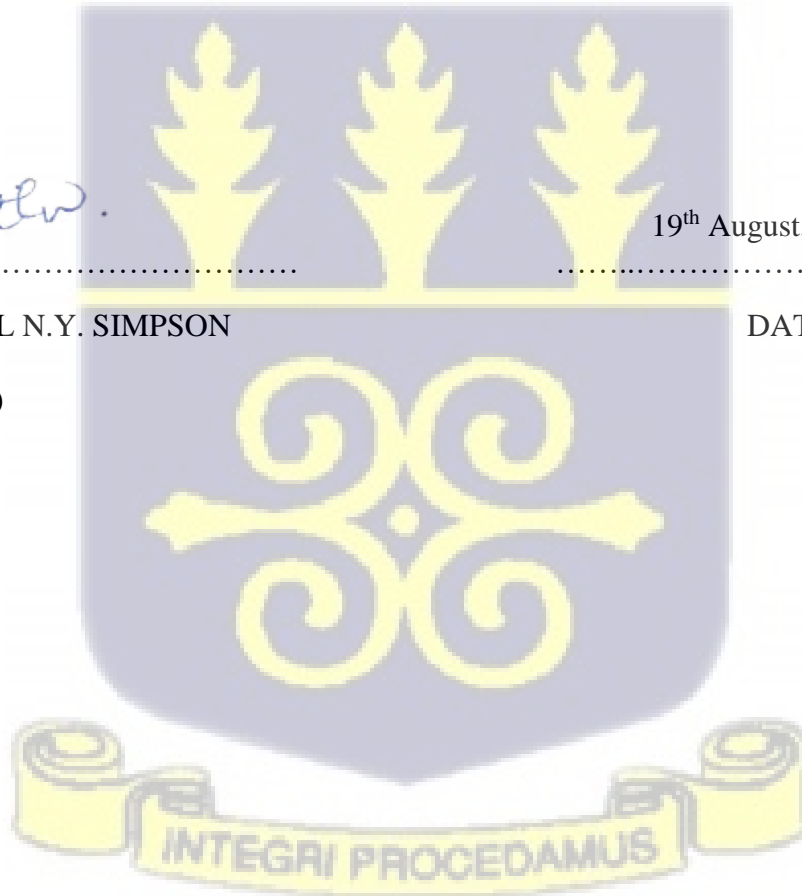


19<sup>th</sup> August, 2022

.....  
PROF. SAMUEL N.Y. SIMPSON

.....  
DATE

(SUPERVISOR)



**DEDICATION**

I dedicate this thesis to my supportive parents, Mr. Kojo Essuman Mbroh and Madam Grace Okyere.



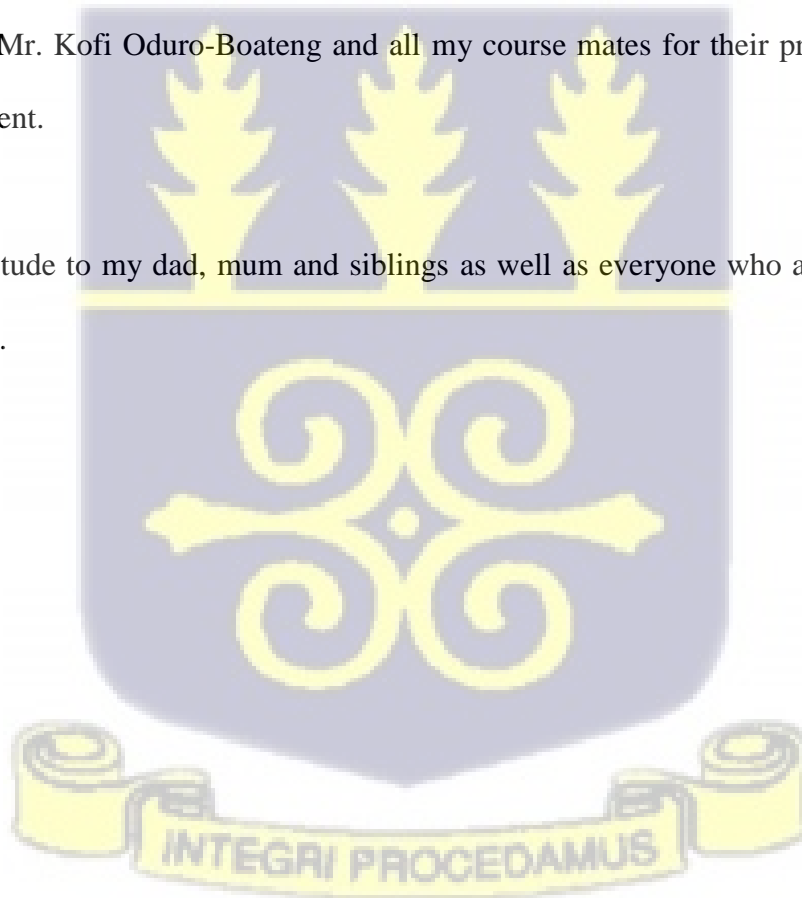
## ACKNOWLEDGEMENT

My heartfelt appreciation goes to my supervisors, Dr. Cletus Agyenim-Boateng and Dr. Samuel N.Y. Simpson, for their guidance, patience and encouragement from the start of this study to its completion. I am grateful to them for accepting to be my supervisors.

I am also grateful for the support, encouragement and contribution of the lecturers of the Department of Accounting, University of Ghana.

I say a big thank you to Mr. Augustine Addo, Mrs. Judith Barima Kwaako, Mr. Matthias Mbroh, Mr. John Kyei, Mr. Kofi Oduro-Boateng and all my course mates for their profound assistance and encouragement.

My sincere gratitude to my dad, mum and siblings as well as everyone who assisted me on my research journey.



## ABSTRACT

The study explores the role of the accounting profession in climate change action and reporting. More specifically, the study examines what and how the accounting profession can influence climate change action and reporting. In doing so, Abbott's theory on the systems of profession was adopted as a theoretical lens to guide the study. The qualitative case study approach was adopted where data was collected through semi-structured interviews. Data analysis was carried out using thematic analysis where data collected was condensed, displayed, and analysed for conclusions to be drawn. The study finds that the accounting profession has categorised climate change as an environmental issue. Within the accounting profession are structural and social actors who are engaging in intraprofessional and interprofessional relations to refine accounting knowledge systems that inform accounting professionals on climate change reporting. Also, the study finds other roles of the accounting profession such as creation of awareness of climate change by accounting professional bodies and provision of climate change reporting standards as prescriptions to contribute to climate action. The findings of the study provide practical implications for the accounting profession to modify traditional accounting practices and recommends that climate change action and reporting should be integrated into accounting pedagogy.

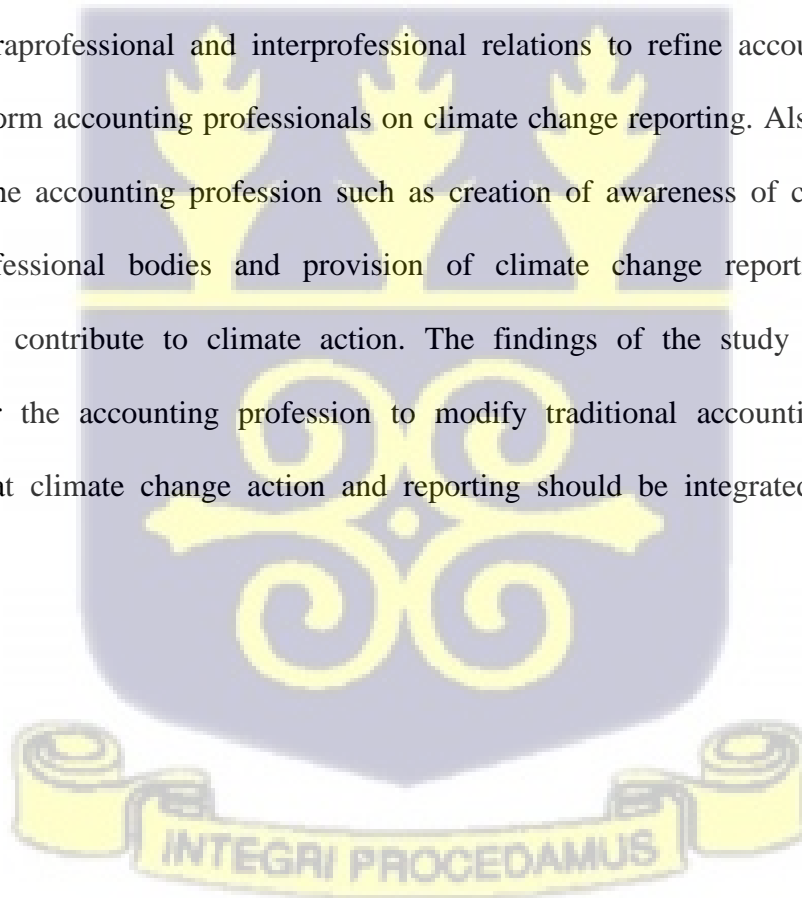


TABLE OF CONTENTS

DECLARATION .....	i
CERTIFICATION .....	ii
DEDICATION .....	iii
ACKNOWLEDGEMENT .....	iv
ABSTRACT .....	v
LIST OF FIGURES .....	ix
LIST OF ACRONYMS AND ABBREVIATIONS .....	x
CHAPTER ONE .....	1
INTRODUCTION .....	1
1.1 Background of the Study .....	1
1.2 Problem Statement and Research Purpose .....	4
1.3 Research Objectives and Questions .....	7
1.4 Significance of the Study .....	7
1.5 Methodology .....	8
1.6 Organisation of the Study .....	9
CHAPTER TWO .....	11
LITERATURE REVIEW .....	11
2.0 Introduction .....	11
2.1 Climate Change .....	11
2.1.1 Causes of Climate Change .....	12
2.1.1.1 Greenhouse Effect .....	13
2.1.1.2 Volcanic Eruptions .....	14
2.2 Climate Change Action and Reporting .....	14
2.2.1 Stakeholder Institutions and Greenhouse Gas Reporting .....	16
2.2.2 Stakeholder Contributions to Climate Action .....	17
2.3 Overview of the Evolution of Accounting Professional Traits .....	18
2.3.1 Accounting Profession’s Climate Action Commitment .....	20
2.3.2 The Accountancy Body and Climate Change in Ghana .....	21
2.4. Theoretical Framework .....	23
2.4.1 Andrew Abbott’s Theory of the System of Professions .....	25

2.4.1.1 Jurisdictions .....	25
2.4.1.2 Structural and Social Accounting Stakeholders.....	27
2.4.1.3 Specialised Knowledge and Abstraction .....	28
2.4.1.4 Professional Development Activities.....	30
2.4.1.5 Jurisdictional Shift of the Accounting Profession .....	33
2.5 Chapter Summary.....	35
CHAPTER THREE .....	36
METHODOLOGY .....	36
3.0 Introduction.....	36
3.1 Research Design.....	36
3.1.1 Research Paradigm .....	37
3.1.1.1 Ontology .....	37
3.1.1.2 Epistemology .....	38
3.1.2 Research Approach.....	39
3.1.3 Research Strategy .....	40
3.2 Data Collection Methods.....	41
3.2.1 Population, Sampling and Sampling Technique.....	42
3.2.2 Semi-Structured Interviewing.....	43
3.2.2 Ethical Considerations.....	44
3.3 Data Analysis .....	45
3.3.1 Data Condensation.....	45
3.3.2 Data Display .....	46
3.3.3 Drawing of Conclusions .....	47
3.4 Chapter Summary.....	47
CHAPTER FOUR.....	48
PRESENTATION AND DISCUSSION OF FINDINGS.....	48
4.0 Introduction.....	48
4.1 Perceptions of Accounting Professionals on Climate Change Action and Reporting .....	48
4.1.1 Climate Risk Assessment .....	49
4.1.1.1 Colligation and Categorisation of a Consolidated Framework to Climate Risk Assessment.....	51

4.1.2 Climate Risk Valuation .....	52
4.1.3 Disclosure of Climate-related Matters.....	54
4.2 Initiatives of the Accounting Profession towards Climate Change Action and Reporting.	56
4.2.1 Intra-professional and Interprofessional Relations of the Accounting Profession .....	57
4.2.1.1 Collaborative Consultations.....	57
4.2.1.2 Awareness Creation on Climate Change .....	59
4.2.2 The Role of ICAG and Other Professional Associations .....	60
4.2.3 Prescriptions for Climate Action and Reporting .....	60
4.2.4 Climate Change Accountability.....	62
4.2.5 Ambiguity within Treatment Classification Systems.....	63
4.3 Professional Development towards Climate Change Action and Reporting.....	65
4.3.1 Jurisdictional Shift towards Climate Action and Reporting .....	66
4.4 Chapter Summary.....	67
CHAPTER FIVE .....	68
SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS.....	68
5.0 Introduction .....	68
5.1 Summary of Study and Findings.....	68
5.1.1 Perceived Roles of the Accounting Profession.....	69
5.1.2 Structural and Social Accounting Stakeholders .....	70
5.1.3 Professional Development towards Climate Change Action and Reporting.....	70
5.2 Conclusions and Contributions .....	71
5.3 Limitations of the Study.....	73
5.4 Recommendations .....	73
5.4.1 Recommendation for Future Research .....	74
References.....	76
APPENDIX.....	86
Interview Guide.....	86

**LIST OF FIGURES**

Figure 2. 1 Global Warming Projections from 1960 to 2100 ..... 11

Figure 2. 2 Concentration of Atmospheric Carbon dioxide..... 13

Figure 3. 1 Data Display on Thematic Areas..... 46



**LIST OF ACRONYMS AND ABBREVIATIONS**

ABBREVIATION	FULL NAME
A4S	Accounting for Sustainability
CCGI	Climate Change Governance Index
CDP	Carbon Disclosure Project
CDSB	Climate Disclosure Standards Board
CSA	Corporate Social Accounting
CSR	Corporate Social Responsibility
EPA	Environmental Protection Agency
EU	European Union
EU ETS	European Union Trading Emission Scheme
FSB	Financial Stability Board
GAAP	Generally Accepted Accounting Principles
GRI	Global Reporting Initiative
MESTI	Ministry of Environment, Science, Technology and Innovation
NAP	National Adaptation Plan
NCCC	National Climate Change Committee
NCCP	National Climate Change Policy
IASB	International Accounting Standards Board
ICAG	Institute of Chartered Accountants, Ghana
IFRS	International Financial Reporting Standard
IPCC	Intergovernmental Panel on Climate Change
ISSB	International Sustainability Standards Board

SEA	Social and Environmental Accounting
SER	Social and Environmental Reporting
SR	Sustainability Reporting
SUSBA	Sustainable Banking Assessment
TBL	Triple Bottom Line
TFCD	Task Force on Climate-related Financial Disclosures
TRI	Toxic Release Inventory
UGBS	University of Ghana Business School
UN	United Nations
UNEP	United Nations Environment Programme



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

There is mass concern that global climate change is happening and will have negative consequences on both human and non-human life if it is left unchecked (Bebbington, Sneider, Stevenson, & Fox, 2020). The desire to address this development has led to international agreements such as the Paris Climate Agreement and Kyoto Protocol to regional laws such as European Union Emissions Trading Scheme and UN Sustainable Development Goals (G13) and national policies such as the National Climate Change Policy in Ghana (European Commission, 2021; Arndt, Asante, & Thurlow, 2015). There have been other efforts at national levels (for instance Sweden, United Kingdom, Scotland, and New Zealand) to address the climate change crisis through regulatory government carbon emissions regimes such as Toxic Release Inventory (TRI) and Climate Disclosure Board (Climate Disclosure Standards Board, 2021). Primarily, all these initiatives are aimed at reducing greenhouse gas emissions to the minimum to preserve life on earth. According to the Intergovernmental Panel on Climate Change (IPCC) (2019), global temperatures should be capped at 1.5 degrees Celsius since beyond 2 degrees Celsius is detrimental to life flourishing on planet Earth.

Global estimates indicate that the climate is being depleted by human activities which implies that aggressive climate measures should be implemented to ensure the climate is protected (Bebbington *et al.*, 2020; IPCC, 2019). In a move to cap the effects of climate change, over 150 countries agreed under the Paris Agreement in 2015 to reduce greenhouse gas emissions to accelerate global attempts to transition to a low-carbon economy (IPCC, 2019). Most of these countries have set targets for achieving net-zero carbon emissions through legislation and the use of edge-cutting technologies. For instance, governments in the United Kingdom and Scotland aim at achieving net-zero greenhouse gas emissions by 2050 and 2045

respectively. Other nations such as China, Indonesia, and France among others have devised sustainability initiatives to achieve net-zero greenhouse emissions by 2050.

Warnings on climate change from scientists and its significant impact on sectors such as tourism, health, agriculture, water, and forestry, have led to environmental stakeholder initiatives that seek to address the climate-related risks (IPCC, 2018). Government legislation as well as climate action benchmarks by international and local environmental stakeholders have aimed at regulating and reducing greenhouse gas emissions among organisations (Bebbington *et al.*, 2020).

Beyond government legislation and other stakeholder benchmarks, voluntary initiatives aimed at mitigating risks associated with climate change have been proposed by professional jurisdictions such as finance, insurance, and accounting. The accounting profession, in response to the need for accountability on climate-related issues and pressures from stakeholders, has sought to provide climate change disclosure guidelines (Deloitte, 2020). This is because, climate change action has become an integral aspect of organisational risk management and business strategy of some sectors especially the energy and transportation sectors (Arora & Lodhia, 2016). These climate change actions are targeted at reducing carbon footprints characterised by emissions of greenhouse gases into the earth's atmosphere. Failure to manage carbon footprints can expose corporations to both physical risks and transition risks (KPMG, 2017). Physical risks comprise disruption to business operations due to climate change such as extreme weather conditions while transition risks constitute risks of transitioning to a low carbon economy such as technological, market, reputational, political, and legal risks (Deloitte, 2020). However, carbon footprint management presents organisations with opportunities including government subsidies, higher reputation-related returns, and other benefits in long-term business profitability (Arora & Lodhia, 2016).

Historically, the accounting profession has been associated with and participated actively in environmentally sensitive issues since the 1970s (Cadez, Czerny, & Letmathe, 2018). Over the years, the profession has been promoting market initiatives to solve environmental degradations while contributing

to climate change action as well as creating awareness of the impacts of organisational activities on the environment (Dillard, Brown, & Marshall, 2005). The foregoing over the years prompted accounting researchers to propose other concepts such as Social and Environmental Reporting (SER), Sustainability Reporting (SR), Corporate Social Responsibility (CSR), and Corporate Social Accounting (CSA) (Bebbington *et al.*, 2020; Deegan, 2017; Canning & O'Dwyer, 2016; Gray, Brennan, & Malpas, 2014). These concepts sought to examine models or normative statements that are concerned with measuring, valuing and disclosing external information associated with the environmental performance of organisations (Deegan, 2017).

In parallel, other developments in standardised reporting practices emerged over the years. Notable among them are the Global Reporting Initiative (GRI), the AA1000 Series of Standards, and the European Union's Guidelines on reporting climate-related information to provide standard templates, software, data collection, and report preparation guidelines to assist organisations to report on environmental impacts, economic and social performance, and are now the most widely used sustainability reporting standards (GRI, 2016). This has motivated other regulatory disclosure initiatives such as the European Union's Corporate Sustainability Reporting Directive, and the plan of the IFRS Foundation to establish the International Sustainability Standards Board (ISSB). These initiatives among others have contributed to the vast arena of sustainable development and related sustainability reporting standards which encompass climate change issues (Lynch, Lynch, & Casten, 2014). In so doing, other initiatives sought to solely focus on climate change action such as the Task Force on Climate-related Financial Disclosures (TCFD), founded by the Financial Stability Board (FSB) in 2015, to provide recommendations on physical and commercial risks associated with a global transition to low carbon economy (KPMG, 2017).

Increasing calls by environmental stakeholders in developed economies for a transition towards a low carbon economy have motivated increasing calls for climate change action among developing economies in the African continent. Average temperatures of warming trends within African subregions such as Central and West Africa have risen (warming trend for 1991 to 2020 is higher than the period of 1961 to

1990) leading to adverse effects including an increase in food insecurity and population displacement (World Meteorological Organization, 2021). Also, scenario-based analyses of these subregions have estimated extreme poverty rates to increase by 2030 due to the impacts of climate change (Jafino *et al.*, 2020). While previous studies have shown that the nature of climate change and how it affects economies have implications for the level of involvement of stakeholder groups, the role of the accounting profession towards the natural environment is still a major concern to accounting academics (Nartey, 2018; Chambwera & Stage, 2010). It is, therefore, important to examine the roles of the accounting profession toward climate action, especially in the less developed world. There is the need to study what the roles of the accounting profession are, and how these roles can evolve to contribute to climate change action and reporting (Bickel *et al.*, 2020).

## **1.2 Problem Statement and Research Purpose**

Climate change reporting and action is of increasing interest to accounting researchers but it is often categorised under the large umbrella of sustainability reporting (Comyns, 2016). While prior studies have emphasised ethical, social, economic, and environmental aspects of sustainability reporting and their integration with corporate reports, much is yet to be done in the field of climate change reporting (Comyns, 2018). Given that many accounting academics within the field of sustainability reporting are motivated by the desire to see the sustainability performance among corporations, there is surprisingly little research into “what, “where” and “how” to report on climate-related issues, especially in emerging economies (Belal & Owen, 2015). Literature suggests that this is because there is no consolidated climate change reporting framework within the accounting profession (Bickel *et al.*, 2020). These include the works of Andrew and Cortese (2011) on accounting for climate change and self-regulation of carbon disclosures, Hrasky (2012) on carbon footprints and legitimization strategies, Schneider and Michelon (2017) on environmental liabilities and diversity in practice under IFRS and Comyns (2018) on climate change reporting and multinational companies. These studies have focused on critical analysis of the link between social and climate-related disclosures (Arora & Lodhia, 2016), examination of reports on climate-related matters by

state organisations (Lynch, 2010), types and quality of climate-related disclosures (de Aguiar & Bebbington, 2014), and cross-country assessment of accounting methods for climate change (Bebbington *et al.*, 2020). This study contributes to the academic discourse by examining the roles of the accounting profession toward climate change action and reporting.

The accounting profession recognises its role in the realisation of sustainability goals related to climate change since its expanded roles and skills enables the profession to participate in decision-making and act as advisors to private corporations and government institutions (Schaltegger & Ortas, 2017). In recent years, financial and accounting organisations have demonstrated their support for climate action initiatives through collaborations with the European Union (EU) and United Nations (UN) while accounting professional bodies commit to education on climate change action and reporting (Asonitou, 2021). A distinguished role of the accounting profession in collaboration with the UN special envoy for climate change and finance is its focus on implementing actions that foster financial reporting and risk management practices to achieve the 1.5°C goal of the Paris Agreement (Association of International Accountants, 2020; Asonitou, 2021). In addition, accounting researchers are examining financial systems and how climate change and preventive policies could be devised as well as the effects of frameworks such as the Sustainable Banking Assessment (SUSBA) and the Climate Change Governance Index (CCGI) (Saliya & Pandey, 2021).

To date, the climate change reporting literature has given little consideration to perceptions of accounting professionals on climate change reporting and how initiatives by the accounting profession are integrated with financial reporting systems (Comyns, 2018). Deegan (2017, p.68) admits that searching questions such as “what has the environment got to do with accounting?” are usually asked by accounting professionals who possess a narrow view of accounting and its impact on accountability. Following this, Gray, Adams, and Owen (2014) suggest that accounting stakeholders should recognise the shortfall of the accounting profession towards climate change concerns and make commitments to question current accounting dogma

and practices. Besides, international accounting stakeholders such as the International Accounting Standards Board (IASB) and the International Federation of Accountants (IFAC) only recommend current IFRS to aid reporting on climate-related risks and opportunities associated with financial assets or liabilities (Schneider & Michelon, 2017). This study examines the perspectives of accounting professionals on climate change reporting and initiatives as well as their roles within the Ghanaian context.

There have been several calls for the accounting profession to examine its contributions toward the mitigation of sustainability concerns such as climate change (Deegan, 2017; Arora & Lodhia, 2016). Also, a vast body of accounting literature mostly relies on secondary data such as annual reports, news releases, and share prices among others (Schneider & Michelon, 2017). This study responds to Deegan's (2017) call for a shift in methodological approach since the majority of climate change reporting research has adopted a positivistic approach for the last two decades. This study adopts the interpretivist paradigm and aims to contribute to the research agenda on the accounting profession's role in climate change action. Similarly, Hrasky (2012) intimates that researchers should make the leap of faith from positivistic research design to case-based research aimed at impacting policy development and climate change reporting frameworks. This study, therefore, is motivated to examine how accounting professionals are interested in promoting climate change reporting and action using a qualitative methodology. A developing nation like Ghana provides an appropriate and unique context to examine the perspectives of accounting professionals on climate change reporting as well as the contribution of accounting professionals toward climate change action (Arora & Lodhia, 2016). This is largely due to the disproportional negative impacts of climate change on sectors of the economy, population growth, and poverty rates of developing countries (IPCC, 2018). Developing countries are more vulnerable to adverse effects of climate change due to the sensitivity of their environments, low adaptive capacity, and heavy reliance on forestry and agriculture (Chambwera & Stage, 2010). This study, therefore, explores how the accounting profession is involved in climate change action and reporting. More specifically, the study seeks to explain how the interactions among accounting

stakeholders and other environmental actors enable the accounting profession to make a jurisdictional claim within the climate change arena.

### **1.3 Research Objectives and Questions**

This study seeks to obtain an understanding of the accounting profession's roles toward climate change action and reporting. More specifically, the study seeks to:

- i. explore the perceptions of accounting professionals on climate change action, and
- ii. examine the initiatives of accounting stakeholders towards reporting on climate-related matters.

Besides, the study set out to explore the processes adopted by the accounting profession toward climate change action. As a result, the study poses the following questions:

1. What are the perceptions of accounting professionals on climate change action?
2. How has the accounting profession contributed toward climate change action and reporting?

### **1.4 Significance of the Study**

This study highlights environmental reporting practices and ways in which accounting professionals within the Ghanaian context contribute to climate change action. Climate change is an environmental concern crucial to the survival of both human and non-human species on earth. Particularly, the study contributes to academia, practice, and policy. Its contributions to these areas are elaborated in the following paragraphs.

This study contributes to academia by stimulating further discussions on the roles of the accounting profession toward climate change action and reporting. The unique context of a developing country like Ghana enables this study to highlight similarities and differences with the developed world. By building on prior studies, this study provides rich and contextualised insights into the accounting profession's

contribution to climate change action and reporting. This study recommends to accounting stakeholders in the academic community to foster the integration of climate-related matters into accounting pedagogy.

In addition, this study seeks to impact government and organisational policies on environmentally-sensitive issues. The study discusses climate disclosure practices that can be adopted by accounting professionals. Furthermore, the findings of this research explain contextual issues associated with climate change reporting to inform government policies and organisational strategies aimed at dealing with the environmental crisis of climate change. The government could take cues from the recommendations of the study to formulate pragmatic policies and legislation on climate change action and reporting.

Regarding practice, the Institute of Chartered Accountants (ICA) and accounting education institutions like the accounting department of the University of Ghana Business School (UGBS) as well as other accounting practitioners in organisations will benefit from the practical recommendations of this study. It is anticipated that initiatives and roles of the accounting profession will be integrated into accounting education as well as the practice of accountancy by accounting professionals.

### **1.5 Methodology**

This study adopts the qualitative research approach which enabled the researcher to gain a rich and in-depth understanding of the subject matter in the Ghanaian context of the accounting profession (Cresswell, 2014). The case study method was employed to elicit the views and perspectives of accounting professionals on climate change action as well as how they perceive the accounting profession's contribution to the climate change fight. To do so, semi-structured interviews were conducted until the point of data saturation (Miles, Huberman & Saldana, 2014).

Data collection through semi-structured interviews was carried out simultaneously with data analysis. This is because, data collection and data analysis in qualitative research constitute an iterative process whereby a continuous collection of data shapes subsequent analysis of data (Miles *et al.*, 2014). Analysis of the data was primarily inductive to encourage reflexivity of the researcher (Denzin & Lincoln, 2011). Thematic

analysis was adopted to identify patterns, regularities, irregularities, threads, and categorisation of codes within the data (Miles *et al.*, 2014). Research methods and data analysis techniques are elaborated in chapter three.

## 1.6 Organisation of the Study

This section analyses the chapters to be discussed for the study. The structure of the study is as follows:

Chapter one opens with a background of the study which provides an overview of the phenomenon under study. The problem and purpose statements as well as the significance of the study follow to put the study in its context and explain contributions of the study respectively. The research objectives and research questions are stated in this chapter to highlight goals to be achieved, and inquiries to be made to achieve such goals. A brief overview of the research design to be adopted for the study is presented to emphasise the approach and methods to undertake this study. Also, data collection and analysis techniques are presented to explain how data was collected and analysed concurrently.

Chapter two (Literature Review) provides a summary and analysis of extant literature that are relevant to the subject matter of this research. The chapter discusses empirical literature on climate change reporting. Again, the theoretical framework to view and put the accounting profession in perspective to aid the analysis of data was explained. The chapter, therefore, discusses scholarly work on how the accounting profession contributes to environmentally sensitive issues such as climate change.

Chapter three (Methodology) deals with research approaches and methods employed for the study. The chapter explains the research design in detail and outlines the philosophical assumptions that guide the researcher. The data collection techniques and ethical considerations that are adopted as well as data analysis are also discussed in this chapter.

Chapter four discusses the empirical material obtained through data collection. The chapter details perspectives of accounting professionals, initiatives to be undertaken by the profession, and how the

profession has evolved to consider climate-related issues. The perspectives of various stakeholders in the accounting profession are presented and analysed. The chapter draws on Andrew Abbott's theory of the system of professions as a lens to interpret certain roles and actions performed by accounting professionals regarding climate change action.

Chapter five deals with drawing implications from the findings of the study together with a summary of all findings. The chapter discusses how these implications affect accounting professionals and provides recommendations relevant to practice and policy. This chapter concludes the whole study and provides recommendations for future research.



## CHAPTER TWO

### LITERATURE REVIEW

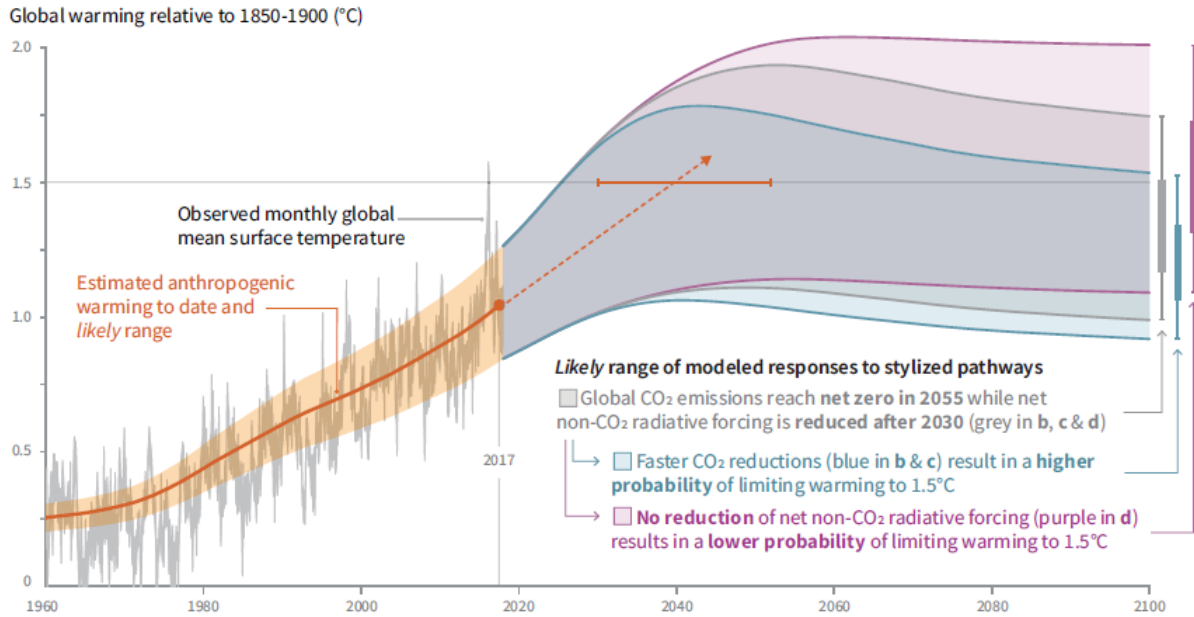
#### 2.0 Introduction

The chapter presents literature on the theoretical lens adopted for this study as well as key themes in the empirical climate change action and reporting literature. The first section discusses empirical literature on climate change, stakeholder contributions to climate action, climate action and reporting, and the accounting profession's commitment to climate action. This is followed by discussions on the theoretical literature which explains the dynamics of professions with an emphasis on the accounting profession.

#### 2.1 Climate Change

Climate change and the increase in carbon footprints are urgent environmental concerns that are key issues to the system of professions (Deegan 2017; Hrasky, 2012). Climate change has been associated with human-induced greenhouse gas emissions that affect the patterns of the weather (IPCC, 2018). According to the Global Risks Report by the World Economic Forum, climate change poses an existential threat to life with severe consequences (World Economic Forum, 2021). Human activities such as the burning of fossil fuels have contributed to about 1.0°C which is above pre-industrial estimates, with the global warming estimate reaching about 1.5°C within 2030 and 2050 if actions are not taken to decrease current greenhouse emissions (IPCC, 2018). Climate change comes with its concomitant climate risks that are estimated to increase over the current climate budget of 1.5°C if current industrial emissions are not reduced significantly.

*Figure 2. 1 Global Warming Projections from 1960 to 2100*



*Source: Intergovernmental Panel on Climate Change Special Report on Global Warming, 2018*

The current measurement of greenhouse gas emissions and global warming indicates that the threat of industrial activities to the environment needs urgent attention. In Figure 2.10 above, an observed monthly surface temperature of the Earth shows the trajectory of global warming if current greenhouse emissions continue (IPCC, 2018). The estimates indicate that it is only a reduction in cumulative carbon dioxide (CO<sub>2</sub>) emissions as well as other harmful gases that will set the earth on the appropriate course of achieving a net-zero carbon budget.

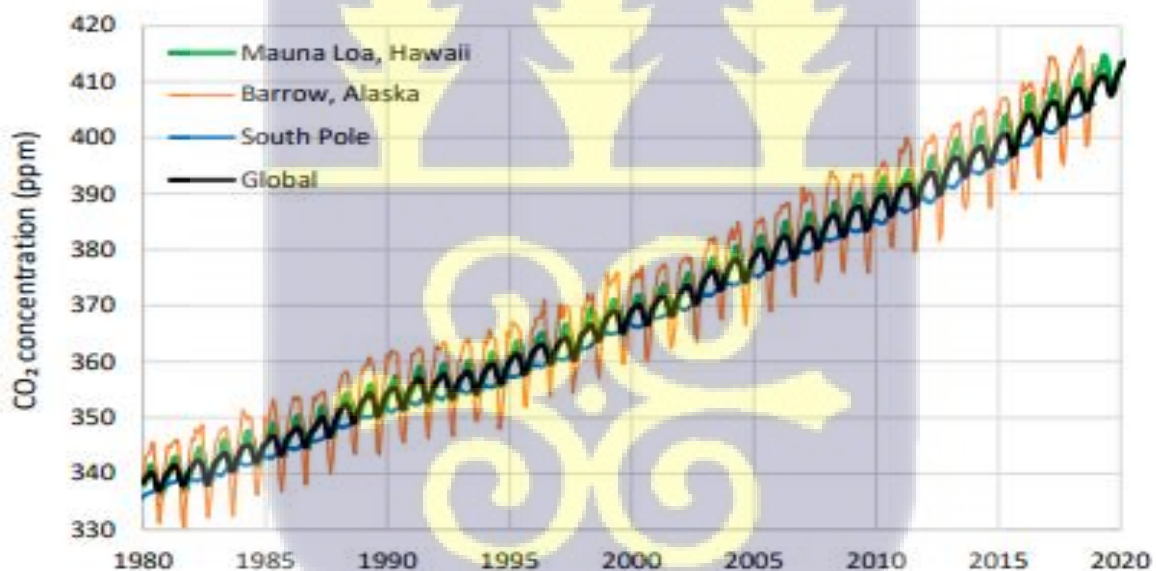
### 2.1.1 Causes of Climate Change

Climate scientists have outlined several causes of the climate change phenomenon comprising atmospheric gases in global warming such as CO<sub>2</sub>, effects of space weather and cosmic rays as well as volcanic eruptions on the surface of the earth (Stenchikov, 2009; Lindsey, 2021).

### 2.1.1.1 Greenhouse Effect

The greenhouse effect comprises a wide range of environmental activities. Lindsey (2021) argues that the greenhouse effect is not only about the concentration of CO<sub>2</sub> whereby reduction of CO<sub>2</sub> will act as the panacea to restore the climate. The greenhouse effect traps infra-red radiations in the atmosphere of the earth by molecules such as carbon dioxide (CO<sub>2</sub>), ozone (O<sub>3</sub>), and water (H<sub>2</sub>O) and redirects these molecules back to the surface of the earth to make it habitable. The absorption of these radiations and redirection back to the surface of the earth is known among climate scientists as the primary greenhouse effect; therefore, the portrayal of the greenhouse effect always as a bad phenomenon is a “myth” (Tuckett, 2009, p. 5).

Figure 2. 2 Concentration of Atmospheric Carbon dioxide



Source: Data series of atmospheric CO<sub>2</sub> from 1980 to 2020, Koutsoyiannis & Kundzewicz, 2020.

Data series on atmospheric CO<sub>2</sub> at the Mauna Loa Observatory at Mauna Loa, Hawaii, National Oceanic and Atmospheric Administration (NOAA) at Barrow, Alaska, USA, and the South Pole

reveal a gradual increase in global temperatures around the globe due to the concentration of greenhouse gases (Koutsoyiannis & Kundzewicz, 2020).

The high concentration of greenhouse gases causes a rise in temperatures, a phenomenon that is labeled as the secondary greenhouse effect. Global temperatures have increased with a remarkable increase in carbon concentration after the industrial revolution era in the 1750s with the highest amount of atmospheric CO<sub>2</sub> estimated to be more than 3 million years ago (Lindsey, 2021). More recently, global temperatures averaged above 1°C indicating a gradual increase in the secondary greenhouse effect (World Economic Forum, 2021).

#### **2.1.1.2 Volcanic Eruptions**

Volcanic eruptions constitute a natural cause of variations in the climate since volcanic constituents affect chemicals in the atmosphere (World Economic Forum, 2021; IPCC, 2018). Lindsey (2021) reports that sulfur-rich gases and volcanic ash enter the earth's atmosphere where they react with atmospheric gases to form a volcanic aerosol. This volcanic aerosol can stay up to three years in the atmosphere of the earth reflecting radiations and absorbing heat energy which impacts the climate. Volcanic eruptions do not only impact the climate in the short term, volcanic radiations can be absorbed by oceans and trigger volcanic-induced activities in the ocean for about a decade (Koutsoyiannis & Kundzewicz, 2020). Besides, volcanic eruption gases such as CO<sub>2</sub>, Nitrogen (N<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and hydrogen sulfide (H<sub>2</sub>S) contribute to atmospheric perturbations which affect climatic conditions.

#### **2.2 Climate Change Action and Reporting**

Climate change threatens all aspects of life on earth including economies, health, nutrition, cultures, weather patterns as well as business activities at the organisational level (Ernst & Young,

2021; IPCC, 2018; Hrasky, 2012). Calls for climate action have marked an important step for organisations as well as the accounting profession to consider climate reporting with organisations integrating sustainability practices in their operations to reduce carbon footprints (Hrasky, 2012). Climate action has been defined as the adoption of approaches to reduce greenhouse gas emissions in an attempt to promote a sustainable future (World Economic Forum, 2021; IPCC, 2018). Climate action has increasingly been associated with stakeholder actions to reduce carbon footprint and achieve a net-zero climate budget (Bebbington *et al.*, 2020). Moreover, climate action initiatives involve a wide engagement of stakeholders such as governments, international organisations, academic institutions, civil society organisations as well as individuals on planet earth (World Economic Forum, 2021). In this regard, environmental actors interact with both formal and informal structures to design systems and technologies capable of contributing to the reduction of carbon footprints and reporting climate-related matters (Bickel *et al.*, 2020).

Climate change reporting comprises collecting, organizing, analysing, and communicating climate-related issues and solutions (Schaltegger *et al.* 2021). According to the UN (2015), reporting on the risks and solutions of climate-related matters should be a vision of and for individual social actors as well as institutions. This is because, there is an urgent need for awareness creation on mechanisms to achieve a rapid and deep reduction of greenhouse gas emissions (Lyon, *et al.*, 2022). As a result, accounting professionals recognise the normative pressures that affect the accounting profession and the need to adopt a climate reporting framework. Besides, accounting professionals perceive that GRI guidelines represent a standardised normative system for climate change-related disclosures (de Grosbois & Fennell, 2022). Standardisation of climate change reporting practices ascribes institutional legitimacy to firms (Comyns, 2018). This puts pressure on the accounting profession and its stakeholders to

devise a climate change reporting framework that seeks to guide accounting professionals in disclosing climate change-related information (de Grosbois & Fennell, 2022).

### **2.2.1 Stakeholder Institutions and Greenhouse Gas Reporting**

The climate change reporting literature engages in discourses about environmental preservation which has served as knowledge about the climate change phenomenon (Andrew & Cortese, 2011). Given that climate change action and reporting are premised on the general assumption that social and structural actors have to do something, an opportunity has been set up to confront the challenge of climate change through institutional collaboration and stakeholder engagements (Bebbington, Brown, Frame, & Thomson, 2007). The increasing calls for climate action and disclosure practices fuel disclosure requirements and recommendations by the Carbon Disclosure Project (CDP), the UN Environment Programme (UNEP), Toxic Release Inventory (TRI), and the Task Force on Climate-related Financial Disclosures (TFCD) among others (KPMG, 2017; Andrew & Cortese, 2011). These initiatives provide climate change reporting requirements for corporations to improve their climate performance. Even though the accounting profession has not standardised specific climate reporting guidelines, accountants can draw on both formal and informal reporting standards to communicate climate-related risks of organisations (Arora & Lodhia, 2016). However, Arora and Lodhia (2016) find that climate-related disclosures are used for organizational reputation and impression management which serves as a diversion from environmental degradation activities. In so doing, corporations engage in greenwashing to portray organizational activities as environmentally friendly in an attempt to maintain their legitimacy (Bebbington *et al.*, 2020). As a result, ascertaining stakeholder contributions to climate action has not only attracted attention among environmental actors, it has become crucial to determine stakeholder actions aimed at addressing the adverse effects of climate change (Andrew & Cortese, 2011).

### 2.2.2 Stakeholder Contributions to Climate Action

The subject of climate action continues to attract stakeholder initiatives aimed at reducing greenhouse gas emissions. Stakeholder initiatives comprise activities ranging from international, to regional, national and individual level commitments (Bebbington *et al.*, 2020). These initiatives vary from mandatory requirements such as climate regulatory frameworks to proactive strategies comprising greenhouse gas emissions mitigation approaches, to reactive climate change actions which tend to meet minimum regulatory frameworks (Cadez *et al.*, 2018; Tavakolifar *et al.*, 2021). However, there is no universal consensus on what constitutes a stakeholder commitment to climate action (Tavakolifar *et al.*, 2021). As a result, an environmental stakeholder is broadly defined as structures or actors that possess the capability to contribute to climate action (World Economic Forum, 2021).

Environmental stakeholders can be grouped into regulative (formal) as well as normative and cultural (informal) categories (Comyns, 2018). Within the formal category, there have been significant regulations on greenhouse gas emissions at institutional levels ranging from global to regional to national climate change reporting guidelines (Andrew & Cortese, 2011). Stakeholder guidelines at the global level comprise Global Reporting Initiative (GRI) whereas the European Union Trading Emission Scheme (EU ETS) qualifies as a regional level reporting framework. The national level boasts of reporting frameworks such as New Zealand Trading Emissions Scheme, Regional Greenhouse Gas Initiative in the United States, and the Energy Transition Law in France among others (Comyns, 2018).

The informal level of stakeholder contributions comprises voluntary climate action and reporting requirements designed to standardise the provision of information. These guidelines like the Greenhouse Gas Protocol are provided by environmental actors who wish to shape the climate

change agenda (Comyns, 2018). Specific climate reporting guidelines may be adopted by certain organisations depending on how these guidelines suit a particular regulatory context (Andrew & Cortese, 2011). Regardless, there are reasons which underpin the adoption of regulatory, cultural, or normative carbon footprint disclosures (Comyns, 2018; Andrew & Cortese, 2011).

Prior studies have enumerated several reasons to explain why environmental stakeholders contribute to climate action including pressure from environmental activists for climate disclosures (Reid & Toffel, 2009); the uncertainty of regulatory frameworks on climate change action, and cost-benefit analysis of low emission investments (Hoffman, 2005); and market pressures as well as strategic environmental initiatives (Cadez *et al.*, 2018). However, there is still concern about the ways accounting professionals perceive their roles toward climate change action and reporting especially in the developing world (Nartey, 2018). By exploring perceptions of accounting stakeholders concerning their roles associated with climate change action and reporting within the Ghanaian context, the contributions of the accounting profession can be ascertained and if not, initiatives that can be implemented can emerge as noted by Belal and Owen (2015). These will form a basis for identifying how professional traits within the accounting profession have changed to incorporate climate-related matters.

### **2.3 Overview of the Evolution of Accounting Professional Traits**

Earlier contributions in the accounting literature sought to identify methods to account for environmental impacts which birthed Social and Environmental Accounting (SEA) and Triple Bottom Line (TBL) (Deegan, 2017). Also, accounting academics have used models from other disciplines such as economics and finance to view environmental problems with a different lens (Hopwood, 2000). Early developments in these accounting concepts of the natural environment considered aspects of energy and waste reporting, compliance and ethical audits, accounting for

environmental assets and liabilities, and environmental impact analysis (Gray & Bebbington, 2000).

Before Neo-liberalism which stems from policies of Thatcherism and Reaganism in the 1980s, professions were viewed as distinct and well-organised groups of occupations characterised by elitism (Dent et al. 2016). This classification of professions was further espoused by the neo-Weberian approach which also saw professions as expert occupations that monopolise work activities and restrict access by maintaining certain high levels of rewards and status. The Weberian approach placed accounting at the heart of rationalising a society under the tenets of capitalism (Chapman *et al.*, 2009). Accounting was instrumental in socio-economic conditions whereby calculative mechanisms are used to estimate profit-making or loss (Chapman *et al.*, 2009).

Another perspective that emerged was the Foucauldian approach which emphasised the role of professions to ensure members become self-regulated (Johnson, 1995). After neo-liberalism ideals, which worked through free-market capitalism, gained traction during the global economic crisis, Giddens (1990) reports that there was a significant rise in interest concerning trust. He intimates that the cause of this phenomenon can be attributed to a “hidden curriculum” in formal education (Giddens, 1990, p. 88). The issue of trust has increasingly been associated with professions in which the accounting profession is no exception (Carnegie & Napier, 2010). Another social construct that has been associated with professions is integrity (Dent et al., 2016).

Aside from the Neo-liberal and Foucauldian perspectives on the evolution of professions, the advent of technologies has fueled a continued transformation of professions together with other political and societal pressures which affect the role and status of professionals in modern times. The accounting profession has equally evolved to consider issues of modernity (Ghattas, Soobaroyen,

& Marnet, 2021; Cooper & Robson, 2006). Over the past decades, environmentally sensitive issues such as climate change have led to many diagnostic accounting categories such as green accounting, sustainability, and climate change reporting which are fueling the evolution of the accounting profession towards environmental concerns (Bebbington *et al.*, 2020). The accounting profession, as a social practice, fosters these developments about climate change action and reporting to demonstrate its commitment to meeting the needs of its stakeholders (Cadez *et al.*, 2018).

### **2.3.1 Accounting Profession's Climate Action Commitment**

Over the past decades, there have been key developments in the accounting profession to tackle environmentally sensitive issues (Deegan, 2017). The accounting profession has sought to complement greenhouse gas emissions regulations, organisational environmental performance declarations as well as sustainability disclosures with standardised models to evaluate the carbon footprints of social actors (Mata, Fialho, & Eugenio, 2018). This has led to concepts such as climate change reporting, sustainability reporting, social and environmental reporting, green accounting, and integrated reporting (Comyns, 2018; Belal & Owen, 2015; Owen, 2008). Observably, environmental information has been of growing interest in the accounting profession by accounting regulatory bodies, accounting academics, and professional associations among other accounting stakeholders (Mata *et al.*, 2018). Therefore, climate action commitment can be understood as the actions undertaken by the accounting profession to ensure greenhouse gas emissions management to enable future reduction of carbon footprints on the natural environment (Tavakolifar *et al.*, 2021). Even though the accounting profession has committed to fostering disclosures on corporate carbon footprints, standardization of these disclosure practices is yet to be considered (Andrew & Cortese, 2011).

The climate change reporting literature is fraught with studies on classification systems such as sustainability reporting, social and environmental reporting, green accounting as well as integrated reporting (Deegan, 2017; Belal & Owen, 2015; Hrasky, 2012). These classification systems seek to provide a framework for accounting professionals to disclose climate-related information (Belal & Owen, 2015). It is also widely held that climate-related risks may have an impact on financial statements and the accounting profession is key to providing climate-related accountability to investors (Hoffman, 2005). However, current financial accounting standards have no clear requirements on climate change reporting and as a result, corporations adopt regulatory and other normative reporting standards (Hrasky, 2012).

The growing interest in the accounting profession to provide climate reporting requirements to standardise climate change reporting has also led to an increase in academic studies (Mata *et al.*, 2018). Most of these studies explain the quality of voluntary reporting of climate-related information (Belal & Owen, 2015), the range of media in which voluntary disclosures are made (e.g, standalone reports, company magazines, or annual reports) (de Aguiar & Bebbington, 2014) as well as the interactions between the accounting profession and other professional domains (Lehman & Kuruppu, 2017).

### **2.3.2 The Accountancy Body and Climate Change in Ghana**

The accountancy profession has demonstrated its support for climate change action through a statement signed by 13 chief executives representing 14 accounting bodies on a call to action in response to climate change (A4S, Accounting Bodies Network, 2021). These bodies, which are members of the Accounting for Sustainability's Accounting Bodies Network, represent over 2.5 million accountants and accounting students across 179 countries (A4S, 2022). This initiative was implemented as a result of research outputs from various regulatory bodies which required

practicing bodies of professional accountants, practicing accountants, and national regulators to commit to addressing the threat of climate change (A4S, 2022). The clarion call to increase commitment to climate change action and reporting points to essential areas for both international and local stakeholders.

Within the Ghanaian context, the implementation of national policy frameworks by the government on climate change can be supported by initiatives by the Institute of Chartered Accountants, Ghana (ICAG) (Arndt, Asante, & Thurlow, 2015). The ICAG which serves as the national accountancy body has the leading role in promoting climate change action and reporting among accountants by ensuring that corporate reports reflect climate change issues nationwide (Duho, 2020). The institute also has the role of collaborating with accounting departments in tertiary schools to promote accounting education on climate change action and reporting (Duho, 2020). These initiatives at the institutional level together with the implementation of government policy on climate change action at the national level are crucial to the mitigation of climate change-related risks (Arndt, Asante, & Thurlow, 2015).

The national policy framework of Ghana on climate action, the National Climate Change Policy (NCCP), was launched by the National Climate Change Committee (NCCC) in 2014 to guide the government's response to climate change (Asante, et al., 2015). The NCCC, composed of a wide range of stakeholders including management and staff of the Ministry of Environment, Science, Technology and Innovation (MESTI), the Environmental Protection Agency (EPA), Parliamentary Select Committees on Environment, Science and Technology, and Forestry and Lands as well as other related ministries, departments, agencies, and non-governmental organisations, was tasked to coordinate with local and international organisations to execute programmes in the NCCP. The NCCP together with the National Climate Change Adaptation Strategy (NCCAS) is Ghana's

integrated framework to respond to the threat of climate change at the national level (Asante, et al., 2015). More recently, the government of Ghana launched a National Adaptation Plan (NAP) to bolster nationwide efforts that encourage climate action and reduce the country's vulnerability to the negative impacts of climate change (UNEP, 2020). The NAP utilises future projections up to the year 2080 combined with assessment of climate vulnerabilities of different sectors to guide government policies, whether it is regulatory or fiscal policies, and investment decisions (UNEP, 2020).

While this study does not propose a framework for reporting on climate-related matters, it details the roles that accounting stakeholders should play to develop a consolidated reporting framework that fosters climate change action and reporting. To do so, the study draws on key elements within Abbott's (1988) theoretical framework to show the role of the accounting profession toward climate change action and reporting. This theoretical lens is discussed in the next section.

#### **2.4. Theoretical Framework**

A growing stream of research has theorised that the accounting profession is a highly institutionalised social practice that reflects claims to socio-cultural legitimacy in a society (Hopwood, 2000; Miller, 1994). From this perspective, the accounting profession continues to claim cultural legitimacy through its global expansion to situate itself within emerging fields (Suddaby, Saxton, & Gunz, 2015). Therefore, an important extension of the accounting profession is its focus on climate change action and reporting in contemporary societal and organisational settings (Arora & Lodhia, 2016).

This study differs from most prior studies on climate change action and reporting in two ways. First, most prior studies adopt traditional theories of how the accounting profession has extended

its domain to consider climate change accountability. In the climate change accountability literature alone, theoretical lenses that have been utilised comprise legitimacy theory (Deegan, 2019); stakeholder theory (Cadez *et al.*, 2018); voluntary disclosure theory (Clarkson *et al.*, 2008); and institutional theory (Comyns, 2018; Chen & Roberts, 2010). This study adopts the theoretical notion of Abbott's (1998) system of professions to indicate that accounting expertise is constituted by the content of its knowledge systems, translation of knowledge into practice by accounting stakeholders, and spread of knowledge into other jurisdictions. In so doing, Abbott's (1988) theoretical lens helps to show how the accounting profession situates itself within the climate action jurisdiction and the roles that accounting stakeholders play to establish a jurisdictional claim. In so doing, the study departs from the traditional system-oriented theories on climate change reporting and adopts a multi-faceted theoretical notion that explains the roles of the accounting profession and how these roles are constructed, shaped, and utilised by accounting professionals within the climate change jurisdiction.

Second, while most studies have highlighted jurisdictional conflicts over which a profession has claims to professional expertise in the climate action jurisdiction (e.g., Cooper & Robson, 2006), this study focuses on professional development activities such as intra-professional and interprofessional roles of the accounting profession towards climate change action and reporting. In this case, the focus of this study is not to observe overt or covert conflicts among professions within the climate action jurisdiction but rather the extension of jurisdictional boundaries of traditional accounting to consider climate change action and reporting in a professional development process. Abbott's (1988) theoretical framework provides key concepts that aid analysis of how the accounting profession facilitates climate change action and reporting.

### **2.4.1 Andrew Abbott's Theory of the System of Professions**

The sociology of professions has spurred the keen interests of several researchers among whom are accounting academics. A recurring theme in the accounting domain is that the accounting profession is constantly extending its “power and scope” (Suddaby et al., 2015, p. 53). For instance, the continual extension within the accounting profession highlights its jurisdictional shift toward climate action and reporting (e.g. Bebbington et al., 2007). A focus is, therefore, required to understand the processes by which the accounting profession considers climate change action and reporting as well as the roles of accounting stakeholders within the climate change jurisdiction. Elements of Abbott's (1988) theoretical framework, namely, jurisdictions, structural and social actors, specialised knowledge and abstraction, professional development activities as well as jurisdictional shift are utilised for this study and discussed in the context of this study hereinafter.

#### **2.4.1.1 Jurisdictions**

A jurisdiction is categorised as the task area where professionals offer expert services to solve human problems (Abbott, 1988). Professions legitimise their work through their values of science and rationality that make life easier. Within a profession's jurisdiction, there is a continuous struggle to protect its boundaries by monopolising the profession's legitimacy (Abbott, 1988). As a result, the boundaries of a profession are protected with a well-defined abstract knowledge system. Abbott (1988) reports that academic knowledge is also crucial, and usually suffers assaults from other professions that wish to take over forms of knowledge within a profession. This engenders jurisdictional conflicts which bring the sustainability of professions into question. Here, jurisdiction is viewed as a task area within which human actors perform roles to solve problems (Abbott, 1988). Since the climate as part of the natural environment possesses no intentionality

and consciousness to act, climate change action and reporting is conceptualised as a domain within which professional jurisdictions can be situated (Suddaby *et al.*, 2015).

Climate change action and reporting constitutes a unique domain attracting professions ranging from science-related disciplines such as climatology to other professions including law, economics, finance as well as accounting (Petani, Ramirez, & Gendron, 2021; Tuckett, 2009). By default, the climate lacks the will to act with intentions thereby it requires actors that can act on their own volition by imposing purposeful actions (Cong, Freedman, & Park, 2020). These actors include governments, international to local organisations, individuals as well as institutionalised groups or professions (Petani *et al.*, 2021). Also, these actors are seen as environmental stakeholders required to perform a wide variety of responsibilities (e.g., reduction in emissions of greenhouse gases, valuation of carbon footprints, and disclosure of climate-related information) geared towards climate change action and preservation of the natural environment (Cadez *et al.*, 2018). By executing these responsibilities and communicating the effects of those actions, these environmental stakeholders contribute to the mitigation of the negative impacts of climate change (Cong *et al.*, 2020). It is within the domain of climate change that professions are also required to contribute their quota towards climate change action

Professions contest for space within the climate change domain ranging from legal regulations on greenhouse gas emissions, and estimation of both primary and secondary greenhouse gases in the earth's atmosphere, to financial projections on ecological recovery initiatives (Arora & Lodhia, 2016; Tuckett, 2009). Unlike professions that construct occupational boundaries due to exclusive technical expertise, the climate domain is a vast arena capable of being inhabited by a wide variety of professions or occupational groups. The climate change jurisdiction presents an opportunity for professions, occupational groups, international and local environmental activists to make

jurisdictional claims to contribute to climate action (Chambwera & Stage, 2010). This is because, climate change has life-threatening consequences on all life on earth (Comyns, 2016).

The accounting profession has demonstrated how it is reconstituted over time as it makes jurisdictional claims over accounting expertise (Suddaby et al., 2015). A key insight from prior studies indicates that accounting expertise does not change radically but, rather, incrementally as pre-existing practices evolve to be gradually applied to new jurisdictions (e.g., Canning & O'Dwyer, 2016; Carnegie & Napier, 2010). Similarly, Suddaby et al. (2015) contend that accounting practices extend into other jurisdictions through ordinary micro-level practices rather than the macro-level jurisdictional conflicts that are highly contested. In this case, jurisdictional shifts towards climate change action and reporting are embedded in routinised accounting practices. It is understood that the extension of the accounting profession into the climate change jurisdiction is evidenced by a gradual use of accounting terminologies and language to assess, value, and disclose climate-related risks (Suddaby et al., 2015).

#### **2.4.1.2 Structural and Social Accounting Stakeholders**

Within the accounting jurisdiction, there exist structural and social actors as well as cultural materials that enable social actors to make sense of their professional experiences (Guo, 2018; Abbott, 1988). Research into structural actors has identified important stakeholders such as international standard setters, international to national accounting associations, professional accounting bodies as well as accounting departments within tertiary institutions (Carnegie & Napier, 2010; Cooper & Robson, 2006). Social actors which comprise academics and working professionals draw on cultural materials which are composed of a specialised knowledge system, identity experiencing and ranking as well as bodily appearance and demeanor to make meaning of professional experiences (Guo, 2018). The accounting profession also interacts with other

professions which affects structural accounting actors in a process known as professionalisation (Carnegie & Edwards, 2001; Abbott, 1988). Moreover, the sustainability of the accounting profession like any other profession is dependent on its academic knowledge, prestige, and power (Canning & O'Dwyer, 2016). Therefore, the accounting academic community plays an important role in propagating abstract accounting knowledge necessary for instruction, research, and legitimation of accounting practices.

On the other hand, social accounting actors comprise accounting professionals in organisations, paraprofessionals (individuals practicing accountancy without professional certification), and accounting academics (Abbott, 1988). These social actors establish systems that constitute the accounting jurisdiction, occupy positions within accounting institutions and interact with knowledge systems produced within the accounting jurisdiction (Abbott, 1988). Also, social actors such as accounting academics create awareness of internal and external pressures that call for change within the accounting profession. Notably, both structural and social accounting actors engage with the specialised knowledge of the profession while promoting professional development activities.

#### **2.4.1.3 Specialised Knowledge and Abstraction**

In the accounting profession, like any other profession, a specialised system of knowledge legitimises the skills to carry out work in the profession. This can be conceptualised as academic knowledge and professional abstract knowledge that is put to use (Abbott, 1988). The accounting profession has developed peculiar systems of abstract knowledge such as the double-entry principle which inform corporate reporting (Hopwood, 2000). These forms of abstract knowledge are arranged in a logically consistent manner and taught by the academic sector of the accounting profession (Hopwood, 2000).

The academic sector which serves as custodians of the knowledge system of a profession performs three functions, namely; legitimation, research, and instruction (Abbott, 1988). Abbott (1988) argues that the ability of a profession to sustain its jurisdictional boundaries lies with the prestige and power of its academic knowledge system. The prestige is associated with public ideas on professional knowledge which makes professional work effective while the power comprises the symbolic use of academic knowledge by giving clarity to the foundations and cultural norms of the profession (Abbott, 1988). By doing so, professional work is legitimised by academic knowledge.

Within the accounting profession, Kaplan (2014) indicates that the academic sector comprising institutions of higher learning such as universities, institutionalises the traditions of the profession through the development of a curriculum. This curriculum is dynamic and enables the production of new jurisdictions of competence that preserve the status of the accounting profession (Kaplan, 2014). Professional abstract knowledge, on the other hand, is ordered by the level of abstraction of accounting problems and solutions (Abbott, 1988). For instance, professional knowledge systems in the accounting profession are organised into inferential and classification cultural systems that imbue accounting professionals with the requisite knowledge to solve client problems. However, systems of knowledge on climate change action and reporting are yet to be devised to enable accounting professionals to disclose climate-related information (Arora & Lodhia, 2016).

Furthermore, the relationship between universities and professionals is partial whereby within the training rendered, there is a tension between abstract knowledge-based training and training of professional aspirants to become actual practitioners who utilise the knowledge acquired immediately after training. For instance, there is tension between accounting and the preparation and publication of organisational financial statements (Chapman, Cooper, & Miller, 2009). The

former is a pursuit of historical and spatial calculative practices that allow accounting professionals to act on processes, persons, and entities (Chapman *et al.*, 2009); the latter is an activity that is pivoted on exemplary demonstrations (Deegan, 2017). Professions like the accounting profession demonstrate fulfillment of self-interest of its members often with an emphasis on the category of professionals who define qualification standards for candidates interested in joining the profession (Jacobs, 2003).

### **Abstraction as a Professional Instrument**

Abstraction becomes a critical component of professions to secure their boundaries while differentiating competitions among professions from other occupations. It is through abstraction that a profession can defend its boundaries and capitalise on other opportunities (Abbott, 1988). Through the abstraction of specialised knowledge, the accounting profession, for instance, survives and thrives in the arena of other professions. In so doing, specialised knowledge on climate change reporting in the accountancy field and the degree of its abstraction can serve as a currency in the competitive jurisdiction of climate change action where other professions are situated. Nevertheless, Gray (2013) questions the level of abstraction of accounting knowledge on climate-related activities. He argues that the abstract accounting knowledge on climate-related matters encompasses knowledge that only accounts for stakeholder risks without concern for the climate.

#### **2.4.1.4 Professional Development Activities**

Emerging issues within the social environment of professions encourage jurisdictions to modify their systems in an attempt to respond to these issues. The process of modifying existing systems or devising new ones constitutes the professional development of a jurisdiction (Abbott, 1988). The professional development process comprises activities such as diagnosis of the environmental

problem, development of treatment instructions, and inference for professional work. These activities are discussed in detail next.

### **Diagnosis of Environmental Problem**

A diagnosis is a mediating act that takes information from the specialised system of abstract knowledge into professional knowledge and practice (Abbott, 1988). Here, the accounting profession engages with knowledge systems in a continuous professional manner to ascertain its contribution to climate action (Guo, 2018). Through diagnosis, the accounting profession can rightly categorise climate change and the problems presented by the effects of climate change that need to be solved. To do this, the accounting profession needs to understand how “natural systems can be accounted for” to modify existing knowledge systems or devise new systems to provide a holistic picture of climate change and its concomitant climate actions (Cho *et al.*, forthcoming). Notwithstanding, the diagnosed problem of climate-related matters may possess some level of ambiguity if there is inadequate clarity in the professional knowledge system of the accounting profession (Andrew & Cortese, 2011).

The climate change diagnostic process can be characterised by two acts, namely; colligation and classification (Abbott, 1988). Colligation comprises assembling details of climate change into an understandable picture by applying specialised knowledge systems to identify relevant and irrelevant descriptions of climate change as well as specifying its ambiguity level (Abbott, 1988). Classification, on the other hand, categorises the “colligated picture” of climate change within a collection of professionally defined environmental problems in the accounting profession (Abbott, 1988, p. 41). Therefore, the classification process becomes a mapping system for the accounting profession to examine its jurisdiction and whether it is well equipped to address climate-related matters. By so doing, the accounting profession can determine the level of ambiguity if the

information available for the classification of climate-related matters is incomplete. The profession can thereafter draw on the diagnostic categories of climate change to provide prescriptions and instructions to help contribute to climate action and reporting. This process can be conceptualised as climate change treatment.

### **Treatment Instructions on Climate Change**

Treatment is a professional activity that utilises a subjective structure determined by a profession to address client problems (Abbott, 1988). Treatment mechanisms draw on the diagnostic classification to clump similar problems with common treatments together. Within treatment mechanisms, the accounting profession devises instructions on climate change action and reporting that attempt to extend traditional accounting practices so that professional work on climate-related reporting will not be downgraded easily (Guo, 2018). By doing so, climate reporting requirements and instructions can be measured for their efficacy.

Climate-related actions are considered at this stage since ineffective prescriptions breed interprofessional competition (Suddaby *et al.*, 2015). The accounting profession will thereby extend its prestige after effective prescriptions on climate change reporting that affects greenhouse gas emissions; this prestige also depends on the chances of how effective the prescribed solutions of the accounting profession will work (Suddaby *et al.*, 2015). Following this, the strength of treatment prescriptions through climate change reporting guidelines will heavily impact the inference practices of accounting professionals.

### **Inference for Professional Work**

The inference for professional work is a professional activity that is utilised when the “connection between diagnosis and treatment is obscure” (Abbott, 1988, p. 49). Studies indicate that human actions have consequences on the environment (see Bebbington *et al.*, 2020; Deegan, 2017), and

as such environmental accountability should be done in an interconnected manner. Reporting on climate-related activities, for instance, should incorporate effects on the natural environment as well as actions of organisations. However, accounting practices fail to account for the interconnections between organisational actions and the environmental crisis of climate change (Cho *et al.*, forthcoming). Regardless, accounting professionals can make inferences from existing financial reporting frameworks to disclose climate-related information which only reflects climate risks to organisations (Comyns, 2018). This creates room for subjective rules of exclusion and inclusion of climate-related information based on the current financial reporting framework (Andrew & Cortese, 2011).

Also, robust treatment instructions characterised by climate change reporting requirements lead to routinisation of professional practices that strengthen professional inferences (see Abbott, 1998). The utilisation of emissions targeting indexes and science-based scenario modelling to better understand global sustainability analyses could enable the accounting profession to devise effective climate reporting requirements (Cho *et al.*, forthcoming). This will enable accounting professionals to routinise reporting on climate-related matters and make associated inferences to bolster the jurisdictional shift of the profession.

#### **2.4.1.5 Jurisdictional Shift of the Accounting Profession**

The accounting profession as a social practice has been understood as a highly institutionalised practice (Hopwood, 2000). From this perspective, the extension of the accounting profession into the climate change domain does not only represent a functional need for traditional financial accounting techniques but also a jurisdictional shift in a form of cultural rationalisation of the changing professional practices that are to promote climate change action and reporting (Suddaby *et al.*, 2015). Prior studies have explained that the gradual jurisdictional shift of the accounting

profession towards climate change action and reporting is explained by the growing cultural legitimacy that the profession represents in an “increasingly rationalised society” (Suddaby *et al.*, 2015, p. 53).

An important extension of this study focuses on what constitutes the roles of the accounting profession and how these roles are constructed within the climate action domain. Much early research found that the accounting profession can shift its jurisdiction into another task area when issues within that task area are problematised using accounting language (Canning & O'Dwyer, 2016). For instance, once issues within the task area of climate change are reframed as accounting problems, the accounting profession gains entry and subsequent legitimacy of its practices within climate change action through the deployment of “calculative technologies of accounting” (Miller, 1994, p. 3). Collectively, these studies have provided rich insights into *why* the accounting profession permeates climate change action and reporting in contemporary society (Suddaby *et al.*, 2015; Cooper & Robson, 2006). What is missing is how the roles of accounting stakeholders are constructed and shaped as well as what these roles accomplish within the task area of climate change action and reporting (Cadez *et al.*, 2018). That is, while previous studies have ably demonstrated *why* there is the need for the accounting profession to consider climate change action and reporting, there is little analysis on *what* roles and initiatives are required and *how* these roles are perceived and shaped by accounting professionals themselves (Comyns, 2018). More importantly, this study points to the perceived roles and initiatives of accounting stakeholders and how these roles affect the jurisdictional shift of the accounting profession towards climate change action and reporting.

The accounting profession has had institutions of well-organised groups with varying degrees of career security and status (Cooper & Robson, 2006). Even though the accounting profession

protects its jurisdictions from intrusion by other professions, there exists a symbiotic relationship between the accounting profession and other professions that fosters the ability of the profession to expand into other task areas (Cooper & Robson, 2006). This research hints at the interprofessional relationship that enables climate action concepts in other jurisdictions to be engrafted as a portion of the accounting profession. By doing so, the study demonstrates how the accounting profession benefits from other professions in the climate change action and reporting domain. Also, this form of professional stakeholder relations exists within the accounting profession where structures and social actors within the accounting profession interact for new cultural materials on climate action to emerge (Canning & O'Dwyer, 2016); these interactions constitute the bedrock for jurisdictional shift (Abbott, 1988).

## **2.5 Chapter Summary**

This chapter presented discussions of extant literature in two major sections comprising discussions on theoretical underpinnings of the study and thematic areas within empirical studies on climate change action and reporting. The chapter highlighted key concepts of the systems of profession adopted for the study and roles necessary to approach climate action and reporting within the accounting profession. The chapter also discussed the climate change problem and stakeholders located within the climate change jurisdiction. The methods utilised for this study are discussed in detail in the next chapter.



## CHAPTER THREE

### METHODOLOGY

#### 3.0 Introduction

This chapter presents the methods and procedures that are employed for the study. It explains the philosophical underpinnings of the researcher and how these underpinnings impact the choice of the research approach. Also, the chapter presents the data collection methods as well as procedures to analyse empirical materials that are used for the study.

#### 3.1 Research Design

In social research, a research design is seen as a work plan that details how relevant evidence will be obtained to answer a research question (de Vaus, 2001). Following this thought, research design can be viewed as a logical structure of finding answers to research questions by obtaining evidence in the form of empirical materials (Flick, 2009). In designing this study, the researcher asked questions such as: Which research approach will be most appropriate? What philosophical assumptions underpin the research approach? How should data collection and analysis be set up? What empirical materials can be obtained to address the research questions?

The abovementioned questions were asked to enable the researcher to construct a research design that considers methodological procedures, objectives of the study, theoretical assumptions, and ways to obtain empirical materials that answer the research questions raised by the researcher (Flick, 2009). To attend to these concerns, the following sections discuss the research paradigm which highlights the philosophical underpinnings, research approach, and methods adopted for this study.

### 3.1.1 Research Paradigm

A research paradigm characterises the philosophical worldview that a researcher possesses (Cresswell, 2014). Notably, the philosophical worldview can be interpreted as a set of beliefs that guide a researcher's actions in conducting a study (Guba, 1990). The research paradigm is the bedrock of a researcher's philosophical orientation which delineates how a researcher perceives the nature of reality (ontology), how to know what is real (epistemology), the process of seeking knowledge (methodology), and the values that guide the research process (axiology) (Denzin & Lincoln, 2011; Hallebone & Priest, 2009; Creswell, 2007). Cresswell (2014) adds that these philosophical underpinnings shape the researcher's view of what is real and how to know what is real.

The world is viewed with two broad philosophical worldviews. These worldviews comprise interpretivist and positivist paradigms. This study embraces the interpretivist worldview and its underlying philosophical assumptions on what is reality and how to know what is known about reality (Denzin & Lincoln, 2011). The study seeks to examine how the accounting profession views climate change action and how accounting professionals wish to contribute to climate change action. The study draws on these philosophical underpinnings (ontology, epistemology, and methodology) to consider a crucial concept of the accounting profession in climate change action and reporting and how accounting professionals acknowledge climate change. These philosophical assumptions are discussed in the following sections.

#### 3.1.1.1 Ontology

Ontology deals with the nature of reality and various features of what is real (Cresswell, 2007). There are two ontological standpoints that comprise subjectivism and objectivism from the interpretivist and positivist paradigms respectively. A researcher adopts any of these ontological

standpoints to answer the question: What is the nature of reality? (Cresswell, 2007). The subjective ontological stance describes reality as social constructions of a phenomenon that are multiple, as perceived by social actors while the objective ontological stance portrays reality as a hard and concrete phenomenon, external to individuals being studied. Thus, as subjectivism seeks to uncover multiple realities based on the perspectives of different individuals, objectivism intimates universal truths associated with objective realities which are in the world to be studied (Denzin & Lincoln, 2011). Besides, objectivism maintains that a researcher and phenomenon to be studied are two independent and separate things. Subjectivism, on the other hand, posits that the observer (the researcher) and the observed (phenomenon) cannot be separated (Weber, 2004).

Subjectivism emphasises evidence from multiple social constructions based on perspectives of different social actors usually at different locations and times (Cresswell, 2007). As a result, this study is keen on reporting multiple realities that hold subjective meanings ascribed to climate change action as well as environmental reporting by accounting professionals. Adopting the interpretivist paradigm enables this goal to be achieved whereby the researcher obtains an understanding of the varying perspectives on the subject matter through careful reflections.

### **3.1.1.2 Epistemology**

Epistemology considers the nature and scope of knowledge (Cresswell, 2007). It is a branch of philosophy that asks the question, how do we know what is real?. Also, epistemology concerns experiences that generate knowledge, how knowledge relates to what is real, and the changing forms of knowledge due to new conceptualisations of the world (Wolenski, 2004). The contributions to knowledge regarding research paradigms vary, having distinct epistemologies. Positivism proposes an objective epistemology that posits that reality exists outside human cognition whereas interpretivism believes knowledge about the world is constructed through

experiences of social actors. With positivistic epistemology, the experiences of social actors reflect an independent and objective reality that constitutes the foundation for knowledge (Weber, 2004).

The interpretivist paradigm postulates an epistemology that builds knowledge from experiences, culture, history, and other disciplines through social constructions (Weber, 2004). Here, social actors internationally create meanings about their lived experiences and reality in the world around them. This study adopts the interpretivist epistemology to enable accounting professionals to socially construct how they appreciate and see the contributions of the accounting profession towards climate change action (Cresswell, 2014).

### **3.1.2 Research Approach**

Two approaches characterise the interpretivist and the positivist paradigms discussed above known as qualitative and quantitative approaches. The quantitative approach, based on positivist philosophical underpinnings, utilises statistical methods to analyse empirical materials to identify irregularities or regularities of a phenomenon (Weber, 2004). These statistical methods convert numerical data into scalar forms that can be interpreted by observing the real world out there. Researchers who are quantitatively oriented utilise “cause-and-effect relationships” to produce knowledge usually from large sample sizes (Given, 2008, p. 717).

The qualitative approach, resultant from the interpretivist paradigm, is characterised by interpretive methods that seek to uncover meanings associated with occurrences that are experienced by social actors (Cresswell, 2007). It enables a researcher to be embedded in a study to gather up-close information within the natural context of a phenomenon. The researcher is seen as a key instrument who observes behaviour while engaging in interactions with social actors (Cresswell, 2007). Also, the qualitative approach enables multiple data sources such as documents,

interviews, or audiovisual information which fosters an in-depth and contextualised understanding of a phenomenon (Denzin & Lincoln, 2011; Cresswell, 2014).

This study adopts the qualitative approach to enable the researcher to learn the meanings and perspectives of accounting professionals on the contributions of the accounting profession towards climate change action (Cresswell, 2014). Since the qualitative design enables multiple sources of data to be utilised, the researcher draws on multiple empirical materials to develop a holistic account of the subject matter in the jurisdiction of the accounting profession (Denzin & Lincoln, 2011). Also, locating the study in the natural setting of the accounting profession provides an opportunity for the background and experiences of the researcher to shape the direction of the study (Miles, Huberman, & Saldana, 2014). The study considers the subject matter as a single-case study thereby the qualitative case study methodology is adopted (Cresswell, 2014).

### **3.1.3 Research Strategy**

This section discusses types of designs for qualitative inquiry. These types of qualitative designs comprise narrative research, phenomenology, grounded theory, participatory action research, and case study. The succeeding section discusses the case study method which is adopted for this study in detail.

#### **Case Study**

A case study is an inquiry into a contemporary occurrence to obtain an in-depth understanding of the occurrence within its real-life context (Yin, 2009). It involves a detailed account of a case within its natural setting and builds a rich and contextualised understanding of the case (Creswell *et al.*, 2007). To do this, the case study design elicits data from documentation, interviews, participant observation, or artifacts to illustrate a phenomenon. In the examination of a case, posing

relevant questions - what can we focus on to develop a rich understanding of this case? how do we capture important details of the case - is crucial to uncover critical situations that are relevant for the study (Buchanan, 2012). Yin (2009) explains that researchers can choose between single-case studies or multiple-case studies which are the two forms of case study design.

This study uses the case study design to understand the roles or initiatives of the accounting profession towards climate change action. The response of the accounting profession to calls for climate change action and reporting is visualised as a bounded system or case in which the researcher sought to draw on multiple data sources to discover rich and contextualised meanings in the Ghanaian setting (Cresswell, 2014). The interpretive nature of qualitative inquiry enabled the researcher to reflect on these meanings and develop a report that incorporates the ideas and views of accounting professionals. Besides, the case study design is most suitable for this study because it helped discover regularities, irregularities, patterns, threads, or themes that emanated from the data collection and analysis processes (Cresswell, 2014; Corbin & Strauss, 2015).

### **3.2 Data Collection Methods**

This section discusses the process of data collection together with ethical considerations that guide this study's data collection process. The data collection process involves the collection of qualitative data in the form of language expressed in words through interviews or documents (Miles, Huberman, & Saldana, 2014). Qualitative data collection through interviews can be categorised into structured, semi-structured, and unstructured interviews (Cresswell, 2014). This study employs the semi-structured approach of qualitative interviewing to capture the views of accounting professionals. The semi-structured interview format enabled open-ended questions to be asked together with follow-up questions to seek clarification on participant responses (Cresswell, 2014).

### 3.2.1 Population, Sampling and Sampling Technique

A population is a group of individuals or entities that possess similar characteristics (Hennink, Hutter, & Bailey, 2020). Due to this, the study considers accounting stakeholders in Ghana comprising the accounting academic community, and the accounting practitioners in organisations. Accounting professionals in academia and practice were targeted because they are seen as important stakeholders who possess a fair understanding and knowledge about the roles and initiatives of the accounting profession towards climate change action and reporting. The choice of accounting professionals is also informed by the unit of analysis that is at the individual level where each respondent participates in a semi-structured interview. At the individual unit of analysis, participants are seen as important social actors who represent structural actors within the accounting profession to aid data condensation, display, and drawing of conclusions (Miles *et al.*, 2014). Besides, there is a significant association between these accounting stakeholders and the accounting profession because of their professional identities making them ideal for this study (Guo, 2018).

This study considers sampling until the point of data saturation in which research participants were selected purposively (Mason, 2010). The nature of purposive sampling ensures that the researcher targets accounting professionals who are deemed to be knowledgeable about climate-related issues and the roles of the accounting profession in disclosing climate-related risks (Denzin & Lincoln, 2011). As a result, the researcher considered a sample of eighteen (18) accounting professionals during the data collection process comprising thirteen (13) accounting academics in the University of Ghana, four (4) accounting practitioners in two organisations, and a representative of the Institute of Chartered Accountants, Ghana (ICAG) (Table 3.0). Persons from these categories were interviewed to enrich the data with differing perspectives.

### 3.2.2 Semi-Structured Interviewing

This study employs semi-structured interviews as its primary source of data. This interviewing approach enabled the researcher to ask open-ended questions enabling an interactive session between the researcher and participants of the study (Cresswell, 2014). The flexible nature of semi-structured interviews provided the researcher with an opportunity to ask follow-up questions to seek clarification of participant responses to gain a deeper understanding of climate action and reporting from accounting professionals (Cresswell, 2014). A few interviews were conducted on the premises of the University of Ghana Business School while other accounting practitioners and the representative of the ICAG were reached via zoom meetings and phone calls. This is because of safety protocols that were adopted by the researcher because of the Covid-19 pandemic.

*Table 3.0 Details of accounting stakeholders interviewed*

Accounting Stakeholders	Coding Label	Designation of Interviewee	Interview Duration
University of Ghana Business School	AAM1	Masters student	16 minutes
	AAM2	Masters student	17 minutes
	AAM3	Masters student	13 minutes
	AAM4	Masters student	15 minutes
	AAM5	Masters student	17 minutes
	AAM6	Masters student	18 minutes
	AAM7	Masters student	14 minutes
	AAM8	Masters student	15 minutes
	AAM9	Masters student	11 minutes
	AAP1	PhD student	9 minutes
	AAP2	PhD student	14 minutes
	The Quantum Group	AAL1	Accounting lecturer
AAL2		Accounting lecturer	12 minutes
The Quantum Group	QG1	Accounting & finance officer	21 minutes
	QG2	Assistant accounting & finance officer	14 minutes
Mulch Company Limited	MCL1	Accountant	14 minutes
	MCL2	Project & finance officer	8 minutes
Institute of Chartered Accountants, Ghana	ICAR	Director of membership	10 minutes

These interviewees were selected for the study because they were deemed stakeholders whose opinions may be indicative of other accounting stakeholders about the roles of the accounting profession towards climate change action and reporting. Also, other accounting academics and accountants were contacted by the researcher to participate in the study. Some were reluctant to participate while others stated that due to their limited knowledge of climate change action and reporting, they could not offer any opinions.

The interviews promoted an interactional dialogue about climate change action and reporting and the perceived roles of the accounting profession. Some interviewees responded to questions by assigning roles to the accounting profession in general while others directed their responses to some accounting stakeholders within the profession. The flexible and fluid structure of the interview format enabled the researcher and participants to co-construct themes or meanings situated within the context of climate change action and reporting (Edwards & Holland, 2013). This was necessary to locate the meanings that accounting professionals ascribed to roles of the accounting profession and its contributions towards climate change action and reporting.

### **3.2.2 Ethical Considerations**

Ethical issues in research are highly considered for the data collection process. Ethical considerations comprise the rights of participants about issues such as informed consent, voluntary participation, the confidentiality of issues discussed, and voluntary withdrawal from the research (Wiles, 2013). Therefore, participants of the study were not coerced or subjected to any undue influence or duress. Semi-structured interviews were recorded only in instances that the research participants agreed for the researcher to record the session. Furthermore, the purpose of the study

was explained before conducting interviews to enable participants to freely express their views. Recorded empirical materials were also kept anonymous and only used for the study.

### **3.3 Data Analysis**

Qualitative data is well suited for identifying meanings that social actors ascribe to events due to their lived experiences (Miles *et al.*, 2014). Analyzing qualitative data is a key component of the research process because it enables large chunks of data to be reduced to small and meaningful bits (Cresswell, 2014). The qualitative data analysis process was carried out simultaneously with the collection of data enabling subsequent data to shape the trajectory of analysing the data. The empirical materials gathered through the data collection process were condensed, displayed, and reflected upon to enable the drawing of conclusions and recommendations (Miles *et al.*, 2014).

#### **3.3.1 Data Condensation**

Data condensation deals with the process of simplifying, transforming, and/or abstracting data chunks from interviews or relevant documents (Miles *et al.*, 2014). By condensing the data, large categories of data from interviews were summarised to aid the generation of codes. These codes were utilised to label data chunks that are summarised to help sharpen, organise and/or focus the data (Miles *et al.*, 2014). Data from participant interviews were transcribed and assigned labels in Microsoft excel. Transcribed data of individual participants were displayed on Microsoft excel sheets and subsequently organised for patterns, regularities, and irregularities on a single Microsoft excel sheet. This process of condensing data from participants' views aided the display of the empirical material.

### 3.3.2 Data Display

Data display is “an organised, compressed assembly of information that allows conclusion drawing and action” (Miles *et al.*, 2014, p. 8). After condensing qualitative data, the categories or patterns were displayed in a diagrammatic format to capture various thematic areas (Fig. 3.0). The themes that emerged from the data were grounded theoretically with supporting discussions from the climate change action and reporting literature.

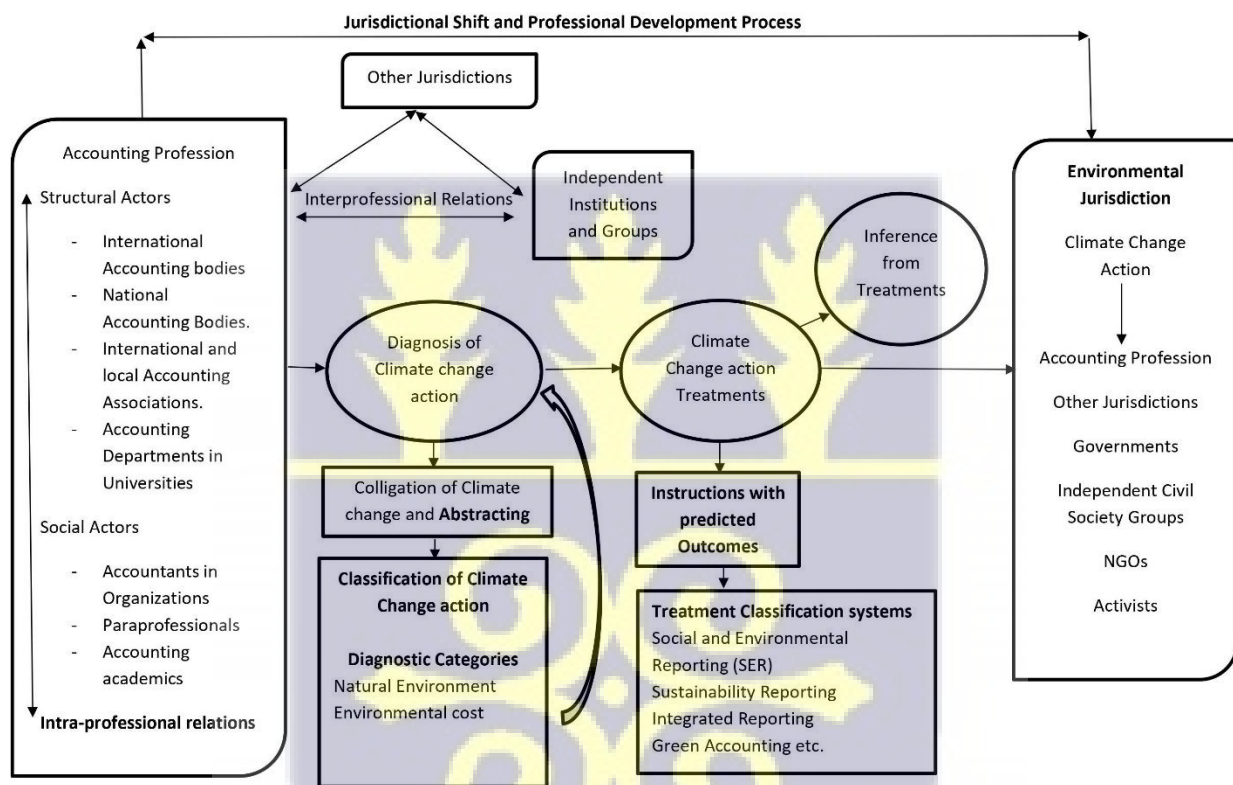


Figure 3. 1 Data Display on Thematic Areas

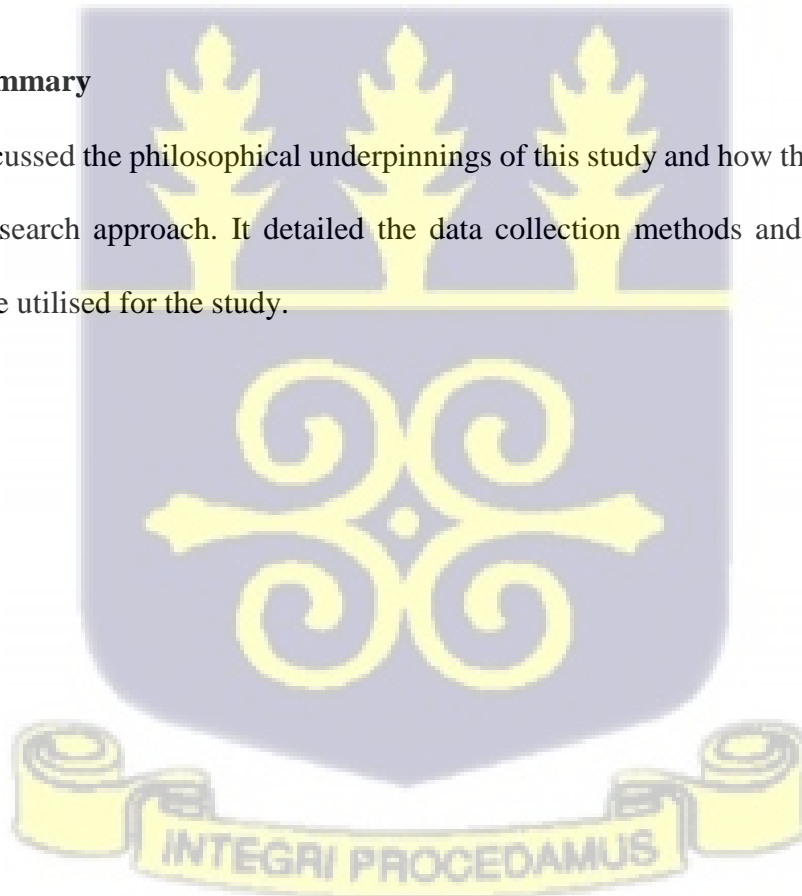
The figure above summarises thematic areas that served as a compass to identify theoretical underpinnings. By so doing, the data was organised to aid in drawing justified conclusions (Miles *et al.*, 2014).

### 3.3.3 Drawing of Conclusions

This third stream of the iterative data analysis process is characterised by interpreting thematic areas that are derived from the data. Conclusions were not finalised until the point of saturation of theoretical themes (Miles *et al.*, 2014). These conclusions were held lightly at initial stages of the data analysis process until research findings were finalised. Vague conclusions were eliminated for increasingly explicit ones. To verify the conclusions, the researcher reflected on implications of key findings and literature on climate change action and reporting (e.g. Comyns, 2016; Hrasky, 2012; Andrew & Cortese, 2011). This enabled practical recommendations to be made from the findings of this study.

### 3.4 Chapter Summary

This chapter discussed the philosophical underpinnings of this study and how these influenced the choice of the research approach. It detailed the data collection methods and the data analysis process that were utilised for the study.



## CHAPTER FOUR

### PRESENTATION AND DISCUSSION OF FINDINGS

#### 4.0 Introduction

This chapter presents discussions of the data gathered and analysed during the study. The chapter establishes the presence of structural and social actors within the accounting profession and analyses their roles towards climate change action and reporting. A detailed analysis of the perceptions of some actors who were interviewed in the Ghanaian context is presented and situated within Andrew Delano Abbott's theory of the system of professions. The chapter is organised according to discussions of principal thematic areas that respond to the research questions of this study. These thematic areas are discussed in turn in the following sections.

#### 4.1 Perceptions of Accounting Professionals on Climate Change Action and Reporting

This section discusses perceptions of accounting professionals about the roles of the accounting profession towards climate change action and reporting. As set out in prior literature, the accounting profession has been recognised as a powerful jurisdiction within the system of professions imbued with status and influence in society. Following this, the accounting function has devised regulatory practices and conceptual frameworks that dominate its cultural environment. Within the cultural environment of the accounting profession are financial reporting standards such as IFRS and US GAAP that can affect disclosures of climate-related matters. These accounting standards are crucial components that have been designed and are continually shaped by accounting stakeholders to maintain their prestige and influence in the system of professions (Cooper & Robson, 2006).

As an interviewee from the University of Ghana revealed:

*“In my opinion, the accounting profession safeguards the interest of all stakeholders and with the reporting accountants do, accountants are strategically placed in an area to disclose historical information about an entity by following structured and formalised frameworks by accounting standard setters.” (AAP2)*

Another interviewee stated that:

*“Well! The accounting profession has been perceived to be backward-looking by drawing on already determined rules and regulations but I think the profession is more progressive since we know international standard setters always revise the IFRS [International Financial Reporting Standard] and discard obsolete standards.” (AAM2)*

This is supported by Hopwood (2000) who argues that the accounting profession has given much consideration to how its systems of knowledge emerge, modes of reporting to sustain these systems, and how they are modified to affect social structures and institutions. These considerations are within the cultural environment of accounting and enable accounting professionals to respond to emerging challenges and devise ways to address them. Responses of some interviewees on climate change action and reporting acknowledged the cultural environment of the accounting jurisdiction as a key component for accounting professionals to respond to climate change action. The majority of these interviewees perceive that the cultural environment of the accounting jurisdiction enables the profession to perform the roles discussed in the following sections. These roles are thematic labels arising from the interview evidence comprising climate risk assessment, climate risk valuation, and disclosure of climate-related matters.

#### **4.1.1 Climate Risk Assessment**

The natural environment with its subsidiary being the climate can be conceptualised as a client of the accounting profession whose problem is climate change. The natural environment as a client of the accounting profession lacks the sophistication to act with consciousness and intentionality

since it does not possess a mouthpiece to communicate for itself (Cong, Freedman, & Park, 2020). As a result, it is the task of social systems and practices which possess their own volition and consciousness to diagnose the natural environment and devise mechanisms to address climate change. The accounting profession, as a social practice, is not exempted from this responsibility and has to engage relevant stakeholders to understand the problem of climate change to contribute meaningfully to climate action and reporting. Evidence from interviews suggests that there is a need for risks associated with climate change to be assessed by accounting professionals.

An interviewee retorted that:

*“....we are aware that investors require value on their investments and if climatic conditions will affect business operations, it is the duty of accountants to disclose relevant information about these conditions for investors to be well informed.” (QG1)*

Another interviewee intimated that:

*“I think effects of climate change can cause extreme weather conditions which can cause floods and other negative stuff [disasters] and these events can destroy company assets that’s why the accounting profession has reporting standards to assess the impact of these events.” (MCL 2)*

While the cultural environment of the accounting profession has standards that accounting professionals can make inferences to address the disclosure of climate-related risks such as IAS 2: *Inventories*, IFRS 9: *Financial Instruments*, and IFRS 13: *Fair Value Measurement* among others, there is no consolidated approach to climate change risk assessment (Arora & Lodhia, 2016). Accounting professionals, therefore, adopt a subjective approach to climate-related disclosures whereby disclosures are promoted in instances where climate-related impacts are deemed to have material consequences on financial statements (Andrew & Cortese, 2011). Some interviewees

believe that the subjectivity of assessing climate-related risks accounts for *why* climate-risk disclosures are scarce, especially in the private and public sectors of Ghana. Regardless, the majority of interviewees acknowledged the role of accounting professionals in assessing climate-related risks in corporate reporting.

#### **4.1.1.1 Colligation and Categorisation of a Consolidated Framework to Climate Risk Assessment**

The processes of colligation and categorisation, as explained in the literature, will enable the accounting profession to be able to develop knowledge systems that encourage accounting professionals to assess climate-related risks through qualitative narratives of reporting or quantitative methods to guide climate risk valuations. It is within the process of colligation that the accounting profession can provide a holistic picture of the climate change problem to inform its stakeholders (Deegan, 2017). The task of colligating and categorising a consolidated approach to address climate risk assessment was dispersedly assigned by interviewees to structural accounting stakeholders like international standard setters and accounting associations as well as some social actors such as accounting academics. The following quotes from accounting professionals emphasise dispersed responsibilities among accounting stakeholders.

An interviewee intimated that:

*“I think accounting standard setters are responsible for developing climate reporting standards that will regulate reporting on the climate. Getting a means of measurement or units of measurement for certain elements of climate change will, of course, be beneficial and will help people placed at the helm of affairs of companies or accountants to disclose relevant information in financial reports.” (AAP1)*

Another interviewee indicated that:

*“The issue about climate change disclosures can be dicey but I think it is not a one man’s job so there should be consultations among accounting standard setters, professional bodies, accounting academics, and accountants who are practicing accountancy in organisations to come out with standards that can be used across all sectors.” (AAM7)*

These responses on dispersed responsibilities among accounting stakeholders in determining approaches to understand and address climate change are corroborated by the accounting literature on climate action (Andrew & Cortese, 2011; West & Brereton, 2013). Notably, standards to regulate climate-related disclosures are still being colligated by structural accounting actors (Mata *et al.*, 2018). To gain a holistic approach to assessing climate-related risks, some interviewees believe it is the role of structural accounting actors to colligate and categorise climate change reporting for accounting professionals while others believe major responsibilities in assessing climate change and its related risks should be attributed to accounting academics. However, there seems to be an over-reliance on international accounting stakeholders to colligate climate-related matters and provide a comprehensive reporting framework to influence climate reporting practices for accounting professionals in Ghana. While some interviewees believe that this is because of the degree of institutionalisation between structural and social accounting actors where international structural actors are accorded much power, others associated this occurrence with the scope of influence of these international accounting stakeholders on what accounting professionals are required to do or not. This finding adds to the cognitive beliefs of accounting professionals which attribute more power and scope of influencing decisions on colligating and classifying climate-related matters to structural accounting actors like IASB (Comyns, 2018; Suddaby *et al.*, 2015).

#### **4.1.2 Climate Risk Valuation**

Within the accounting profession, it is anticipated that its cultural environment comprising conceptual and regulatory frameworks can be translated into climate risk valuation and

management practices by accounting professionals to influence the decision making of environmental actors. Here, interviewee responses indicate that accounting stakeholders have a role in determining climate-related risks and how these risks impact organisational activities.

*“In research, I have come across carbon accounting and I believe it will be about trying to quantify emissions in the atmosphere. I also believe anything about accountability falls within the purview of the accounting profession and it is the duty of accounting academics to conduct more research into the matter and suggest ways in which that [climate change reporting] can be done.” (AAP1)*

An interviewee acknowledged the accounting profession’s role in climate risk valuation and intimated that:

*“...I think the accounting profession is more forward-looking where we are now not only interested in how to push forward the finances of an organization and reporting some past events but also environmental needs however precise and mandatory reporting standards [IFRS] on this issue [climate change] have not been developed yet.” (AAM1)*

Belal and Owen (2015) concur with the perceptions of these interviewees that the accounting profession as a social practice has the responsibility of determining the extent to which climate change impacts organisations. However, Gray (2013) critiques the accounting profession’s role in climate risk valuations and calls for a proactive approach within the accounting profession to respond to impacts of climate change. Gray (2013) argues that the economic-centric calculative technologies utilised by accounting professionals in corporate reporting need revision to capture climate change concerns. Nevertheless, some interviewees were hopeful that climate risk valuation by drawing on existing financial reporting standards can be seen as a contribution towards climate change action and reporting. Other interviewees expressed doubts on how the accounting

profession can quantify its contributions to the reduction in carbon footprints due to the lack of specific climate reporting standards.

One of the interviewees commented that:

*“As for standards being developed with regards to climate change, of course, standards can be developed but from where I sit, with regards to the measurement for some of the elements of climate change, it will most certainly be difficult. Because if you take an element of climate change, like the ozone layer, how will the ozone layer be valued? And will it be shared among countries, continents, individuals, or what have you?” (AAM6)*

Apart from the calls for climate risk valuations, the climate change action and reporting literature shows that there are still methodological challenges in estimating the actual impact of climate change through accounting estimates, provisions, and resulting future losses (West & Brereton, 2013). Current accounting standards do not provide a means to fully incorporate climate impacts in corporate reporting while accounting for how the accounting jurisdiction is contributing to a reduction in carbon footprints and greenhouse gas emissions. Regardless, concepts such as carbon accounting have emerged over the years to indicate the efforts of the accounting profession towards climate-risk valuations (Nartey, 2018). Even though the accounting profession is making strides in the valuation of climate risks, some interviewees were skeptical about how reporting on climate risk valuations can have impacts on the reduction of carbon footprints in the natural environment.

#### **4.1.3 Disclosure of Climate-related Matters**

Environmental stakeholder groups are pressing organisations for greater disclosure on climate change impacts and related financial effects due to low disclosure (Belal & Owen, 2015). Notably, the accounting profession’s cultural environment contains disclosure requirements and practices that accounting professionals can access knowledge and calculative techniques to examine

climate-related risks. However, these disclosure standards do not indicate how organisations can reduce their vulnerability to climate-related risks which is an important decision-making component (Thornton, 2013). Some interviewees acknowledged the growing stakeholder pressures for climate change disclosures but were skeptical as to their adoption within the Ghanaian context.

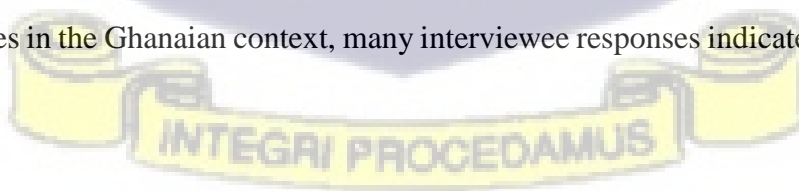
One of these interviewees stated that:

*“I think the developed nations have devised legislations on this [climate-related disclosures] which is why I think developing countries should also make it a matter of urgency. I will also recommend that accounting researchers should take the lead and with more research, a comprehensive framework can be developed”* (AAM5)

Another respondent mentioned that:

*“Climate change disclosures in annual reports will help decision makers to integrate climate considerations in their analyses in order to better align the business practices of entities with climate change mitigation strategies as well as other strategic goals on the environment.”* (MCL1)

Disclosure of climate-related issues has spurred global and national climate reporting guidelines aimed at regulating disclosure of greenhouse gas emissions. Within the accounting profession, disclosure of climate-related issues remains voluntary based on financial reporting standards and the level of materiality of climate-related matters (Arora & Lodhia, 2016). Regarding climate-related disclosures in the Ghanaian context, many interviewee responses indicated that much is yet to be done.



#### 4.2 Initiatives of the Accounting Profession towards Climate Change Action and Reporting

This section discusses other thematic areas about *how* the roles of the accounting profession can influence climate change action and reporting. To understand the initiatives to be undertaken by accounting professionals, interviewees were interrogated for their views on stakeholder groups within the accounting profession and the roles associated with each group. It was acknowledged by interviewees that the accounting profession comprises structural and social actors who play diverse roles. Structural actors consist of institutions such as international standard-setting boards, international and national accounting professional bodies, international and local accounting associations as well as accounting departments within tertiary institutions while social actors comprise accounting professionals who establish accounting systems and occupy institutions within the profession (Hopwood, 2000).

In an interview with an account and finance officer, the officer mentioned that:

*“The accounting profession is very broad and within the accounting profession, there are various institutions and actors like IASB [International Accounting Standard Board], IFAC [Internationals Federation of Accountants] .....and within our context, you will find ICAG [Institute of Chartered Accountants, Ghana] and a lot of other stakeholders elsewhere.” (QG2)*

Undoubtedly, the interactions observed and reported in the accounting literature between structural and social accounting actors are made possible by accounting stakeholders themselves as indicated by interview responses (Cooper & Robson, 2006). Some accounting academics and practitioners recognised that stakeholders categorised into structural and social actors are responsible for the process of modifying existing systems of knowledge to highlight emerging concepts like climate change action and reporting. In doing so, these interviewees acknowledged that accounting stakeholders participate in a process known as professional development (Abbott, 1988). The

succeeding section discusses major themes on other roles of the accounting profession towards climate change action and reporting. These major thematic areas are discussed with sub-themes that emerged from the interview data.

#### **4.2.1 Intra-professional and Interprofessional Relations of the Accounting Profession**

Intra-professional relations consider the interactions among structural and social accounting actors within the accounting jurisdiction while interprofessional relations deal with interactions between the accounting profession and external environmental stakeholders. As one of the major roles of the accounting profession towards climate change and related disclosure guidelines, intra-professional and interprofessional relations are crucial. These roles are expressed within collaborative consultations that enable the accounting profession to diagnose climate change and create awareness among accounting stakeholders as discussed hereinafter.

##### **4.2.1.1 Collaborative Consultations**

Collaborative consultations are encouraged by both intra-professional and interprofessional relations. Structural accounting actors ranging from international standard setters and international accounting associations to local actors like national accounting professional bodies interact among themselves and collaborate with other social actors in academia or practice. Apart from these intra-professional interactions, the accounting jurisdiction also interacts with other external environmental stakeholders. Particularly with issues surrounding climate action and related disclosures, the empirical material shows that there is a need for more collaborations between the accounting profession and other environmental stakeholders. An accounting academic retorted that:

*“I think there should be a collaboration between the accounting profession and other subject areas that consider environmentally sensitive issues. We will be interested in the accountability bit to be able to quantify or tell the impact of organisational activities on the environment.” (AAL1)*

Another accounting academic intimated that:

*“The accounting profession is a very important area of study both in academia and in practice and the role of the accounting profession permeates both private or public institutions as well as civil society organisations like NGOs. The profession can, therefore, collaborate with these stakeholders since some of them will be concerned about activities that impact the climate.” (AAP2)*

Agreeably, Lynch *et al.* (2014) argue that the accounting profession possesses the capacity to contribute to the reduction of carbon footprints through climate change accountability while Gray (2013) intimates that there is no conceptual space for climate-related reporting in traditional accounting and proposes a collaborative initiative that enables the profession to provide environmental reports that highlight issues about climate change. As discussed in the literature, intra-professional and interprofessional interactions will enable the accounting profession to understand climate change and provide guidelines for climate-related disclosures (Andrew & Cortese, 2011). Structural accounting actors like IASB are encouraged to continue interacting with reporting frameworks of other environmental stakeholders such as the Climate Disclosure Project (CDP) or Global Reporting Initiative (GRI) while social actors like accounting scholars research adoption of climate change reporting requirements in different contexts. In these instances, collaborative roles played by accounting stakeholders will generate adequate knowledge to create awareness of climate change action and reporting. Here, some interviewees attributed collaborative roles to structural accounting actors while others intimated that social actors especially accounting academics should play active roles through research.

#### 4.2.1.2 Awareness Creation on Climate Change

The intra-professional and interprofessional interactions provide the avenue for gathering knowledge to create awareness of climate change. Awareness creation within the accounting profession prompts accounting stakeholders of the nature of climate change and projected ways to disclose related information on the environment. Both structural and social accounting actors have roles to play in the awareness creation process. For instance, since accounting academics are custodians of knowledge systems within the cultural environment of the accounting profession (see Abbott, 1988), they can draw on existing knowledge and examine how such knowledge systems inform calculative techniques that are tailored-to-suit climate-related disclosures. An accounting academic mentioned that:

*“.....in the accounting literature, issues of climate change are being interrogated and I think they should be able to develop some framework to guide climate change reporting. I believe there should be a development where we should have these guidelines.” (AAL2)*

Another interviewee intimated that:

*“First of all, there must be awareness creation so major accounting stakeholders who are involved on this subject should be at the forefront to make information available [...] and trying to support individuals through research initiatives can be classified as climate action.” (AAM4)*

Stakeholders of the accounting profession play a major role in the creation of awareness on climate action and reporting guidelines. Structural actors within the accounting profession are expected to provide climate reporting standards to guide disclosure practices of accounting practitioners while other stakeholders like academics are required to further the cause of research into climate change as well as suitable disclosure practices. Structural actors can also mention climate-related issues in periodic publications in their attempts to create awareness of the climate crisis and the potential

roles of accounting professionals. Some interviewees mentioned some local accounting stakeholders such as the Institute of Chartered Accountants, Ghana (ICAG), and other professional bodies in highlighting the urgency of the climate change crisis.

#### **4.2.2 The Role of ICAG and Other Professional Associations**

Awareness creation initiatives like seminars and conferences are also encouraged by local actors within the accounting profession so that accounting professionals may be adequately informed about threats to the climate (KPMG, 2017). Responses from interviewees indicated that these seminars and conferences are roles of structural actors like ICAG and other accounting professional bodies. An interview stated that:

*“I think ICAG can partner any of these audit firms say KPMG or universities to organise some seminars to educate accountants on climate change and how the profession is addressing the matter. It will help [nods].” (ICAR)*

Some interviewees also expressed their expectations of other accounting professional bodies to actively create awareness of climate change by organising climate sensitization programmes. Also, having diagnosed the climate change problem and being able to develop classification systems that will enable accounting professionals to understand the climate change problem, the accounting profession favourably situates itself within the climate action jurisdiction by extending traditional accounting disclosure practices.

#### **4.2.3 Prescriptions for Climate Action and Reporting**

After describing climate action and reporting requirements, accounting stakeholders are expected to devise a reporting framework that enables accounting professionals to routinise climate change reporting. The execution of this role births a climate reporting framework to provide prescriptions

or instructions that extend traditional financial reporting requirements to include climate change reporting while informing accounting professionals on how to contribute to climate action. Interviewee responses indicated that the accounting profession is in the process of logically organising classification systems that will help contribute to climate change action. These classification systems hold reporting requirements for accounting professionals to execute. An interviewee acknowledged classification systems on climate change action and reporting by stating that:

*“I have looked at some organizations both outside Ghana and locally and those organisations trying to adopt these reporting frameworks like the integrated reporting framework, Global Reporting Initiative, and Triple Bottom Line reporting and when you look at some organisations, some are adopting these frameworks. But locally I don't even think the focus of these organisations are there and they don't see it as something urgent.”*  
(QG1)

Within the accounting profession, there are diverse treatment classification systems like integrated reporting, triple bottom line reporting, sustainability reporting among others (Andrew & Cortese, 2011). There was a general belief among interviewees that by implementing some of these classification systems during periodic reporting, accounting professionals can publicise the need for other stakeholders to be environmentally responsible. Some interviewees mentioned classification systems developed by other environmental stakeholders such as the Global Reporting Initiative (GRI) and intimated that accounting professionals in organisations can discuss with management to implement these international sustainability-related standards to report on activities that affect the climate. By adopting other reporting frameworks which have instructions on climate disclosure guidelines, some interviewees intimated that accounting professionals can contribute to climate action especially in sectors with minimum climate-related risks.

#### 4.2.4 Climate Change Accountability

The potential of accounting for carbon footprints and related climate change risks through climate reporting practices has come under scrutiny over the past decades (Jafino *et al.*, 2020). This is because environmental stakeholders are keen on knowing the contributions of the accounting profession towards climate change action and reporting. Some interviewees demonstrated fair knowledge on efforts of the accounting profession to address climate-related disclosures, while others failed to outline initiatives by accounting professionals towards climate change accountability. An accounting academic mentioned that:

*“To me, if you can determine how pronounced an issue is, then there should be some level of accountability. We should be able to know the extent of the problem. We are talking about the effects of human activities on the environment so we should be able to have an idea of the issue be it the quantitative or qualitative aspect.”* (AAP1)

The accounting profession has made efforts to create awareness on climate change and has suggested some treatment classifications such as sustainability reporting, social and environmental reporting, green accounting, and integrated accounting (Deegan, 2017; Hoffman, 2005; Lodhia, 2003). However, some accounting scholars have been critical of the roles of accounting to truly reflect the effects of human activities on the climate. Adams (2004) argues that the response of the accounting profession to calls for climate-related disclosures by promoting voluntary environmental reporting may only be window dressing the environmental problem of climate change.

Notwithstanding, Andrew and Cortese (2011) opine that the accounting jurisdiction should make some information available through climate accountability on climate-related issues. They posit that the profession is bound to do so because of its moral and social obligations. Though the notion

of climate accountability does not cause any apparent problems for understanding climate change and reporting requirements among accounting professionals, the various treatment classification systems and lack of consolidated reporting standards have caused some level of ambiguity. This level of ambiguity together with environmental stakeholder pressures has contributed to efforts by the accounting jurisdiction to evolve and devise climate reporting standards.

#### **4.2.5 Ambiguity within Treatment Classification Systems**

The accounting profession has outlined several classification systems within its knowledge system comprising sustainability reporting, social and environmental reporting, green accounting, integrated reporting, or triple bottom line reporting. The accounting literature is fraught with these terminologies and because specific standards have not been devised for accounting professionals to know how to report on climate-related activities, these professionals have a wide range of concepts to choose from with limited knowledge on how these concepts contribute to climate action. Some interviewees demonstrated knowledge of these concepts and mentioned a few as ways the accounting profession can contribute to climate action while other interviewees did not have ideas on these concepts. Particularly, some interviewees were uncertain about what they are mandated to do due to the lack of specific standards to regulate climate change disclosures and numerous classification systems on voluntary environmental disclosures.

One of these interviewees mentioned that:

*“I believe that climate change falls under the umbrella of sustainability issues and I can say that the profession has made some strides as far as sustainability reporting is concerned. I believe that at least we have started something and making significant strides.” (AAM1)*

Abbott (1988) argues that ambiguity emerges within a classification system of a profession when there is complexity within a problem or a lack of organised and logically structured procedures to address the problem. In the case of the accounting profession, the lack of mandatory climate reporting standards which address climate-related issues and the presence of several treatment classification systems have contributed to ambiguity on which disclosure practices should be adopted by social actors within the accounting profession.

Even though there are classification systems to inform accounting professionals on voluntary disclosure practices, some interviewees lamented that some local companies in Ghana have not identified climate action and reporting as a matter of urgency. An interviewee intimated that:

*“The response of the organisations being regulated is a bit slow and taking Ghana for instance and companies on the stock exchange, only a few are adopting climate reporting framework in their annual reports and the ones I know are usually multinational companies.”* (MCL1)

Another interviewee stated that:

*“These organisations are still reporting using normal reporting standards which do not take into consideration climate change-related issues. Those who report on the environment I can say because they are multinational companies but most of the companies that are in our local setting, even big companies, hardly report and it is difficult to see something on sustainability in their reports.”* (AAM2)

Accounting professionals acknowledge the urgency of responding to climate change through disclosure practices and call for a climate reporting framework to be integrated into traditional financial reporting guidelines. Interview responses indicate that the provision of sustainability reporting standards that address climate-related matters is a step in the right direction. West and Brereton (2013) concur that a reporting framework on climate-related matters is necessary to resolve ambiguity issues within current disclosure practices.

#### 4.3 Professional Development towards Climate Change Action and Reporting

Professional development comprises the structural and cultural evolution of a profession (Abbott, 1988). Structural evolution comprises the establishment of institutions or modification to existing institutions whereas cultural evolution deals with the development of new knowledge or modification of existing systems of knowledge. Interviewees intimated that in the case of the accounting profession, climate-related matters have permeated facets of the accounting jurisdiction and attracted interest from its stakeholders. There is also a certain level of sensitivity of the accounting profession towards climate change action and reporting. The degree of sensitivity was acknowledged by both accounting academics and practitioners. This sensitivity was expressed by an interviewee who stated that:

*“What I can say about the accounting profession is that the accounting profession has tried over the years to respond to the challenges of climate change by developing models and frameworks as to how to report the impact of organisational activities on the climate. There are new reporting frameworks that they are bringing on board.”* (AAM9)

Other responses affirmed the role of the accounting profession in devising knowledge systems that extend traditional accounting practices. This notion on the role of the accounting profession to modify existing systems to respond to emerging phenomena is also supported by Miller and Power (2013) who conceptualised the jurisdictional shift into climate change action and reporting as territorialising. By modifying existing systems of knowledge and contributing to the professional development process, accounting stakeholders who play major roles within the process construct spaces within which accounting professionals can inhabit to contribute meaningfully to climate action (Miller & Power, Accounting, Organizing, and Economizing: Connecting Accounting Research and Organization Theory, 2013). The proposed IFRS foundation’s International Sustainability Standards Board also serves as corroboratory evidence to the views of some

interviewees regarding how the accounting profession is evolving in its contribution to climate change action and reporting. However, many interviewees failed to comment on the ISSB due to a lack of adequate knowledge on its proposed operations and how the institution will empower stakeholders of the accounting profession to contribute to climate change action and reporting.

#### **4.3.1 Jurisdictional Shift towards Climate Action and Reporting**

The recognition of roles of the accounting profession enables accounting stakeholders to take up various tasks within the domain of climate change action and reporting. This demonstrates a jurisdictional shift whereby the accounting profession extends accounting practices into the climate change domain. In doing so, the accounting profession executes some roles mentioned in the above sections that are geared towards situating the profession within the climate action and reporting domain. The accounting profession's jurisdictional shift to consider climate-related matters also promotes its professional development process (Suddaby *et al.*, 2015). An interviewee stated that:

*“Well! In my opinion, accounting has evolved from the mere calculation of figures that can be seen on financial statements to providing non-financial information through environmental or sustainability reporting. The profession has changed over time and one of the significant changes is for it to pay attention to doing something about climate change.”* (AAP2)

The accounting jurisdiction is not only seen as a technical function that has rigid practices since accounting systems change over time (Chapman *et al.*, 2009). Here, interviewees viewed the accounting stakeholders as a dynamic social practice that is instrumental in reporting financial and non-financial information. Other interviewees concurred that the accounting profession has responded to stakeholder pressures and changed over time to address climate-related matters.

#### 4.4 Chapter Summary

This chapter presented an analysis of major thematic areas that addressed the objectives of this study. The findings of the study were categorised under three main sections that considered perceptions of accounting professionals, initiatives of the accounting profession towards climate change action and reporting, and how the accounting jurisdiction has evolved to consider climate-related matters.



## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter presents a summary of this study by outlining key findings and drawing conclusions. Also, the chapter discusses the implications of the research findings and provides recommendations for the accounting profession and stakeholders within the accounting jurisdiction. The chapter concludes with recommendations for future research on the roles of the accounting profession towards climate change action and reporting.

#### 5.1 Summary of Study and Findings

This study begins with an introductory chapter that discusses the background of the study (which provides an overview of prior studies on climate change action and reporting), research problem, research objectives and questions, and significance of the study. The chapter also contains a brief methodology as well as the scope and limitation of the study. This is followed by the literature review chapter which presents empirical studies on climate change action and reporting together with the theoretical lens for the study.

The next chapter (methodology) explains the procedures and methods employed for the study. It presents data collection methods as well as data analysis procedures that were utilised to interpret the empirical materials. Analysis of the empirical materials that were obtained for the study was presented in the next chapter. The chapter discussed thematic areas which emerged from the data drawing on elements of Abbott's (1988) theoretical lens. This enabled the study to address fundamental questions on what the roles of accounting professionals are and how these roles are constructed and shaped in the climate change action and reporting domain.

Overall, the study presents the perceived roles of accounting stakeholders and contributes to the discourse on climate change action and reporting by emphasising the need for intraprofessional and interprofessional interactions among accounting professionals and other environmental actors respectively. The study highlights that as accounting stakeholders execute their perceived roles and foster professional development activities, the accounting profession can develop climate change reporting standards. The following section summarises the key findings of the study.

### **5.1.1 Perceived Roles of the Accounting Profession**

The study finds that within the jurisdiction of the accounting profession, there are regulatory and conceptual frameworks that are translated into accounting practices by accounting actors. These frameworks characterise the cultural environment of the accounting profession. The cultural environment emphasises systems of knowledge within the accounting jurisdiction and how new knowledge is developed to maintain the profession's legitimacy. Also, the accounting profession engages its internal stakeholders who play distinct roles to respond to a given phenomenon like climate change.

Accounting professionals depend on knowledge systems within the cultural environment of the accounting profession to respond to environmentally sensitive issues. The cultural environment on environmentally sensitive issues also evolves within a professional development process when existing knowledge is modified or new knowledge is developed to better respond to climate change reporting. Besides, accounting stakeholders are perceived to perform other roles comprising climate risk assessment, climate risk valuation as well as disclosure of climate-related activities. Accounting stakeholders who are expected to undertake these roles are categorised into structural and social actors.

### **5.1.2 Structural and Social Accounting Stakeholders**

Drawing on Abbott's theory on the system of the professions, the study discusses two categories of stakeholders within the accounting profession which comprise structural and social actors. Structural accounting actors consist of institutions within the accounting profession while social actors are the accounting professionals who represent these institutions, accounting academics, and other accounting practitioners. Both structural and social accounting stakeholders perform roles related to climate change action and reporting and are responsible for the professional development of the profession.

### **5.1.3 Professional Development towards Climate Change Action and Reporting**

For the accounting profession to meaningfully contribute to the climate action and reporting discourse, it is required to undergo a professional development process whereby accounting stakeholders play roles that emphasise the sensitivity and adaptation of the profession to climate change issues. These roles comprise interprofessional relations with external environmental stakeholders and intra-professional relations among accounting stakeholders as well as enabling a jurisdictional shift towards climate action and reporting.

First, the study finds that intra-professional and interprofessional interactions within the accounting profession are necessary for the professional development process of accounting. Structural actors are encouraged to collaborate with both social accounting and external environmental actors in an attempt to diagnose the climate change problem. By undergoing the diagnostic process suggested by Abbott (1988), structural actors will understand the climate change problem and coordinate with other social accounting stakeholders to create awareness among accounting professionals on climate change as well as initiatives being taken to address the climate crisis within the accounting profession.

Second, it is identified that structural and social accounting actors are responsible for situating the accounting profession within the environmental jurisdiction to contribute to climate change action and reporting. The study finds that the roles of devising climate reporting standards are assigned to structural accounting actors while accounting academics are encouraged to conduct more research on climate change action and reporting. By so doing, accounting professionals can rely on climate reporting standards and other climate reporting requirements which serve as treatment classification systems to promote climate change accountability.

Finally, the study finds that there is ambiguity within the treatment classifications on climate change action and reporting. This is because there are no mandatory reporting requirements on climate change but a wide variety of classification systems such as integrated reporting, social and environmental reporting, sustainability reporting within the accounting profession, and other environmental stakeholders. For instance, it is at the discretion of accounting professionals to choose from these classification systems such as integrated reporting or GRI to report on climate-related matters. Moreover, these climate-related treatment systems only promote voluntary environmental disclosures. Notwithstanding, some local organisations within the Ghanaian context are yet to adopt sustainability reporting frameworks that highlight climate-related issues.

## **5.2 Conclusions and Contributions**

This section discusses conclusions drawn from the findings of this study which have implications for climate change action and reporting within the accounting profession. The following conclusions and contributions are drawn from the findings of the study.

As the accounting profession is categorised as an important stakeholder within the systems of the profession, its traditional system of solving client problems has to be extended to capture

environmentally sensitive issues on the climate. Interviewees of this study mentioned that voluntary disclosure practices only highlight the financial impacts of climate-related issues and are mainly adopted by organisations that are exposed to climate-related risks. These interviewees (11 out of 18) believe that accounting professionals cannot ascertain the extent of damage caused to the environment that accelerates climate change. This is because, traditional reporting practices have not integrated rigorous disclosure requirements on climate-related matters (Gray, 2013). The study suggests that the accounting profession can build the capacity of accounting professionals to create awareness of climate change through climate change accountability. This can be done through climate change action and reporting requirements to promote narratives in the academic community of accounting and valuation of climate-related matters in practice.

Despite the fundamental assumption in the climate change reporting literature that current reporting requirements (e.g., IFRS) can reflect climate-related risks that corporate bodies are exposed to (CDSB, 2021; Arora & Lodhia, 2016; Comyns, 2016; Andrew & Cortese, 2011), many interviewees (13 out of 18) were not convinced. The lack of majority support for current reporting standards shows that even though the accounting profession has permeated the climate change domain, it is yet to problematise climate-related matters in accounting language and offer solutions to make a jurisdictional claim (Canning & O'Dwyer, 2016). Nonetheless, interviewees showed optimism about the professional development process in the accounting profession to develop climate change action and reporting requirements. As a result, this study suggests that there should be more stakeholder collaborations and accounting stakeholders should devise a consolidated framework that enables accounting professionals to assess and value climate-related matters to aid climate change disclosures. Future studies on climate action and reporting should be extended to multiple environmental stakeholders groups to guide government policies on climate action.

The study identified mixed reactions among interviewees about roles and initiatives of the accounting profession towards climate change action and reporting. This is not surprising given the emerging maturity of climate change action and reporting discussions among accounting stakeholders. Only a few interviewees acknowledged disclosure of climate-related information by corporations within the Ghanaian context. The study shows that this is because of a variety of voluntary treatment classifications that have been recommended in the accounting profession. Accounting professionals are, therefore, have a wide range of climate reporting guidelines with limited knowledge on how these guidelines enable climate change action. This is indicative of ambiguity within the classification systems on climate-related disclosures as the accounting profession progresses towards devising reporting guidelines on climate change action and reporting.

### **5.3 Limitations of the Study**

This study considers the role of the accounting profession in climate change action and reporting. Also, the study adopts a qualitative approach and its focus is not to seek statistical generalisation of findings for this study. Instead, the study sought to gain an in-depth understanding of the roles of accounting stakeholders towards climate change action and reporting as well as how these roles are carried out (Cresswell, 2014). Moreover, the research participants were selected purposively and may not be a wider representation of accounting stakeholders.

### **5.4 Recommendations**

This section presents practical recommendations for the accounting profession regarding climate change action and reporting. These recommendations are discussed hereinafter.

First, as the accounting profession evolves to consider climate change action and reporting, structural accounting stakeholders have a crucial role to play in integrating climate action

guidelines in accounting pedagogy. Efforts should be made by professional accounting bodies to integrate environmentally sensitive issues in their professional curricula. More so, the accounting academic community is not exempt from this responsibility and is encouraged to design courses that highlight the climate crisis as well as the roles of accounting professionals that contribute to climate change action. In doing so, accounting professionals will be educated on the environmental problem of climate change and initiatives by the accounting profession towards climate change action and reporting. Since the accounting academic community constitutes the custodian of knowledge systems within the accounting profession, integration of climate-related issues in accounting pedagogy will also foster the claim of a cognitive jurisdiction within the climate change arena (Abbott, 1988).

Secondly, there should be active collaboration between the accounting profession and environmental stakeholders to give clarity to dispersed responsibilities among structural and social accounting actors. By collaborating with both internal and external environmental stakeholders, the accounting profession sets the agenda on climate change action and reporting for social accounting actors to identify their roles. Dispersed responsibilities among accounting stakeholders also leave the profession open to criticism from external environmental stakeholders (Cadez *et al.*, 2018). This is because accounting professionals conflate tasks to be performed by structural actors with tasks of some social actors. A good understanding of the climate crisis and how each accounting stakeholder can contribute to climate action gives clarity to the necessary initiatives to be undertaken.

#### **5.4.1 Recommendation for Future Research**

Having explained the categories of accounting stakeholders and their roles, future studies could examine best practices on ways organisations account for climate impacts, and how climate

adaptation is understood and economically measured using climate reporting standards. The extent of intra-professional and interprofessional consultations can also be examined to understand the process of these interactions and how they shape climate change reporting.



## References

- A4S. (2021, December 4). *Accounting Bodies Network*. Retrieved from Call to action in response to climate change: <https://www.accountingforsustainability.org/abn-climate-action.html>
- A4S. (2022, June 30). *Net Zero*. Retrieved from Accounting Bodies Net Zero Commitment: <https://www.accountingforsustainability.org/abn-net-zero-commitment.html#:~:text=The%20accountancy%20profession%20can%20play,impacts%20arising%20from%20global%20warming.>
- Abbott, A. D. (1988). *The System of Professions: An Essay on the Division of Expert Labor*. Chicago and London: The University of Chicago Press.
- Andrew, J., & Cortese, C. (2011). Accounting for climate change and the self-regulation of carbon disclosures. *Accounting Forum*, 35(3), 130-138.
- Arndt, C., Asante, F., & Thurlow, J. (2015). Implications of climate change for Ghana's economy. *Sustainability*, 7(6), 7214-7231.
- Arora, M. P., & Lodhia, S. (2016). The BP Gulf of Mexico oil spill: Exploring the link between social and environmental disclosures and reputation risk management. *Journal of Cleaner Production*, 140, 1287-1297.
- Asante, F. A., Bawakyillenuo, S., Bird, N., Trujillo, N. C., Tagoe, C. A., & Ashiabi, N. (2015). *Climate change finance in Ghana*. Accra: Ministry of Finance.
- Asonitou, S. (2021). Accounting and Sustainability. In *Low Carbon Energy Technologies in Sustainable Energy Systems* (pp. 343-354). Academic Press.
- Association of International Accountants . (2020, July 8). *Building Science and Technology*. Retrieved from Climate Action: <https://www.aia.org/articles/6309397-climate-action->
- Bebbington, J., Brown, J., Frame, B., & Thomson, I. (2007). Theorizing engagement: The potential of a critical dialogic approach. *Accounting, Auditing and Accountability Journal*, 20(3), 356-374.
- Bebbington, J., Sneider, T., Stevenson, L., & Fox, A. (2020). Fossil fuel reserves and resources reporting and unburnable carbon: Investigating conflicting accounts. *Critical Perspectives on Accounting*, 66, 1-22.
- Belal, A., & Owen, D. L. (2015). The rise and fall of stand-alone social reporting in a multinational subsidiary in Bangladesh. *Accounting, Auditing & Accountability Journal*, 28(7), 1160-1192.

- Bickel, M. W., Caniglia, G., Weiser, A., Lang, D. J., & Schomerus, T. (2020). Multilevel knowledge management for municipal climate action: Lessons from evaluating the operational situation of climate action managers in the German Federal State of Lower Saxony. *Journal of Cleaner Production*, 277.
- Buchanan, D. A. (2012). Case Studies in Organizational Research. In G. Symon, & C. Cassell, *Qualitative Organizational Research: Core Methods and Current Challenges* (pp. 351-389). London: SAGE Publications Ltd.
- Cadez, S., Czerny, A., & Letmathe, P. (2018). Stakeholder pressures and corporate climate change mitigation strategies. *Business Strategy and the Environment*, 28(1), 1-14.
- Canning, M., & O'Dwyer, B. (2016). Institutional work and regulatory change in the accounting profession. *Accounting, Organizations and Society*, 54(1), 1-21.
- Carnegie, G. D., & Edwards, J. R. (2001). The construction of the professional accountant: the case of the Incorporated Institute of Accountants, Victoria (1886). *Accounting, Organizations and Society*, 26(4-5), 301-325.
- Carnegie, G. D., & Napier, C. J. (2010). Traditional accountants and business professionals: Portraying the accounting profession after Enron. *Accounting, Organizations and Society*, 35, 360-376.
- CDSB. (2021). *Accounting for climate: Integrating climate-related matters into financial reporting*. Climate Disclosure Standards Board.
- Chambwera, M., & Stage, J. (2010). *Climate change adaptation in developing countries: Issues and perspectives for economic analysis*. London, United Kingdom: International Institute for Environment and Development.
- Chapman, C., Cooper, D. J., & Miller, P. (2009). Linking accounting, organizations and institutions. In C. Chapman, D. Cooper, & P. (. Miller, *Accounting, organizations and institutions: Essays in honour of Anthony Hopwood* (pp. 1-29). Oxford: Oxford University Press.
- Chen, C. J., & Roberts, W. R. (2010). Toward a More Coherent Understanding of the Organization–Society Relationship: A Theoretical Consideration for Social and Environmental Accounting Research. *Journal of Business Ethics*, 97, 651-665.
- Cho, C. H., Senn, J., & Sobkowiak, M. (forthcoming). Sustainability at stake during COVID-19: Exploring the role of accounting in addressing environmental crises. *Critical Perspectives on Accounting*.
- Church, J. A., White, N. J., & Arblaster, J. M. (2005). Significant decadal-scale impact of volcanic eruptions on sea level and ocean heat content. *Nature*, 438, 74-77.

- Clarkson, M., Li, Y., Richardson, D. G., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, 33(4-5), 303-327.
- Comyns, B. (2016). Determinants of GHG Reporting: An Analysis of Global Oil and Gas Companies. *Journal of Business Ethics*, 136(2), 349-369.
- Comyns, B. (2018). Climate change reporting and multinational companies: Insights from institutional theory and international business. *Accounting Forum*, 42, 65-77.
- Cong, Y., Freedman, M., & Park, J. D. (2020). Mandated greenhouse gas emissions and required SEC climate change disclosures. *Journal of Cleaner Production*, 247, 1-9.
- Cooper, D. J., & Robson, K. (2006). Accounting, professions and regulation: Locating the sites of professionalization. *Accounting, Organizations and Society*, 31(4), 415-444.
- Corbin, J., & Strauss, A. (2015). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (4th ed.). Thousand Oaks, California: SAGE Publications.
- Cresswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Thousand Oaks, California: SAGE Publications.
- Creswell, J. W. (2007). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, California: Sage Publications.
- Creswell, J. W., Hanson, W. E., Morales, A., & Clark Plano, V. L. (2007). Qualitative Research Designs: Selection and Implementation. *The Counseling Psychologist*, 35(2), 236-264.
- Daiute, C., & Lightfoot, C. (2004). *Narrative Analysis: Studying the Development of Individuals in Society*. Thousand Oaks, California: SAGE Publications.
- de Aguiar, T. R., & Bebbington, J. (2014). Disclosure on climate change: Analysing the UK ETS effects. *Accounting Forum*, 38, 227-240.
- de Grosbois, D., & Fennell, D. A. (2022). Determinants of climate change disclosure practices of global hotel companies: Application of institutional and stakeholder theories. *Tourism Management*, 88, 104404.
- de Vaus, D. (2001). *Research Design in Social Research*. Thousand Oaks, California: Sage Publications.
- Deegan, C. (2017). Twenty five years of social and environmental accounting research within Critical Perspectives of Accounting: Hits, misses and ways forward. *Critical Perspectives on Accounting*, 43, 65-87.

- Deegan, C. M. (2019). Legitimacy theory: Despite its enduring popularity and contribution, time is right for a necessary makeover. *Accounting, Auditing & Accountability Journal*, 32(8), 2307-2329.
- Deloitte. (2020). *Corporate reporting and climate change*. Retrieved from How external corporate reporting is affected by the impact of climate change: <https://www2.deloitte.com/ch/en/pages/audit/articles/zusammenspiel-von-unternehmensberichterstattung-und-klimawandel.html>
- Dent, M. (2003). *Remodelling Hospitals and Health Professions in Europe: Medicine, Nursing and the State*. Basingstoke: Palgrave Macmillan.
- Dent, M., Bourgeault, I. L., Denis, J.-L., & Kuhlmann, E. (2016). *The Routledge Companion to the Professions and Professionalism*. London: Routledge.
- Denzin, N. K., & Lincoln, Y. S. (2011). *The SAGE Handbook of Qualitative Research* (4th ed.). Thousand Oaks, California: SAGE Publications.
- Dillard, J., Brown, D., & Marshall, S. (2005). An environmentally enlightened accounting. *Accounting Forum*, 29(1), 77-101.
- Duho, K. T. (2020, March 3). *Modern Ghana*. Retrieved from Global Response to Climate Change by the Accounting Profession: Insights for Ghana: <https://www.modernghana.com/news/986788/global-response-to-climate-change-by-the-accountin.html>
- Edwards, R., & Holland, J. (2013). *What is Qualitative Interviewing*. London: Bloomsbury Publishing.
- Ernst & Young. (2021). *The future of sustainability reporting standards: The policy evolution and the actions companies can take today*. Ernst & Young, UK.
- European Commission. (2021). *Report on the functioning of the European carbon market*. Brussels: European Commission.
- Fleischman, R. K., & Schuele, K. (2006). Green accounting: A primer. *Journal of Accounting Education*, 24(1), 35-66.
- Flick, U. (2009). *An Introduction to Qualitative Research* (4th ed.). Thousand Oaks, California: SAGE Publications.
- Ghattas, P., Soobaroyen, T., & Marnet, O. (2021). Charting the development of the Egyptian accounting profession (1946–2016): An analysis of the State-Profession dynamics. *Critical Perspectives on Accounting*, 78, 102-159.

- Giddens, A. (1990). *The Consequences of Modernity*. Cambridge: Polity Press.
- Given, L. M. (2008). *The SAGE Encyclopedia of Qualitative Research Methods* (Vol. Vol. 2). Thousand Oaks, California: SAGE Publications.
- Gray, R. (2013). Back to basics: What do we mean by environmental (and social) accounting and what is it for? - A reaction to Thornton. *Critical Perspectives on Accounting*, 24, 459-468.
- Gray, R., & Bebbington, J. (2000). Environmental accounting, managerialism and sustainability: Is the planet safe in the hands of business and accounting? *Advances in Environmental Accounting & Management*, 1, 1-44.
- Gray, R., Brennan, A., & Malpas, J. (2014). New accounts: Towards a reframing of social accounting. *Accounting Forum*, 38(4), 258-273.
- Grey, C. (1998). On being a professional in a Big Six firm. *Accounting, Organizations and Society*, 23(5), 569-587.
- GRI. (2016, December 1). *Universal Standards*. Retrieved from Setting a new global benchmark for sustainability reporting: <https://www.globalreporting.org/standards/standards-development/universal-standards/>
- Guba, G. E. (1990). *The Paradigm Dialog*. Newbury Park, California: SAGE Publications.
- Guo, K. H. (2018). The odyssey of becoming: Professional identity and insecurity in the Canadian accounting field. *Critical Perspectives on Accounting*, 56, 20-45.
- Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative Research Methods* (2nd ed.). London: SAGE Publications.
- Hoffman, J. A. (2005). Climate change strategy: The business logic behind voluntary greenhouse gas reductions. *California Management Review*, 47(3), 21-46.
- Hopwood, A. (2000). Understanding financial accounting practice. *Accounting, Organizations and Society*, 25(8), 763-766.
- Hrasky, S. (2012). Carbon footprints and legitimation strategies: Symbolism or action? *Accounting, Auditing & Accountability Journal*, 25(1), 174-198.
- IFRS. (2010, December 1). *Emissions Trading Schemes*. Retrieved from <https://www.ifrs.org/projects/completed-projects/2012/emissions-trading-schemes/#final-stage>
- IPCC. (2018). *Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways*. Intergovernmental Panel on Climate Change.

- IPCC. (2019). Summary for Policymakers. In H. Portner, D. C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, . . . N. M. Weyer (eds.), *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (pp. 3-35). Cambridge, UK: Cambridge University Press.
- Jacobs, K. (2003). Class Reproduction in Professional Recruitment: Examining the Accounting Profession. *Critical Perspectives on Accounting*, 14, 569-596.
- Jafino, B. A., Walsh, B., Rozenberg, J., & Hallegate, S. (2020). *Revised Estimates of the Impact of Climate Change on Extreme Poverty by 2030*. World Bank Group.
- Johnson, T. (1995). Governmentality and the Institutionalization of Expertise. In T. Johnson, G. Larkin, & M. Saks, *Health Professions and the State in Europe* (pp. 2-14). London: Routledge.
- Kaplan, A. (2014). European management and European business schools: Insights from the history of business schools. *European Management Journal*, 32(4), 529-534.
- Kenealy, G. J. (2012). Grounded Theory: A Theory Building Approach. In G. Symon, & C. Cassell, *Qualitative Organizational Research: Core Methods and Current Challenges* (pp. 408-425). London: SAGE Publications.
- Koutsoyiannis, D., & Kundzewicz, Z. W. (2020). Atmospheric Temperature and CO<sub>2</sub>: Hen-or-Egg Causality? *Sci*, 83(2), 1-33.
- KPMG. (2017). *The KPMG Survey of Corporate Responsibility Reporting*. KPMG.
- Lee, T. (1995). The professionalization of accountancy: A history of protecting the public interest in a self-interested way. *Accounting, Auditing & Accountability Journal*, 8(4), 48-69.
- Lehman, G. (1995). A legitimate concern for environmental accounting. *Critical Perspectives on Accounting*, 6(5), 393-412.
- Lehman, G., & Kuruppu, S. C. (2017). A framework for social and environmental accounting research. *Accounting Forum*, 41, 139-146.
- Lindsey, R. (2021, October 7). *Understanding Climate*. Retrieved from Climate Change: Atmospheric Carbon Dioxide: <https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide>
- Lodhia, S. K. (2003). Accountants' responses to the environmental agenda in a developing nation: An initial and exploratory study on Fiji. *Critical Perspectives on Accounting*, 14(7), 715-737.

- Lynch, B. (2010). An examination of environmental reporting by Australian state government departments. *Accounting Forum*, 34, 32-45.
- Lynch, C. N., Lynch, F. M., & Casten, B. D. (2014). The expanding use of sustainability reporting. *The CPA Journal*, 84(3), 18-24.
- Lyon, C., Saube, E. E., Smith, C. J., Hill, D. J., Beckerman, A. P., Stringer, L. C., . . . Aze, T. (2022). Climate change research and action must look beyond 2100. *Global Change Biology*, 28(2), 349-361. Retrieved from <https://doi.org/10.1111/gcb.15871>
- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Qualitative Social Research*, 11(3).
- Mata, C., Fialho, A., & Eugenio, T. (2018). A decade of environmental accounting reporting: What we know? *Journal of Cleaner Production*, 198, 1198-1209.
- Miles, M. B., Huberman, M. A., & Saldana, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). Thousand Oaks, California: SAGE Publications.
- Miller, P. (1994). Accounting as social and institutional practice: An Introduction. In A. G. Hopwood, & P. Miller (Eds), *Accounting as a social and institutional practice* (p. 115). Cambridge University Press.
- Miller, P., & Power, M. (2013). Accounting, Organizing, and Economizing: Connecting Accounting Research and Organization Theory. *The Academy of Management Annals*, 7(1), 557-605.
- Moore, S., & Wen, J. J. (2008). Business ethics? A global comparative study on corporate sustainability practices. *Social Responsibility Journal*, 4(1/2), 172-184.
- Moustakas, C. (1994). *Phenomenological Research Methods*. Thousand Oaks, California: SAGE.
- Muzio, D., Ackroyd, S., & Chanlat, J. F. (2008). Introduction: Lawyers, Doctors and Business Consultants. In D. Muzio, S. Ackroyd, & J. F. Chanlat, *Redirections in the Study of Expert Labour: Established Professions and New Expert Occupations* (pp. 1-28). Basingstoke: Palgrave Macmillan.
- Muzio, D., Hodgson, D., Faulconbridge, J., Beaverstock, J., & Hall, S. (2011). Towards Corporate Professionalization: The Case of Project Management Consultancy and Executive Search. *Current Sociology*, 59(4), 443-464.
- Nartey, E. (2018). Determinants of Carbon management accounting adoption in Ghanaian firms. *Meditari Accountancy Research*, 25(1), 88-121.

- Owen, D. (2008). Chronicles of wasted time? A personal reflection on the current state of, and future prospects for, social and environmental accounting research. *Accounting, Auditing & Accountability Journal*, 21(2), 240-267.
- Petani, F. J., Ramirez, C., & Gendron, Y. (2021). Special issue on Digitalization, work, and professions. *Critical Perspectives on Accounting*, 79.
- Polkinghorne, E. D. (1995). Narrative Configuration in Qualitative Analysis. *Qualitative Studies in Education*, 8, 5-23.
- Reed, I. M. (1996). Expert Power and Control in Late Modernity: An Empirical Review and Theroretical Synthesis. *Organization Studies*, 17(4), 573-597.
- Reid, M. E., & Toffel, W. (2009). Responding to public and private politics: Corporate disclosure of climate change strategies. *Strategic Management Journal*, 30(11), 1157-1178.
- Roberts, R. (1992). Determinants of corporate social responsibility disclosure: An application of stakeholder theory. *Accounting, Organizations and Society*, 595-612.
- Saldana, J. (2016). *The Coding Manual for Qualitative Researchers* (3rd ed.). London: SAGE Publications.
- Saliya, C. A., & Pandey, S. K. (2021). Financial battle against climate change - assessing effectiveness using a scorecard. *Qualitative Research in Financial Markets*, 13(2), 141-160.
- Sarbin, T. R. (2004). The Role of Imagination in Narrative Construction. In C. Daiute, & C. Lightfoot, *Narrative Analysis: Studying the Development of Individuals in Society* (pp. 5-48). Thousand Oaks, California: SAGE Publications.
- Schaltegger, S., & Ortas, E. E. (2017). Innovating corporate accounting and reporting for sustainability - attributes and challenges. *Sustainable Development*, 25(1), 113-122.
- Schaltegger, S., Christ, K. L., Wenzig, J., & Burritt, R. L. (2021). Corporate sustainability management accounting and multi-level links for sustainability – A systematic review. *International Journal of Management reviews*, 1-21. Retrieved from <https://doi.org/10.1111/ijmr.12288>
- Schneider, T., & Michelon, G. (2017). Environmental liabilities and diversity in practice under international financial reporting standards. *Accounting, Auditing & Accountability Journal*, 30(2), 378-403.
- Stenchikov, G. (2009). The Role of Volcanic Activity in Climate and Global Change. In T. M. Letcher, *Climate Change: Observed Impacts on Planet Earth* (pp. 77-102). Elsevier.

- Suddaby, R., Saxton, G. D., & Gunz, S. (2015). Twittering change: The institutional work of domain change in accounting expertise. *Accounting, Organizations and Society*, 45, 52-68.
- Tavakolifar, M., Omar, A., Lemma, T. T., & Samkin, G. (2021). Media attention and its impact on corporate commitment to climate change action. *Journal of Cleaner Production*, 313.
- Thomson, I., & Bebbington, J. (2005). Social and environmental reporting in the UK: A pedagogic evaluation. *Critical Perspectives on Accounting*, 16, 507-533.
- Thornton, D. B. (2013). Green accounting and green eyeshades twenty years later. *Critical Perspectives on Accounting*, 24, 438-442.
- Tuckett, R. P. (2009). The Role of Atmospheric Gases in Global Warming. In T. M. Letcher, *Climate Change: Observed Impacts on Planet Earth* (pp. 3-19). Elsevier .
- UN. (2015). *Transforming our World: The 2030 Agenda for Sustainable Development*. United Nations.
- UNEP. (2020, July 2). Retrieved from COVID-19 is a wake-up call': Ghana to develop national plan for climate adaptation: <https://www.unep.org/news-and-stories/press-release/covid-19-wake-call-ghana-develop-national-plan-climate-adaptation#:~:text=Accra%2C%20July%202020%2D%20The,up%20to%20the%20year%202080>.
- Weber, R. (2004). The Rhetoric of Positivism Versus Interpretivism: A Personal View. *MIS Quarterly*, 28(1), 1-10.
- West, J., & Brereton, D. (2013). *Climate Change Adaptation in Industry and Business: A Framework for Best Practice in Financial Risk Assessment, Governance and Disclosure*. Gold Coast, Australia: National Climate Change Adaptation Research Facility.
- Wiles, R. (2013). *What are Qualitative Research Ethics?* London: Bloomsbury Publishing.
- Wolenski, J. (2004). The History of Epistemology. In I. Niiniluoto, M. Sintonen, & J. Wolenski (Eds.), *Handbook of Epistemology* (pp. 3-54). Dordrecht, Netherlands: Kluwer Academic Publishers.
- World Economic Forum. (2021). *The Global Risks Report 2021: 16th Edition*. World Economic Forum. Retrieved from [http://www3.weforum.org/docs/WEF\\_The\\_Global\\_Risks\\_Report\\_2021.pdf](http://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2021.pdf)
- World Meteorological Organization. (2021). *State of the Climate in Africa*. Geneva, Switzerland: World Meteorological Organization.

Yin, K. R. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, California: Sage Publications.

Yin, R. K. (2009). *Case Study Research: Design and Methods* (4th ed.). Thousand Oaks, California: SAGE Inc.



## APPENDIX

### Interview Guide

#### Section 1: Background information about respondent.

- a. Age in years:
- b. Gender:
- c. Position:
- d. Education:
- e. Name of Respondent:
- f. Contact Number:

#### Section 2: General information on climate change reporting.

- 1a. In your own opinion, what is climate change action and reporting?
- 1b. How are climate change issues likely to affect organisational activities?
- 1c. How should climate related risks/information be disclosed by accounting professionals?
- 1d. Why should climate change information be disclosed in that manner?
- 1e. What are the major contributors of climate change?
- 1f. What strategies should be undertaken to ensure climate change adaptation and mitigation by accounting stakeholders? What disclosure framework has the accounting profession devised for reporting on the climate?
- 1g. Should climate reporting be mandatory through accounting standards and appropriate legislation? Why?
- 1h. Could you provide details of progress towards climate reporting in Ghana and ways to improve the status quo?
- 1i. In your view, how has the accounting profession responded to calls for climate change disclosures?

#### Section 3: Roles of Accounting profession towards climate change action and reporting.

- 2a. What do you reckon as the roles of the accounting profession towards climate change action?
- 2b. Which accounting stakeholders are responsible for these roles?
- 2c. Are there local accounting stakeholders in the Ghanaian context and what do you think are their roles?
- 2d. Does traditional accounting consider climate related risks? How?
- 2f. How are these disclosures on the climate made?

2g. Are there any responses to these disclosures by external environmental stakeholders?

**Section 4: Evolution of the accounting profession towards climate change action.**

3a. How has the accounting profession changed over the years to consider climate change action and reporting?

3b. Which stakeholders spearhead how the accounting profession responds to climate change and its related disclosures?

3c. What contributions have been made by these accounting stakeholders towards reporting of climate related risks?

3d. Are there climate action and reporting areas that the accounting profession has to improve? Why?

