

**UNIVERSITY OF GHANA**

**IMPROVING DISASTER MANAGEMENT AND COORDINATION IN GHANA;**

**PERSPECTIVES FROM DISASTER MANAGEMENT AND RESPONSE**

**ORGANISATIONS IN ACCRA.**

**BY**

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**THIS LONG ESSAY IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN  
PARTIAL FULFILMENT FOR THE REQUIREMENT FOR THE AWARD OF A  
MASTER OF PUBLIC ADMINISTRATION DEGREE**

**JUNE 2019**

**DECLARATION**

I, **Harriet Adjorkor Sowah**, hereby declare that this long essay is the outcome of my own research except for references to other people's work which has been duly acknowledged. It has neither in part nor wholly been presented for another degree in this or any other university. I bear full responsibility for any shortcomings that may arise out of this work

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**CERTIFICATION**

I hereby certify that this long essay was supervised in accordance with the procedures laid down by the University.

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## **DEDICATION**

To my Family and Colleagues.

## **ACKNOWLEDGEMENT**

I wish to express my earnest gratitude to my lecturers of the Department of Public Administration and Health Sciences whose lectures helped shaped this work. I am particularly grateful to my supervisor, Dr. Albert Ahenkan, whose thoroughness and insightful suggestions informed the quality of this study. I would also thank our seminar coordinators, Dr. Abdulai Gafaru and Dr. Richardson Azunu whom with help from Dr Daniel Appiah, made immense contributions to the outcome of this work by offering insightful critiques. A special thanks to all stakeholders and respondents who willingly took part in this project in the face of challenging circumstances. Finally, my utmost thanks to my family, friends, and colleagues whose prayers, inspiration and encouragement led to me to a successful completion of this project. Above all, to God be the Glory for his grace and mercy for unless “HE BUILDS, THE BUILDERS LABOUR IN VAIN”

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## **LIST OF ABBREVIATION AND ACRONYMS**

NADMO	-	National Disaster Management Organization
UNDP	-	United Nations Development Programme
UNISDR	-	United Nations International Strategy for Disaster Risk Reduction
IDNDR	-	International Decade for Natural Disaster Reduction
GNFS	-	Ghana National Fire Service
GHS	-	Ghana Police Service
WFP	-	World Food Programme
GRS	-	Ghana Redcross Society
NAS	-	National Ambulance Service
EPA	-	Environmental Protection Agency

## ABSTRACT

The aftermath of disasters in Ghana most especially in recent years calls for an enquiry into the nature and approach of disaster management organizations in dealing with such situations. As threats of terrorisms, flooding and earthquakes increases, there is greater demand on disaster management and response organizations to enhance their efficacy by engaging measures to reduce impact of these various types of disasters. In light of this, this study seeks to examine disaster management and coordination in Ghana. It employs a qualitative research approach with the use of both primary and secondary data sources. Officials from key disaster management organizations were purposely chosen to aid with data collection. The study revealed that, legal frameworks exist to ensure effective disaster management however implementation is a challenge. Politics, citizen attitudes, resource constraints and the challenge of coordinating activities of disaster management organizations continue to undermine disaster management efforts in the Ghana. The study recommends sustainable relief and reconstruction, depoliticisation of NADMO, engagement of traditional leaders and improved communication networks at ways of improving disaster management and coordination in Ghana.

Keywords; Disaster, Disaster management, NADMO

## CHAPTER ONE

### GENERAL INTRODUCTION

#### 1.0 Introduction

The effectiveness of disaster management organizations in properly handling and dealing with disaster situations cannot be ruled out in discussions on disaster management. As the disruptive effects of disaster continue to increase, it is important for disaster management organizations to demonstrate proactiveness towards effective emergency management. This chapter introduces the research subject by providing the background to the study, research problem, research objectives and questions, significance of the study, scope and limitations of the study as well as organization of the study.

#### 1.1 Background of the study.

Right through history, disasters have caused huge cost in both material, human and physical resources and consequently grave damage to the environment. Disasters present a significant obstacle to socio-economic stability and development and as suggested by Gyireh & Nunbogu (2015) they are nature's methods of changing terrains and developing new biodiversities. As stated in the (Bank, 2010) document, disasters have been one among many phenomena that have posed great challenges on many economies, particularly, growing ones that have restrained managerial capabilities. Disasters involve an extreme interruption of the operation of a society or network at any extent as a result of harmful events interacting with conditions of exposure, vulnerability and capacity, which leads to material, human, economic, and environmental influences and losses. ( *Advocacy and Capacity Building For Disaster Risk Reduction and Preparedness in Ghana Project. Final Project Report, 2017*). Palanivel, Saravanavel &

Gunasekaran (2015) define disaster as a severe occurrence within the earth's system that leads to loss or destruction of value items and property, injury to persons and in extreme cases death. From monstrous storms and tsunamis to civil wars and drought, both natural disasters and manmade disasters obstruct progress of families, societies and economies. The world has experienced several forms of disasters, along with the Ebola, starvation and conflict within the Democratic Republic of Congo, Hurricane Katrina, 2005 in the United States, 2011 earthquake and tsunami in Japan, and September 11, 2001 terrorist attack within the United States.

Ghana is one of the fast rising countries in sub Saharan Africa that is not an exception when it comes to the incidence and frequency of disaster. The country has experienced several forms of disasters in the forms of floods, droughts, fire outbreaks and outbreak of disease within the last decades. These include the 1999, Northern floods, the Dompouse mine collapse on November 12, 2009, in the Ashanti Region, Swedru floods, in June 24, 2010, only to mention a few. The Accra, the Capital City of Ghana has experienced periodic fire outbreaks, floods and different kinds of disaster resulting in the loss of many lives and destruction of property. Notable among them include the November 7, 2012, Achimota Melcom disaster, the June 3, 2015 dual catastrophe at the Kwame Nkrumah Interchange, October 2017, atomic gas explosion at atomic junction and the December 2, 2016 Trade Fair gas explosion. Evidently, the emergence of these disasters resulted in many lives lost with damage to numerous assets in the affected areas. The National Disaster Management Organization(NADMO), the main coordinating organization has come under scrutiny for its capability in effectively handling disaster situations in Ghana. Due to large scale loss of human lives and property, many people have also questioned the roles of the collaborating organizations in effectively responding to disaster and mitigating its impacts.

According to (Noran, 2014) a lack of proper interoperation and collaboration among disaster management and response organizations often affects their performance in handling disaster situations. Obviously, how successfully disaster management and organizations deal with various types of crisis situations is dependent on their ability to efficiently collaborate throughout the different phases of the disaster management cycle. Eide, Haugstveit, & Borén (2013) observe that an important aspect in dealing with massive emergencies is the successful cooperation between emergency services and non-governmental organizations. Proper preparation and response are required by the various institutions to effectively respond to and manage these unforeseen circumstances. This necessitates an understanding of the various emergency response organizations and their roles in disaster management. As suggested by (Eide et al., 2013) this understanding, coordination, and cooperation will enhance performance of the various stakeholders in disaster management. Accordingly, innovative ways coupled with advanced technology would better facilitate this process.

Interagency cooperation is thus central to disaster management given that it requires the intervention of the police service, fire service, emergency medical services and different applicable agencies. It requires a multidimensional technique that leverages the competencies, resources and dedication of authorities, government agencies, non-governmental agencies and individuals. Carter(2008) argues that contemporary disaster management is a general requirement, essential to both governments' and citizens and in order to be successful, disaster management ought to be carried out as an inclusive and an uninterrupted activity and not as a periodic response to isolated cases of disasters. Effective disaster management involves planning, coordination, communication and risk assessment in order to achieve results(Caymaz, Akyon, & Erenel, 2013).

## 1.2 Research Problem

Disaster management in Ghana, especially in municipal or metropolitan areas like Accra is predominantly complex due to growing urbanization and its related effects which repeatedly increases exposure of humans and financial property to hazards and creates new forms of risk. The aftermath of these disasters and subsequently its management have impacted the lives of many citizens and societies leading to both temporary and permanent changes. For instance, between the periods 1991 and 2008, the country experienced six(6) major floods which impacted over two million people(*Ghana Plan of action on disaster risk reduction(drr) & climate change adaptation(cca),n.d*). Subsequently, the growth in frequency of these diverse forms of disaster in the country and its enormous consequence such as the June 3, 2015 twin catastrophe necessitates a more effective collaboration for preventing, responding to and restoring communities after such undesirable circumstances.

Disaster Management involves activities that seek to mitigate the terrible consequences of disaster, ensure societies and nations preparedness in case of prevalence, facilitate reaction to disasters that occur and help societies, individuals and countries recover quickly following disaster activities. Most of these disasters require a joint and collaborative attempt among the Ghana Police Service, the Ghana National Fire Service, the Military, the National Disaster Management Organization (NADMO), among other collaborators all through response and restoration. As stated by Carter (2008) a recurring challenge in the course of response organizations is coordinating the different and various activities undertaken by them. However, effective disaster management and coordination in Ghana is hampered by resources constraints, improper communication and information flow, differences in organizational structure and design, divergent perception and views, politics, and absence of technical capacity.

Prior research however shows that, institutions have not focused on effective coordination and collaboration among disaster management organizations.( Noran, 2014; Cheema, Mehmood, & Imran, 2016).Other studies have focused on challenges and issues in disaster management (Chong & Kamarudin, 2017; Kapucu, 2012).This notwithstanding, studies on disaster management in Ghana have centered on the different types of disaster and their effects on the socio economic improvement of the country. These studies have focused on floods (Osei, 2013; Gyireh & Nunbogu,2015; Asumadu-Sarkodie, Owusu Phebe, & Jayaweera Herath M P, 2015), fires(Addai, Tulashie, Annan, & Yeboah, 2016).Comparatively, few studies have paid attention to aspects of the disaster management cycle.(Baidoo, 2018). As a result, this research seeks to bridge the gap in literature by examining the effectiveness of disaster management and coordination in Ghana.

### **1.3 Research Objectives.**

The objective of the study looks at the motive of the research and in this instance the studies seeks to examine the effectiveness of disaster management and coordination in Ghana. Other specific targets include;

- To identify the roles of the various response institutions in disaster management
- To examine the coordination mechanism of disaster management in Ghana.
- To highlight coordination challenges of these institutions in disaster management.
- To suggest ways of improving collaboration and coordination among response institutions for effective disaster management.

#### **1.4 Research questions.**

- What are the diverse roles of the various response institutions and how have they managed disasters in Ghana?
- What is the coordination mechanism of disaster management in Ghana?
- What specific challenges do response organizations encounter in managing disaster in Ghana?
- In what ways can collaboration and coordination be improved among response institutions for effective disaster management?

#### **1.5 Definition of Key terms and Concepts**

Disaster: Any tragedy, misfortune, catastrophe or severe incident in any region, springing up from either man-made or natural reasons which leads to human suffering, loss of lives and property damage. Surya, Begum, & Rita (2013)

Disaster Management: Measures taken to prevent the emergence of disasters and mitigate its impacts when it happens.

Hazard: A potential adverse physical occurrence, happening or individual interest, which might result in the loss of life, damage to property, social and economic disorder or environmental deterioration. (National Disaster Management Organization, 2010)

Vulnerability: A measurement of network elements at risk that are exposed to unique dangers, either natural and human triggered, and which have a low level of resilience to cope with the influences of that hazard or its characteristics.

Risk: The presence of vulnerable factors in areas exposed to dangers

### **1.6 Significance of Study**

The study revealed the level of activities of response institutions in disaster management. It also highlighted the challenges faced by these institutions with regard to responding effectively to emergencies and managing them accordingly. Results from the study would inform relevant stakeholders in their decision making towards mitigating the distressing effects of disasters in Ghana. Moreover, findings and recommendations from the study would help policy makers draft and implement workable policies towards effective disaster management in Ghana. Additionally, the study contributes to the extensive knowledge in disaster management and serves as a guide to practitioners and students in the field.

### **1.7 Scope and Limitation of Study**

Due to time and resource constraints, the scope of the study is narrowed to response organizations in Accra. Moreover, per the challenge of engaging all disaster management organizations, the research focused on key institutions such as NADMO, the Ghana Fire Service, The Ghana Police Service, Ghana Redcross Society, Ghana, United Nations Development Programme, Ghana, World Food Programme and the Ghana Health Service.

### **1.8 Organization of the Study.**

The entire research is structured into five chapters. Chapter one introduces the topic with the background of the research, research problem, research objectives, research questions, significance of the study, scope and limitation of the study and chapter organization. Chapter two, reviews literatures relevant to the topic and key terms pertaining to disaster management are discussed. Chapter three elaborates on the methodology of the study. By these, frameworks for the study is explained through strategically organized subheadings. This includes the research

design, study population, sampling techniques used, data collection instruments and procedures, methods of data analysis and ethical considerations. In the fourth chapter, findings from the previous chapter are analyzed and discussed. This enables readers follow through the connection between the research objectives and questions, literature review and responses from respondents. Chapter five details the summary and conclusions of the long essay based on the findings and analysis made. It also discusses important recommendations to inform policy action and directives in order enhance effectiveness among response institutions as well as provide lessons for policy implementation and further studies.

## CHAPTER TWO

### LITERATURE REVIEW DISASTER MANGEMENT; CONCEPTS AND ISSUES

#### 2.0 Introduction

Disaster management is an important concept critical to governance as such disaster management organizations are generally created by governments and required to offer disaster related services for the general public. Their operations are generally legislated at national, state and global levels. (Noran, 2014). For instance, the United Nations International Strategy for Disaster Risk Reduction (UNISDR/UNDRR), United Nations Development Program (UNDP) and disaster management agencies in respective countries along with the National Disaster Management Organization in Ghana and the National Emergency Management Organization in Nigeria.

In recognition of the fact that disaster risks would further be magnified by climate change which consequently would negatively impact on lives and property(*Advocacy and Capacity Building For Disaster Risk Reduction and Preparedness in Ghana Project Final Project Report,2017*), there is usually pressure on disaster management organizations to provide better services for citizens. However, merely providing frameworks to guide the operations of disaster management and response organizations do not necessary improve disaster management. Incompatibilities in infrastructure, structure, culture, overlap of roles and difficulties in filtering and validating disaster information in crisis situation remains a challenge for disaster management organizations.

This chapter reviews literatures significant to the research subject. Information would be gathered on concepts of disaster and disaster management, key components of the disaster

management cycle, concept of coordination and collaboration in disaster management, disaster management in Ghana, disaster management and sustainable development.

## **2.1 Concept of Disaster and Disaster Management**

### **2.1.1 Concept of Disaster**

Disasters are not abnormal occurrences. They are a manifestation of the way humans live their normal lives, the way they structure their societies and the way they allocate resources. Disasters are catastrophic events that are collectively experienced, have acute onset and are time delimited. Disasters are universal events, experienced in both growing and advanced nations, they potentially cause great loss to life and property. They are usually measured based on the number of lives lost, belongings damaged or destroyed, injuries sustained, as well as environmental degradation. As stated by Pascapurnama et al (2018) dramatic disruption such terrorism, human induced and natural disasters generate an emergency situation for nations and increase pressure on interest groups that require timely responses and reactions.

Unfortunately, in less developed countries such as Ghana, discussions on disasters are embellished in misconceptions, myths and beliefs which occasionally discourages individuals and sometimes the learned from taking emergency situations seriously.(National Disaster Management Organization, 2010).Over the past decades, the world has suffered a rising number of disasters affecting more than 2.5 billion, killing about 500,000 and causing economic losses of about US 700 Billion Dollars.(National Disaster Management Organization, 2010). Disasters, either human induced (anthropogenic) or natural, cause environmental destruction, deterioration in utility facilities and overall pose an extreme challenge to the normal functioning of life and the process of development.

Natural forms of disasters include earthquakes, tsunamis, and landslides, among several others. Human induced disasters include floods, fires, epidemics and several others. Natural disasters which are both sudden and powerful cause severe damage to the economic bearing of a country, creating hardships to a larger section of the population. The impact of this type of disaster is multidimensional and affects all aspects of economic, social, political and domestic processes. As suggested by Palanivel, Saravanavel, & Gunasekaran(2015), the expansion in developmental activities such as over exploitation of groundwater, polluting of rivers, potential lands and cutting trees for several constructions, of humans, through improper intervention with nature have increased the occurrence of natural disasters. In furtherance, they broadly categorized disasters into three classes namely Disasters induced by Natural Processes also known as Natural Disasters, Induced Natural Disasters by human interventions, and Exclusive Human Made Disasters. The table below further explains the above statement.

**Table 2.1. Classification of Disaster**

Natural	Some Human Influence	Mixed Natural/Human Influence	Some Natural Influence	Human
Earthquake	Flood	Landslides	Crop disease	Armed conflict
Tsunami	Dust Storm	Soil Erosion	Insect Infestation	Land mines
Windstorm	Drought	Coastal Erosion	Forest Fire	Oil spill
Cyclone/Hurricane		Greenhouse effect	Mangrove decline	Water/Soil/Air pollution
Volcanic eruption		Sea level rise	Ozone depletion	Electrical Power breakdown
Lightning		Coal fires	Acid rain	Nuclear/Chemical accidents
Thunderstorm		Desertification		Ground water pollution
Snow storm				Pesticides

**Source:** Palanivel et al (2015).

Dramatic disruptions owing to both natural and manmade disasters present challenges to countries and increase pressure on interest groups and various stakeholders to act promptly. Such disruptions have the tendency of increasing the vulnerability of the people to possible risks such as health, energy, food and security. This is to say that both man-made and natural disasters are amongst the major drivers of famine and malnutrition hence conscious practices in the stages

of the disaster management are crucially important to achieve effective and efficient disaster management. Carter( 2008) argues that, although we have managed to adapt to disaster problems, we have neither eliminated nor controlled them. Hence, while we have made efforts at modifying their impacts in diverse forms, disasters consistently mete out undesirable demands globally. Threats from nuclear accidents, social conflicts and in recent times terrorist attacks such as actions of Boko Haram in Nigeria are disturbing enough and could pose significant challenges which would be difficult to contain.

### **2.1.2. Disaster Management**

Disaster management involves a multidisciplinary approach to address the pre and post effects of a disaster occurred within a particular locality or region. In a crisis situation, individual property is destroyed, people either get injured, displaced or killed and key societal infrastructure such as roads, water, communication systems and electricity networks gets damaged. Disaster management is critical in lessening the impact of these disasters on affected persons, the community and country at large. It involves preparedness, response and rehabilitation of affected structures. Disaster management generally, involves forecasting, preparedness, monitoring, prediction, early warning, damage assessment, and relief management capability.(Gyireh & Nunbogu, 2015).

Disaster management requires the organization of resources both human and materials to avert the emergence of disaster or ease its possible impacts in case of occurrence. It also involves the plans, policies and programmes put in place to mitigate disaster impacts in a country. Perhaps emphasizing the point of Sinha & Srivastava, (2017),it includes the creation and implementation of disaster rehabilitation and recovery plans and spans through organization, coordination, evaluation and monitoring by a variety of actors. Palanivel et al, (2015) argues that “disaster

management involves several aspects comprising of disaster vulnerable area mapping, proper understanding of the type and degree of causative parameters involved, mitigation or prevention planning, assessing damages caused by disaster and rehabilitation”. It also involves the consideration of all the policies, strategies that are put in place to effectively tackle and manage the causes of disaster. Effective disaster management is influenced by the activities of a multitude of autonomous organizations both nationally and globally. Citizen participation and engagement initiatives are significant throughout the disaster management cycle. It is obvious that disaster problems cut across various disciplinary lines, hence such issues cannot be effectively addressed by focusing on isolated cases.

## **2.2 Key Components of the disaster management cycle.**

The disaster management cycle details the sequence involved in the management of disaster events and their impacts. According to Chong & Kamarudin (2017) earlier researchers emphasized diverse phases of the cycle, and subsequently concluded that regardless of the differences in approach, the overall disaster management cycle can be divided into pre-disaster and post-disaster stages. The pre-disaster stages included prevention, mitigation and preparedness while the post-disaster stages included disaster response, rehabilitation and reconstruction. Generally, disaster management involves four phases specifically, Disaster prevention and mitigation, Disaster preparedness, Disaster Response and Disaster Recovery.

**Figure 2.1: Disaster Management Cycle.**



### Disaster Prevention and Mitigation

Disaster prevention and mitigation encompasses the things we do to prevent the occurrence of disasters as well as activities taken to lessen the impact of a possible disaster on both life and property caused by a potential hazard. Disaster Prevention involves actions taken to avert a natural occurrence or possible hazard from causing destructive effects on economic assets or people. Disaster prevention requires effective planning. The undesirable consequence of hazards and disasters cannot be barred in its entirety however, the degree of severity can be considerably reduced by a variety of measures and strategies. Thus disaster mitigation aims at hazard reduction as well as reduction in risk consequence. Mitigation actions include carrying out public sensitization and awareness programmes, preparations of disaster management policies and plans and strengthening existing weak structures. Disaster mitigation may be structural and non-structural. Structural mitigation deals with the physical changes or acts of protection from disasters or emergency situations. They are usually direct actions taken by people in order to

better preserve life and property. For instance, constructions of seawalls, levees, windbreaks and hazard resistant buildings. Non-structural mitigation encompasses the policies, awareness, knowledge creation, and participatory mechanisms that can reduce risks and related impacts. Having family emergency plans and flood insurance policies may be considered as mitigation strategies. Both structural and non- structural mitigation actions and strategies are usually carried out by human beings themselves, however nature has its own way of providing mitigation measures through the ecosystem functions. (*Disaster Risk Management Training Manual, 2016*)

The table below provides a summary of such measures as provided by nature.

**Table 2.2. Nature and mitigation strategies.**

Ecosystem	Disaster Mitigation
Wet lands, Floodplains	Floodplains and wetlands direct floods in coastal areas. Lakes, marshes and floodplains gradually release wet season flows in periods of drought.
Coastal Ecosystems	Tidal flats, coastal wetlands, deltas and estuaries decrease the altitude and pace of storm surges and tidal waves. Coastal ecosystems protect against flooding, storm surges, and other coastal hazards.
Mountain forests, vegetation on hills	Forests on watersheds help in water recharge and purification. It is also essential for drought mitigation and conserving the supply of drinking water. Vegetation cover and root structures guards against erosion and enlarges slope stability by binding soil together and averting landslides

Source; (*Disaster Risk Management Training Manual, 2016*)

Essentially, while disaster prevention and mitigation are often used interchangeably, there is a conceptual difference between the two terms. Disaster prevention is largely related to prohibiting man-made disasters such as chemical accidents and fire outbreaks. Disaster mitigation on the other hand is a critical measure of hazard reduction for natural hazards. (*Disaster Risk Management Training Manual*, 2016).

### **Disaster Preparedness**

In disaster Preparedness actions and activities are carried out to safeguard against a possible disaster and respond effectively in case of occurrence. Disaster preparedness involves an incessant and integrated course of action ensuing from an array of risk reduction actions and resources rather than from a separate sectoral activity and provides a framework for devising valuable, pragmatic and synchronized planning efforts of governments. (*Disaster Risk Management Training Manual*, 2016). Such measures include information management, early warning systems, training of officials, acquisition and storage of relief items, hazards and risks vulnerability assessments, developing data base on collaborating agencies, research and mobilization of equipment for simulation. For effective handling of hazards and emergencies, a comprehensive disaster preparedness strategy is required. As stated by Mashi et al (2019) taking preventive actions to prevent the emergence of disasters or devising strategies towards achieving high level of awareness for inevitable disaster events is of great essence.

### **Disaster Response**

The response phase includes initiatives taken to guarantee the desires and provisions of affected persons in order to minimize effects. Disaster response is intended at creating and providing urgent aid in order to sustain life, improve wellbeing and build morale of the affected community. These activities, often referred to as emergency response services involve, search

and rescue operations, evacuation of victims to safe havens, assessment of disaster and registration of victims and provision of relief items. (*National Disaster Management Organisation, 2010*). Other activities involve provision of medical services, coordination and communication, first aid and emergency medical care. According to Baidoo (2018) “a well prepared response is much more effective than ever”. It is worth knowing that, information and resources are two major requirements for an efficient response without which programmes, plans and policies put in place would yield no results. The rationale for disaster response is captured in the need to mitigate further damage and loss, limit casualties, alleviate hardships, re-establish the necessary support systems and consequently provide a foundation for recuperation(*Disaster Risk Management Training Manual, 2016*).

### **Disaster Recovery**

This details the final phase in the disaster management cycle. It involves activities undertaken to restore disaster victims and community members to normalcy. The process of recovery is an important aspect in the management and handling of disasters. As stated by Johnson, Olshansky, & Olshansky, (2016) management of recovery matters because the after effects of disasters extend over time. Many people survive the initial disaster but consequently suffer from health problems, financial problems and a breakdown of social and network system. Physical recovery from disasters may take many years and the psychological scars may last for a lifetime. Measures taken in this phase include reconstruction of infrastructural facilities, promotion of self-reliance and income generating activities, restoration of utility service and the construction of permanent structures for adjustments and accommodation.

The role of community members or citizens in this important phase cannot be underestimated. When citizens are actively involved in formulating disaster recovery plans and strategies, they

become empowered to act instead of just playing passive and receiving assistance in an unlikely event of a disaster. Disaster recovery is best achieved when governance is decentralized with assistance in the form of money, skills development, from central government. The vulnerability of people to common possible threats as food and security is increased as such good practices in the pre-disaster stages are crucial to responding effectively to disaster situations(Pascapurnama et al., 2018). It is worth noting that, the four stages in the management cycle overlap and the extent of damage significantly determines the length of each stage. Sinha & Srivastava(2017)argues that disaster management is complex as such, it should be flexible, progressive, risk driven, integrated, coordinated, progressive and professional in order to improve effectiveness.

### **2.3 Disaster Management and Sustainable development.**

“The aftermath of great natural disasters and the management of the recovery process impacts the lives of citizens and can change the future of a city or region forever”(Johnson et al., 2016). When disaster strikes, lives are lost, buildings collapse, infrastructure is hobbled leaving local authorities desperate for resources to provide immediate relief and reconstruction for affected victims. Post disaster rehabilitation and reconstruction could offer opportunities to fix and resolve longstanding problems that consistently negatively affect human lives and property. Perhaps this emphasizes the assertion by Palanivel et al (2015) that disaster could be forewarned or possibly averted by appreciating the root causes, determining such vulnerable zones, engaging in practical and defined planning for implementation and conducting preparedness activities. It is therefore important to encourage deliberate and systematic approaches so as limit vulnerabilities and risks to hazards.

This is understood by the Sendai Framework For Disaster Risk Reduction 2015-2030, which is directed at achieving a considerable reduction of disaster risk and losses in lives, livelihoods and health in the economic, physical, cultural and environmental assets of people and make the world safer from natural hazards.(UNDP, 2015).With focus on strategic partnerships, the Sendai Framework was adopted by 187 countries in Japan as a blueprint for substantial reduction in disaster losses globally, highlighting climate change and sustainable development.

Sustainable development requires structural and institutional adjustment of societies to hasten economic growth, reduce inequality gaps and eliminate complete poverty without compromising ability of future generations to benefit from these developments. The sustainable development goals have about 25 targets related to disaster risk reductions which firmly establish disaster risk reduction has a core developmental issue. Disasters and its resulting environmental degradation have a tendency to stimulate conflict, reverse development gains and obstruct progress towards the achievement of sustainable development goals. Ultimately, the consequence of disasters can severely degrade a country's overarching potential for sustainable development and compel governments to adjust programs and priorities. Poor administration of relief and reconstruction efforts may have depressing implications for future development which may possibly increase vulnerability to future hazards.

The resulting effects of crucial developmental programmes may occasionally have dire consequences for a country. Developmental programs and projects implemented without taking into account current environmental hazards may increase vulnerability to both natural and human induced disasters. For instance, construction projects that increase demand for wood to strengthen houses could bring about increased vulnerability to mudslides due to deforestation. Moreover, vulnerability to earthquakes and spillages also increases when projects such as dams

and airports are constructed without carrying out an environmental impact assessment. The increasing trend in the incidence of natural disasters perhaps is an indication that increase in vulnerability to hazards is largely due to human activities. Some development projects such as road constructions, clearing forest for timber, put at risk, natural resource sustainability, and are among the many determinants of the incidence and intensity of natural disasters. As such, an obvious relationship exists between vulnerability to disasters and the level of social, economic and industrial growth. Effective management of disaster has proven to be the best practice to the accomplishment of sustainable development (UNDP Report, 2017). It is indicated that, every dollar spent on disaster management can typically save about four to nine dollars otherwise spent in an emergency response when disaster occurs (UNDP Report,2017).

#### **2.4. International Strategies and Frameworks for Disaster Management.**

Following the United Nations first conference held in Yokohama, Japan, in 1994, the Yokohama Strategy and Plan of Action for a Safer World was adopted. It was the primary document, aimed at creating strategies at the global level for preparing, preventing and mitigating disaster impacts. The Yokohama plan of action particularly, focused on enhancing coping mechanisms to help facilitate an easy and fast recovery process. This plan was a product of the International Decade for Natural Disaster Reduction (1990-2000) and particularly, the Global Conference on Natural Disaster Reduction held in 1994.

At the second global conference on Disaster reduction held in Kobe, the International Community developed and adopted a 10 year plan, the Hyogo Framework for Action (2005-2015); Building Resilience of Nations and Communities to Disasters, as a comprehensive document for disaster risk reduction with the aim of considerably reducing loss of human lives and socio- economic assets and building resilient communities to better deal with hazards that

impede their progress. The framework was to address challenges presented by disasters, lessons and gaps identified from the Yokohama strategy and outlined five priorities for action, guiding principles and pragmatic ways for achieving resilience. The priorities were aimed at ensuring that dealing with disaster risk reduction becomes both a national and local priority requiring institutional support for implementation, identify, assess and monitor disaster risks and enhance early warning, utilize innovation, knowledge and education to build a culture of safety, reduce underlying risk factors and to strengthen disaster preparedness for effective response at all levels.

Subsequent to discussions at the global conference on Disaster Risk Reduction in March, 2015, a new plan of action and framework was established by 187 member countries. As a result of the relative lack of consideration to health concerns by the preceding framework, the Sendai Framework addresses matters on individual health and wellbeing which are general to disaster risk reduction, climate change and sustainable development. Although the Hyogo Plan succeeded in galvanizing many stakeholders to make improvements with disaster risk reduction, more effort was needed to tackle fundamental vulnerability from poverty, inequality or improper urban planning and land use. The Sendai Framework for Disaster Risk Reduction 2015-2030 marks a decisive shift from dealing with disasters to containing and reducing risk and establishes resilience building as an important component of the 2020 Agenda on sustainable development (UNISDR, 2016) The framework requires a coordinated action across local, national, regional and international levels.

## **2.5 Disaster Management in Ghana**

### **2.5.1. Overview of Disaster Risks in Ghana**

Ghana is one of the fast rising countries in the continent exposed to risks emerging from seismic and multiple weather related hazards. (UNDP Report, 2017).The country is located in one of the

world's complex climatic regions and is affected by the climatic forces of the Sahel Sahara and two oceans(*Ghana plan of action on disaster risk reduction (drr) & climate change adaptation (cca)*, n.d.) Ghana is exposed to floods, pest infestations, cholera outbreaks and droughts more especially in the Northern regions. Historically, the country has been exposed to hazards such as wild fires, floods, coastal erosion, droughts, storms and earthquakes (UNDP Report, 2017). Disaster risks and poverty are strongly connected in Ghana and are entangled with the reality of climate change. As such it is expected to expose societies to an increase in rainfall inconsistencies, a decrease in farm yields and a decline in resource based livelihoods (*Ghana plan of action on disaster risk reduction (drr) & climate change adaptation (cca)*, n.d.)

Due to the alarming rate and increase in disasters in the 1980s, several conferences were held by the United Nations Organization, which resulted in the UN declaration of the 1990s as the International Decade for Natural Disaster Reduction (IDNDR).The decades goals were to enhance global understanding and to advance disaster prevention while decreasing risk of natural disasters through an extensive use of science and technology.( National Disaster Management Plan, 2010).Following this, a conference on Natural Disaster Reduction was held in Yokohama, Japan, in May 1994, which established the International Strategy for Disaster Reduction to replace the defunct IDNDR. This strategy was to ensure a safe world and compelled each country to establish a permanent disaster management organization.

### **2.5.2 Institutional Structure.**

The National Disaster Management Organization is currently the lead government organization created by Act 517 (1996) to handle disaster situations and related emergencies in the country. This constitutional provision which establishes, NADMO, provides it with the legal mandate to execute and discharge disaster mitigation, response and recovery operations in the country. The

organization operates under the Ministry of Interior coordinates all the appropriate civil organizations at national, regional, district levels and zonal levels. It uses a decentralized system in the discharge of its duties. Structurally, the organization has a National secretariat, ten (10) Regional secretariats, two hundred and forty-three (243) Metropolitan, Municipal and District secretariats more than nine hundred (900) zonal offices throughout the country. (NADMO, 2019). The Organization collaborates with other organizations like the Metropolitan, Municipal and District Assembly, Military and Other security services, Bilateral and Multilateral Donors, UN Agencies, Private Institutions, Philanthropists and Beneficiaries in managing disaster in Ghana. These organizations and agencies provide a range of services in managing disaster situations in the country.

**Table 2.3. Types of Disaster in Ghana**

<b>Types of Disasters</b>	<b>Examples</b>
Insect and Pest Infestation	Blackfly, Armyworm, Anthrax, Locus, etc.
Diseases and Epidemics	Yellow fever, Pandemic Influenza, Cerebro-Spinal Meningitis(CSM), Cholera
Human induced/ Man-made	Marine and railway emergencies, Vehicular and aviation accidents, Building collapse, Social conflicts
Geological/ Nuclear Radiological	Landslide, Gas emission, Earth quakes, tsunami's
Hydro-meteorological	Floods, windstorm, droughts, rainstorm, tidal waves
Fires and Lightning	Lightning, domestic and Industrial fires, Bush /Wildfires

Source: NADMO (2019)

Since its inception, NADMO in partnership with other agencies has handled major disaster situations in Ghana such as outbreak of Cerebro-Spinal Meningitis (CSM) in 1997 in the Northern region, which claimed about 1,356 lives. Also, an amount of one hundred and fifty million cedis was spent in the management and control of cholera epidemic in the Central and Greater Accra which claimed a total of about 117 lives. (NADMO, 2019). In more recent times, the organization has managed several types of disasters including floods, fires, droughts, cholera outbreak with the major break being June 3, 2015 twin disaster which claimed the lives of many and destroyed several properties.

**Figure 2.2: 3<sup>rd</sup> June, 2015 floods in Accra**



Source: Graphic online (2015)

**Figure 2.3. Atomic gas explosion**



Source: Ghpage.com, (2017)

**Figure 2.4 Fire Outbreak at City Gold Jewelry, Makola Shopping mall, Accra**



Source; Graphic Online (2019)

**Figure 2.5 Bagre Dam Spillage, 2019**



Source: My joy online (2019)

**Figure 2.6 Achimota Melcom Disaster, 2012**



Source: My joyonline (2012)

Preceding the commencement of the National Disaster Management Organization (NADMO), the National Mobilization Programme, was the implementing body of the Disaster relief committee up until 1994. (Osei, 2013). This committee was set up after the 1982, 1983 crisis of famine, bushfires, drought and the deportation of about 1.2 million (m) Ghanaians from Nigeria. In 1996, this programme metamorphosed into NADMO through the creation of NADMO Act 517 (Osei, 2013). In order to effectively manage disasters in a more systematic, harmonized and efficient manner, a National Disaster Management Plan was prepared in 2010 in accordance with Act 517 which presents guidelines to NADMO in delivering on its mandate to ensure proper handling of disasters in Ghana.

The National Disaster Management Plan spells out suitable measures to dealing and managing disasters at the diverse stages of the disaster management cycle. (National Disaster Management Plan, 2010). The Plan was first drafted in 1997 and subsequently reviewed in 2007. Also the National Standard Operating Procedures (NSOP) spells out the functions and responsibilities of various stakeholders and addresses issues of duplication of efforts (NADMO, 2010). It is understood to be the operational module to the NDMP. The National Contingency Plan (2008) was originally drafted to cover preparedness for floods, earthquakes and post-election/ ethnic conflicts and was subsequently reviewed in 2010 to expand its scope to cover oil spillage and pandemic influenza. The Plan provides a basis for each interest group to perform its functions efficiently and provide a timely, consistent and coordinated response to the various types of disaster in order to minimize the potential humanitarian, economic and environmental consequences.

After operating for over 20 years, NADMO was given a renewed mandate through the enactment of a new law to strengthen its operations (NADMO, 2019). In 2016, a new NADMO Act, Act

927, was enacted to replace the old NADMO Act 517 and to address the weaknesses associated with managing disasters in the country. The new Act 2016, (Act 927) necessitates the enactments of regulations on various tenets as creation of emergency management plans, reporting procedures for disaster management, state and alertness in respect of declaration of emergency, terms of mutual aid agreement, dissemination of information evacuation procedures, safety measures for the public and procurement of goods, equipments, personnel accommodation and other services in times of disaster and emergency. With the passage of the new NADMO services bill, disaster management in Ghana is expected to focus more on a collaborative and proactive means of dealing with disaster risks. As stated in a UNDP Report (2017) disaster management in Ghana has experienced a considerable shift from the reactive approach to prevention and risk reduction to a proactive approach in recent times owing to support from the World Bank through the design of a Disaster Risk Management (DRM) Country Plan in order to strengthen institutional capacity of agencies responsible for handling disaster risks.

## **2.6 Coordination and Collaboration in Disaster Management.**

### **2.6.1 Concept of Collaboration**

Disaster management is traditionally collaborative.(Kapucu, 2012).Public institutions organizations across different levels of private sector entities, government, non-governmental organizations, community organizations, and individuals have been components of the disaster management structure. The complexity of emergency management requires detailed and denser sets of relationships between diverse stakeholders involved in disaster management. As stated by Yodsampa (2013), agencies retain their independence when they collaborate however, they work side by side towards achieving a shared goal. The failure of disaster management and response organizations to achieve effective collaboration has dire consequences on the sustainability of an

economy. According to Kapucu(2012) cross sector, multi- level and interorganisational relationships is a must in current urban disaster management governance. He however, argues that such associations could only make meaning if local capacity is developed and strengthened with all relevant interest groups equipped with the strategic and practical aspects. In respect, resilient urban communities are those that have improved capacity to handle disaster situations. Collaboration and cooperation is thus necessary in order to meet the surge of both natural and manmade disasters globally.

### **2.6.2 Concept of Coordination.**

According to Peters & Mawson (2016) coordination is a concept critical to the governance of a country. It is central in effectively providing public goods and services in country. Coordination is a complex issue because, its challenges results due to the involvement of many institutions and the relatively overlapping nature of their jurisdictions. Bouckaert et al (2013) argue that, coordination within the public sector environment is considered to be the mechanisms and tools that seek to improve the voluntary or mandatory alignment of responsibilities and efforts of public sector organizations. As stated by Metcalfe(1994), coordination means that parts of a structure or system operate together more proficiently, effortlessly and harmoniously.

Coordination is the incorporation of separate and distinct parts into an orderly whole in order to achieve results. “When agencies coordinate, they maintain their organizational autonomy and independence of action, but align resources, capabilities, strategies and implementation in support of shared goals.” (Yodsampa, 2013). Coordination basically means that relevant actors functioning in a policy area takes recognizes the activities of other actors in order to provide cooperation and collaboration towards a common objective.(Peters & Mawson, 2016). Coordination issues are not just about conflicting roles but may arise due to defunct

programmes or gaps in coverage due to lack of coordination in programmes (Peters, 2018). Failure to meet project deadlines by public sector organizations is a resultant of lack of coordination and as deadlines are not met, it becomes difficult to initiate and start new ones depriving citizens the opportunity to benefit from good governance. Metcalfe(1994) argues that coordination is always unstable because political demands, bureaucratic self-interest and separation of tasks, reinforced by professional specialization results in centrifugal tendencies.

Coordination is a laudable objective in providing unrestricted services. It removes some burdens from citizens and ultimately deals with contradictions among programs of agencies that result in wastage of resources, making lives of citizens more difficult. The concept of collaboration and coordination cannot be over ruled in disaster management because it involves of web of various actors and response organizations such as the police service, fire service, environmental protection agencies, non-governmental organizations, health institutions, individuals and civil society groups. Mashi, Oghenejabor, & Inkani, (2019), emphasizes that, coordination can be very difficult due to varying and complex roles of the various disaster management organizations. Sharing of valuable information in times of a crisis is necessary in dealing with self-organizing groups and putting them to the suitable tasks. Disaster management is successful to the point that it is inclusive and participatory. Metcalfe (1994) asserts that in a growing mutually dependent world, the performance of any organization or institution is dependent on the support and interactions of other organizations.

Mismanagement of resources, duplication of efforts may emerge when effective coordination is absent amongst response organizations. Perhaps reflecting absence of efficient coordination among response organizations in disaster management as well as absence of proactive interventions, the approach of governments has largely been reactive (Caymaz et al., 2013:

Noran, 2014). For instance, in Ghana, when a fire disaster occurs, community members rush to address the situation on their own terms, discretion and operational processes while trying to get the attention of response organizations. Subsequently, the focal organization which is the fire service moves in to address the situation and then NADMO to assess and evaluate the amount of damage and provide the needed assistance to affected victims. Other response organizations such as the police help in ensuring security and safety at the disaster scene. Unfortunately, these activities are inefficiently coordinated to determine who arrives at a disaster scene first and who takes what action first, as such, response organizations act in their own right and according to their own operating procedures which consequently creates conflict situations. It is worth noting, although community members are known to be first or primary responders, the interference by these groups of people is somewhat distracting. Due to their lack of expert knowledge, they sometimes worsen or aggravate disaster situations.

(Mashi et al., 2019), notes that the United Kingdom is a country where emergency management is tackled from an all-inclusive and professional perspective, incorporating the various phases of disaster management in the country's Civil Contingencies Act, 2004. They argue that, citizens are made to appreciate disaster risks, and are subsequently encouraged and compelled to operate within regulatory frameworks to prevent the occurrence of any unforeseen circumstances. Evidently, the United Kingdom adopts a proactive approach to disaster management as compared to many developing countries like Ghana. It goes to emphasize the point that by Chong& Kamarudin (2017), that having a well-coordinated disaster management and, recovery plan coupled with a highly prepared and coordinated response team involving community members could help decrease the impacts of disasters. Gearing sustainable development goals

into practice is essentially dependent among others on the effective coordination and collaboration among disaster management and response organizations.

### **2.6.3 Mechanisms of Coordination**

Peters(2018)identified three main mechanisms for ensuring interagency coordination as Hierarchy, Market and Network. The most commonly used mechanism for coordination is Hierarchy. With this mechanism, coordination result from a centralized authority and it is dependent on the ability of these authority figures to command other actors to act in certain ways. In Market mechanism, coordination operates from voluntary exchange and bargaining between buyers and sellers. Due to ideological differences amongst organization, this type involves organizations agreeing on both the fundamental nature of a crisis and a possible means of handling such crisis. Organizations should mutually, demonstrate willingness to discuss and negotiate over definitions of problems and programs.

With the network mechanism, coordination is seen as usual patterns of relations among institutions and organizations concerned with the same policy. The existence of networks between shared groups and organizations could provide a means for coordination. These networks could provide for coordination from the bottom up, with varied participants having knowledge of the activities of diverse public entities while identifying contradictions amongst them. (Peters, 2018). Despite these differences, any of these mechanisms, depending on the setting can be used to promote effective coordination among organizations. Moreover, it would be detrimental to focus on a single choice as such policy makers need to keep an open mind and choose what would work best depending on the circumstances. Interagency coordination is needed to maximize resources and capabilities to achieve shared development goals.

## **2.7 Organizational/ Institutional Effectiveness and Disaster Management.**

Institutions are stable, valued, recurring patterns of social order which direct the behavior of people within a particular jurisdiction. Developing the equipment, techniques and best practices to handle disasters more successfully is becoming increasingly urgent universal priority Douglas North (2003; 7) argues that the effectiveness of institutions is the result of formal rules, informal rules of behavior and enforcement resources. As such the effectiveness of disaster management and response institutions is premised on having the formal documents, plan of actions and policies to guide and direct the activities of disaster management organizations. The formal rules should be supported by informal shared beliefs and practices among members of the society. Moreover, there should be human actors, economic resources and technology to enforce the formal rules. According to North (2003), institutions provide incentive systems that shape human interaction thus they provide incentives and disincentives that inform human actions, economic, political and social activity.

Teutsch (2014) argues that efficient disaster management can be explained as providing the equipments, resources, technology and practices that facilitate organized handling of information from several sources by disaster management and response organizations as well as collaborating well to support survivors, ease damage and help rebuild communities. Improving disaster management activities with new technology, state of the art equipments and training requires that disaster management organizations must unanimously have identify and agree of perceived problems or issues while drawing up programs and processes to tackle them. It is imperative for these organizations to recognize, understand and address recurrent challenges such as differences in organizational culture and structure, access to accurate data and logistics. Information sharing across organizations is often hindered by lack of cooperation. In a crisis situation, information is

generally owned and disseminated by a variety of interest groups. Significant data is kept in disparate systems that do not interoperate well and often times there are no guidelines and standards to enable organizations efficiently classify and share information in emergency response operations.

Moreover, deteriorated infrastructure may make information sharing virtually impracticable. The use of technology cannot only help in improving information sharing amongst organizations so as to minimize loss of lives and property but more importantly help to bring back together families and ease pain by providing first responders with the equipments for effective communication to surmount obstacles posed by broken infrastructure, distance, geographic and language barriers.

## **2.8 Research Framework**

The research is informed by Priority 2 of the Sendai Framework for Disaster Risk Reduction (2015-2030). The Sendai Framework is the document which succeeds the Hyogo Framework for Action(HFA) 2005-2015; Building the Resilience of Nations and Communities to Disaster. It was adopted at the third global conference on disaster risk reduction which commenced from March 14 to March 18, 2015, in Sendai, Miyagi Japan. It is a voluntary, non-binding agreement which spans over a 15 year period. The framework establishes that, the state performs crucial functions relating to disaster risk reduction, however, such functions should be shared with other interest groups together with local actors and the private sector.(*United Nations Office for Disaster Risk Reduction (UNISDR), 2015*).

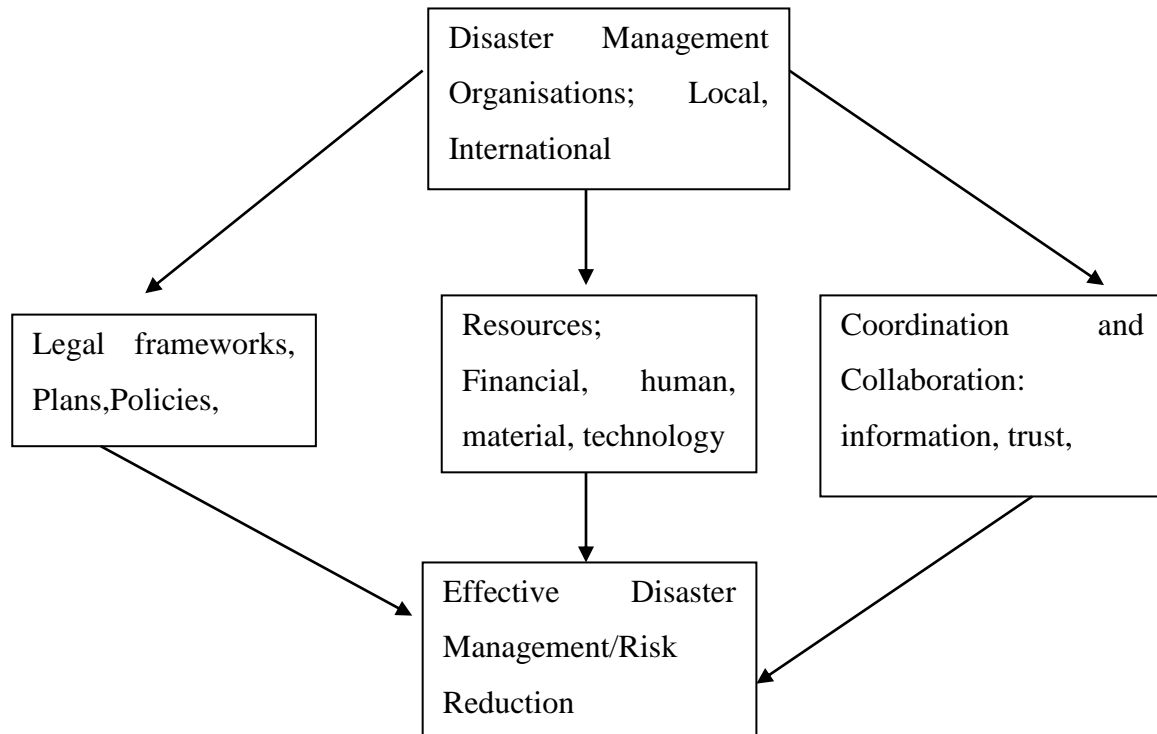
The framework is directed towards achieving a considerable decrease in disaster risk and loss of lives, livelihoods and health and in the economic, physical, social, economic, cultural and environmental assets of persons, businesses, communities and countries. It also recognizes the

importance of effective coordination and collaboration among various stakeholders in disaster management. It is established under four priorities of action namely; understanding disaster risk, strengthening disaster risk governance to manage disaster risk, investing in disaster risk reduction for resilience and enhancing disaster preparedness for effective response and to build back better in recovery, rehabilitation and reconstruction.

### **Priority 2-Strengthening Disaster Risk Governance**

Priority 2; Strengthening Disaster Risk governance to manage disaster risk recognizes the importance of disaster risk governance at state, regional and global levels. The UNDP refers to disaster risk governance, as the manner by which civil society organizations, public authorities, the media, community members' work together in order to handle and lessen disaster risks. Achieving sustainability in disaster management requires the formulation of clear plans, visions as well as competence and guidance of relevant stakeholders. Countries need to demonstrate support towards effective implementation through the creation of risk reduction and coping strategies. It also establishes the need for coordination and collaboration among disaster management organizations in the different phases of the disaster management cycle for a successful implementation of policies and programs pertinent to risk reduction and sustainable development. Strengthened multi-stakeholder coordination that includes the private sector and relevant social actors is key while developing capacities of people on environment, climate change and migration. The Sendai framework priority 2 is relevant for the study because it links effective disaster management to effective institutions.

**Figure 2.7 Conceptual Framework for effective disaster management.**



**Source :** Author's own conceptualisation , 2019

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

The achievement of any explorative work is dependent on the design and strategies used in order to accurately realize the study targets. This chapter therefore highlights the methods and processes used in completing the research. It discusses the research approach, research design, types and data sources, methods of data collection and analysis, population, sampling technique, as well as ethical considerations.

#### **3.1 Research Approach and Design**

In order to satisfy the study objectives, a qualitative research approach was adopted. Creswell (2013) posits that we usually undertake qualitative research because we want a detailed understanding of the study under consideration. Qualitative research as suggested by Boateng (2018) explores the meanings, attitudes, values and ideals people attribute with an occurrence so as to develop an improved understanding of a situation. Qualitative researches are ordinarily concerned with how people interpret their actions and experiences as such the researcher becomes a primary tool for data generation and evaluation. Appropriate for small samples, qualitative research approach offers the researcher the opportunity to meet people, visit case sites or organizations to observe and record behavior in its natural setting. This renders the method suitable for the study because the phenomenon being studied demands extensive interaction with relevant stakeholders both formal and Informal in disaster management in Ghana.

### 3.2 Population and Sampling Technique

The target population of the study is defined to consist disaster management and response organizations in Accra. As stated by Wilson (2010), research population is the complete set of cases from which a sample is obtained. The study adopted a purposive sampling technique to get a sample size for the research work. Purposive sampling according to Boateng (2018) represents the procedure of getting a sample based on the researcher’s judgment about some suitable features necessary of the sample. Broad range of actors from key organizations charged with the responsibility for mitigating and responding to disasters were purposely chosen based on their knowledge, experience and relevance in the study area. The research was however limited by time, financial and institutional constraints. In all, 20 people were interviewed from the different organizations as follows.

**Table 3.1 List of participating organizations**

No.	Organization	Number of Persons
1.	National Disaster Management Organisation	5
2	Ghana National Fire Service	5
3	Ghana Police Service	2
4	Ghana Redcross Society	3
5	World Food Programme	1
6	United Nations Development Programme	2
7	Ghana Health Service	2

**Source :** Author’s own conceptualisation , 2019

### **3.3 Sources of Data**

To ascertain the effectiveness of disaster management and response institutions in Ghana, data was obtained from both primary and secondary sources. Primary data is information obtained directly from firsthand experience. Primary data were obtained from strategic disaster management and response organizations in Ghana. Key observations from interviews were taken into consideration. Secondary data sources included books, academic journals, articles, newsletters, internet sources, NADMO website and press releases.

### **3.4 Instruments and data Gathering Procedure**

The rationale behind data collection instruments is to help create a picture of the work setting and offer the needed information regarding a research work (Gyireh & Nunbogu, 2015). In a bid to answer the questions, find out facts and opinions about the subject matter, in-depth interviews were used. In-depth interviews, usually personal and unstructured, aims at identifying respondents' emotions, opinions and feelings regarding a particular research topic. An interview guide detailing open-ended questions was designed to obtain views from respondents. With consent of respondents, interviews were recorded along with writing notes. Relevant questions that satisfy the objectives of the research were posed to respondents which subsequently allowed for meaningful interactions and follow up questions. The interviews were held at the convenience of respondents and lasted between 45 minutes to an hour.

### **3.5 Method of Data Analysis**

Data Analysis involves a careful assessment of data with a goal to uncover hidden and useful information about a research, to inform conclusions and support decision making (Gyireh & Nunbogu, 2015). Data analysis is the practice of selecting, focusing, simplifying, abstracting or

transforming data either in written up notes, interview transcripts, documents and other empirical material. (Miles, Huberman & Saldana, 2013). A data management plan was employed to manage data which were gathered effectively. Field notes were well arranged to make logical meaning. The interviews were first transcribed from the audio to text followed by generating themes and codes from the interviews. The transcribed interviews were read at several times to gain meaning of the responses and reflect on its contribution to the research work. The themes were used to discuss the findings and in the course of the analysis direct quotations from respondents were employed to show linkages to the themes and demonstrate emphasis on the point.

### **3.6 Profile of Study Area.**

This section gives a brief description of the area for which the research was conducted. Amongst the 16 administrative regions of Ghana, the Greater Accra Region occupy's the smallest area, with land surface of about 3,245 square kilometers. The region has Accra as the country's largest capital city and serves as the region's economic and administrative hub. The region has sub districts and Municipals such as La, Teshie, Nungua and Osu and houses the head offices of many organizations in the country. Although the main occupation of the people is fishing, the region is said to be a cosmopolitan one with several banks and businesses. The region is affected mainly by industrial fires, flood disasters, cholera outbreaks which has been predominant in recent times.

**Figure: 3.1 Map of study area.**



### **3.7 Ethical considerations**

Based on the impact of ethical issues on researches, the researcher acquired from the department an introductory letter to be shown to the response organizations to draw their attention to the fact that any data or information gathered would be treated as confidential and used exclusively for academic purposes. Also, this clause was stated on the interview guide and was strictly adhered to by the researcher. Additionally, respondents were not coerced into providing detailed information stated in the research instrument.

### **3.8 Conclusion**

This chapter reviewed, the procedures used in conducting the research work. Employing both secondary and primary data sources, relevant information were obtained from officials from key disaster management organizations. Evidently, there are many organizations that help in

managing and responding to disaster situations however, due to time, institutional constraints, only seven of these institutions were contacted.

## **CHAPTER FOUR**

### **FINDINGS, ANALYSIS, INTERPRETATION**

#### **4.0 Introduction**

This chapter reviews the results of the qualitative data followed by discussions on the research findings. The study was informed by these precise objectives; To identify the roles of the various organizations in disaster management; To examine the coordination mechanism of disaster management in Ghana; To highlight the challenges encountered by disaster management organizations and to suggest ways of improving coordination and collaboration among disaster management organizations in Ghana. The observed data used for this analytical study were obtained from results of key informant interviews conducted with officials of different institutions concerned with disaster management in Ghana. The chapter is presented in themes to reflect the four key objectives.

#### **4.1 Roles of Disaster Management Organizations in Ghana.**

The first objective was to identify the roles of various disaster management organizations in Ghana. Data for this objective was obtained through in-depth interviews with respondents as well as academic articles and publications. From the data gathered, the findings have been organized into themes below;

##### **4.1.1 National Disaster Management Organization (NADMO)**

The National Disaster Management Organization was created as a focal organization to help manage and deal with disaster situations as well as other emergencies in the country. The mandate of the organization stipulates that it gives alleviation aid in instances of emergencies in any location, as such, the organization has structured offices at the national, regional,

district/Municipal and zonal levels. Having operated for the past twenty years NADMO has a new Act 2016 (Act 927) which graduates NADMO from a reactive organization to a proactive one.

#### **4.1.2 Other Actors**

##### **The Ghana Police Service (GPS)**

The Ghana Police Service is a collaborating organization of the National Disaster Management Organization. They cordon off the disaster area, control and direct traffic and sometimes set up safety zone around the disaster area to prevent pilfering and further damage to lives and property. They set up on-scene police command post, arrest and detain intruders and cope with proof until nicely relieved with the aid of forensic evidence control crew. In an interview session, officials at the Department Research and Planning at the Police Headquarters stated that the Police is called upon in almost all disaster situations except for extreme situations when the Military is called for instance the Melcom Disaster Situation in November 2012.

##### **The Ghana National Fire Service (GNFS)**

The Ghana National Fire Service is an important stakeholder of NADMO. The institution facilitates disaster management by coordinating fire and rescue services in the country. They identify and assess the full range of anticipated fire and rescue related risks societies face, provide prevention and protection activities such as fire education and simulation exercises and respond to incidents accordingly. It was established by the Ghana National Fire Service Act, (Act 537) in 1997. The institution's main objective is to avert and control undesired fires in the country. The Ghana National Fire service seems to dedicate most of its technical capacities to disaster response relatively than to community preparedness and readiness.

### **The Ghana Redcross Society (GRS)**

The Redcross is auxiliary to government in times of humanitarian crisis. It is established by Act 10, 1957 and the organization's activities encompasses the different stages in disaster management. The organization works in the area of food security by supporting farmers to enable produce on a large scale. The Ghana RedCross Society offer first aid to affected victims in a crisis situation while awaiting proper treatment at the hospitals. Findings reveal that 25 communities within 5 districts are been trained by the organization in disaster preparedness. It has regional and district response teams who identify injured persons, provide first aid. After which they begin with rapid assessment.

### **The Ghana Health Service (GHS)**

The Ghana Health Service is an autonomous organization established under Act 525 of 1996 to provide fair, efficient, accessible and responsive health care systems to citizens. The Ghana Health Service supports response and relief efforts by providing cure to disaster victims during a crisis situation. They declare emergencies in hospitals and dispatch medical teams to a disaster location or scene. The institution also collaborates with the Disease and Epidermis department of NADMO by providing public education and awareness on post flood related health issues.

### **The Ghana Armed Forces (GAF)**

In extreme disaster cases, the military provides technical support to help rescue trapped disaster victims. With their vast experience in rescue operations, they are able to complement the effort of other response organizations to restore calm during crisis situations. The Ghana armed forces have committed themselves to boost the capacity of Ghana disaster management preparedness and to improve the operational of stakeholders in that field. The armed forces assist by providing

equipment for search, rescue and evacuation of trapped victims, and also help with communication and lighting equipment. Findings revealed that despite a number of institutions responsible for disaster management, the military dominates the scene, especially in worse case scenarios.

### **World Food Programme (WFP)**

The World Food Programme is a partner to governmental organizations and its core mandate is combat global hunger. The organization ensures food security and anything that poses a threat to food security by working to prevent and mitigate disaster impacts. Many of World Food Programme's (WFP's) activities deal with effects of natural disasters on food security. The institution collaborates with government to strengthen capacities, prepare for, assess and respond to hunger created by disasters, develops national policies and programmes that deal with the impact of disasters on nutrition. Additionally, WFP supports the development of flood protection infrastructure, soil and water conservation and the development of roads. (World Food Programme, 2018)

### **United Nations Development Programme UNDP)**

The UNDP works with government and persons across all levels of the society to transform development, eradicate poverty and reduce inequality, strengthen governance and peace building and support climate and disaster resilience. For instance, with funding from the Norwegian Government in 2013, the National Disaster Management Organization together with the UNDP started the Community Resilience through Early Warning (CREW) Project. The project was aimed at building capacities in the country to lessen disaster risk by establishing an integrated early warning system that is systematic and people-centered. The organization focuses on disaster development work in areas of environmental management, policy. The UNDP also, in

partnership with NADMO, inaugurated a new short course that seeks to enhance the abilities of public officers involved in disaster risk management and guarantee its mainstreaming in development process (UNDP, 2016). It is essentially the UN coordinating agency responsible for disaster risk management within the UN system.

### **National Ambulance Services (NAS)**

The National Ambulance Service is a collaborating organization in disaster management in Ghana. The Service was established to offer proficient and timely pre-hospital emergency medical care to sick and injured persons and subsequently transport them safely to health centres. In disaster situations, the services administer first aid to disaster victims and help to evacuate these persons from the disaster scene to selected medical facilities.

### **Ghana Meteorological Services**

The Ghana Meteorological Agency exist to offer valuable and consistent information by collecting, processing, storing, analyzing and disseminating findings to end users such as the general public and other organizations. The Department in collaboration with NADMO provides cost effective weather and climate services by disseminating information to support socio-economic growth of the country with special regard to the protection of lives and property as well as the environment (Ghana Meteorological Agency Website, 2016). To fulfill its mandate, information dissemination is done through the local radio stations using local dialects to ensure target population receives the information.

#### **4.1.3 Preparedness and Organizational linkages in roles**

Simulation exercises are done in collaboration with other Organizations. Understanding disaster hazard is important for instance risk assessment, risk mapping, early warning systems in order to

reduce impact through coordination with all relevant agencies. Floats are occasionally organized by respective organizations in their specialty to create awareness on disaster issues. When asked about frequency in conducting simulation exercises, participants from the Ghana National Fire Service responded in the affirmative, however, they mentioned that such exercises are usually done at the request of companies.

## **4.2 Mechanisms for Coordination.**

### **4.2.1 Institutional and Legal Frameworks**

As stated earlier in literature, Institutional frameworks exist and spell out mechanisms by which disaster management organizations should operate with respect to managing disasters in the country. The NADMO Act 517(1996) established NADMO as the focal agency to coordinate emergency management efforts in the country. Subsequently policy documents were put in place to help achieve effective disaster management in Ghana. Findings reveal however that; implementation challenges have obstructed the effective realization of the objectives these policy documents. As mandated by the new law (Act 926), NADMO is putting measures in place to help operationalise its National Contingency Plan. Individual organizations have their modus operandi when it comes to disaster management. The Environmental Protection Agency (EPA) Act 1994, Act 490, The Ghana National Fire Service Act, 1997, Act 537, Land use and Spatial Planning Act 2016 are all legal frameworks developed by the government to prevent and mitigate the impact of disasters in case of occurrence. Disaster risk management is a focus area of coordinated programmes of economic development as well as the National Medium Term Development Policy framework 2018-2021. Findings reveal that, a committee which was put together in 2015 to draw up a plan has only been able to meet twice since it was constituted.

#### **4.2.2 Inter agency meetings**

Evidently effective communication and information is one sure way to achieve and establish effective coordination among organizations. Communication promotes preparedness for disasters, provides early warning signals and facilitates responses facilitates Disaster management committees and task forces through round table discussions work to enhance information sharing among disaster management organizations in the country. Findings reveal that a national network of emergency operation centre is approaching completion at the NADMO head office. This is to help observe and respond successfully to possible emergencies across the country. Occasionally, interagency meetings are held to help deliberate on issues and put forward ideas towards effective disaster management.

#### **4.2.3 Resources and technology**

Effective coordination among organizations requires exchange of resources among disaster management organizations to help effectively respond to disaster situations. Participants revealed that, although they coordinate their resources towards responding to disaster situations, equipments, funds and assets are not enough to effectively handle disaster situations. For instance, in instances of flooding, the army provide boats to help evacuate trapped victims. Recognizing the need for high level technology, stakeholders are working on establishing a ground station that has equipment which gathers satellite data on all forms of disaster with divisions such as satellite weather and climate, virtual environmental laboratory, climate informatics and high performance computing.

#### **4.2.4 Monitoring and Evaluation.**

Facilitates the formation of project monitoring teams to ensure protection of reserved and protected areas and also conduct a pre and post assessment of disaster situations. Findings reveal that monitoring and evaluation is critically lacking and although identified as a key area in enhancing stakeholder participation and improving coordination, its implementation is a challenge. Often times, after there has been normalcy following disaster situations, organizations return to their usual routine activities creating recurring problems.

### **4.3. Challenges of disaster management organizations**

#### **4.3.1 Resources**

Findings reveal that most organizations are challenged and lack the proper logistics to deal with disaster situations in the country. Human resource also remains challenge, institutions lack the required human resource strength to deal with these issues. Financial commitments also remain a challenge as sometimes Government is unable to meet financial obligations of the institutions to properly deal with these situations. *“The private sector is not doing anything to help in disaster management”* A Red Cross official said. NADMO as a lead agency lacks the needed structures to accommodate their staff with most zonal offices operating from uncomfortable structures and under resourced. This assertion was emphasized by NADMO officials during interview sessions with them. This situation affects staff morale, esteem and consequently reduces their output or productivity. A Key informant from NADMO noted:

*“I have been working here for the past five years, and anytime we go out on field we have to use our own monies for transportation. Providing a vehicle for field trips is a challenge and at the*

*same time you should be seen to be working. We lack the resources to operate effectively and I wonder why an organization like ours is not given the needed support.”*

#### **4.3.2 Weak Coordination**

Coordination remains a challenge especially during preparedness phase of the due to differences in operating procedures and standards. Participants revealed that it is often a great challenge to achieve efficient communication across agencies. Information is hampered by trust issues and although multisectoral assessments are required, reports lack uniformity. According to one of the interviewees, disaster management organizations demonstrate poor attitude towards meetings and representatives are unwillingly to give off information when asked probing questions due to problem of power relations. *“I have a head, I am acting for someone and I do not need to contradict myself and look stupid”* (A Disaster Officer at Ghana Redcross Society, 2019). However, in the response phase some level of coordination is achieved in order save affected victims. This notwithstanding, coordination among organizations in the disaster management cycle is paramount to improving efficiency at disaster management. *“It appears departments in NADMO work in silos hence there is weak coordination among themselves which even affect coordination with other organizations”* (Programme Analyst, UNDP, 2019). Community cooperation is also challenge.

#### **4.3.3 Overlap of Roles and Duties**

Functions and activities of most disaster management organizations seem to overlap which often results in conflict situations regarding appropriate organization to handle specific issues. A NADMO officer complained, *“Environmental Health Officers accuse as us taking over their job, Fire service officers accuse us of taking over their jobs, Works department also accuse us of interfering with their jobs, this problem affects the effective discharge of our duties”*. Most of

these institutions above have overlapping roles in the different phases of disaster management. Findings revealed that the capacity of staff of civilian organization is not sufficiently enhanced to enable them effectively handle crisis situations in the country.

#### **4.3.4 Solutions not lasting and sustainable.**

Disaster management organizations explained with frustration how government is unable to support them in providing lasting solutions to remedy disaster problems in the country. Officials from NADMO and other organizations explained that, due to lack of political will to make hard decisions, people continue to suffer the same effects of some disaster problems. For instance, perennial flooding in some parts of Accra requires the demolition of building on water ways to make way for proper construction of drains, however this is not realized because politicians do not want to be unpopular. Moreover, citizens and community members in the bid to protect their interest resist some of these moves by government leading to disruptive effects of flooding in Accra. According to the Programme Analyst, UNDP, there are no sustainability measures and knowledge management to continue projects offered by development partners. He added, “*we expect to have sustainability measures to be put in place so if we are not there, the work can go on*”.

#### **4.3.5 NADMO focusing more on management than coordination**

Findings reveal that, the legal frameworks allow NADMO to act as the lead agency in coordinating activities of other organizations however, their focus has been too much on management. Through the sharing of relief items, NADMO has gained popularity in just that aspect reducing the confidence of community members in them. Other disaster management organizations have not been happy about their approach to disaster issues especially, the interagency group (UN organizations). A Red Cross official said “*NADMO is always in a hurry*

*to manage disasters by distributing relief items and most often, the mode of distribution is wrong. He added, NADMO needs spiritual healing”.*

#### **4.3.6 Politics**

Findings reveal that NADMO as a lead organization has been overly politicized which affects their ability to effectively operate with limited interference. The politics of competitive clientelism creates an environment in which recruitments and appointments are based more on political rather than technical and professional considerations and this approach has been evident in the National Disaster Management Organization in different regimes. The Programme Analyst of UNDP emphasized in an interview that one critical issue limiting sustainability measures in change in political regimes. He added that change in management during regime changes affects continuity of projects and this constant political interference affects the performance of NADMO and consequently other collaborating organizations. This emphasizes the assertion by Meyer-Sahling et al (2008) that having political connections matter for civil service management. Often termed “Job for the boys” findings revealed that employment in NADMO is perceived as a reward for political patronage hence reducing the quality of human resource base recruited into the organization. Respondents also cited a high level of political interference, unreliable political commitments as issues militating against Ghana’s Disaster Risk Reduction Plan.

#### **4.4 Ways of Improving coordination and Collaboration**

##### **4.4.1 Facilitative and Strong Leadership.**

A committed and facilitative is essential to organize and lead effective joint analysis and planning process. One key challenge in coordinating across agencies is the absence of line authority over the numerous interest groups. For instance, the structure of the Military and other

service organizations reflects an extremely hierarchical system and directive leadership is the norm. Participants agreed that *Inter organizational processes are complex hence facilitation of cooperative analysis and preparation process is important to maintain desired conversations and ensure that plans and programmes are implemented to address the needs of citizens in the country.* Moreover, an officer from Ghana Police Service argued that a strong leadership with political will would build, encourage and promote an atmosphere of cooperation rather than competition.

#### **4.4.2 Transparency**

In disaster assessment situations, most organizations tend to produce conflicting reports and are sometimes unwilling and unable to defend their positions. Participants' iterated that reports should be transparent and clear. Statistics must be trustful for other stakeholders especially the interagency group such as the World Food Programme(WFP) and the United Nations Development Programme(UNDP). Power disparities contribute to longstanding mistrust among disaster management organization which negatively affects the relationship between them.

#### **4.4.3 Commitment from Disaster management organizations**

Findings revealed that, institutions express low commitment towards disaster management activities especially during the disaster mitigation and disaster preparedness phases. Respondents argued that, interagency meetings are not held frequently and with the few ones some organizations demonstrate a poor attitude towards them. Sometimes, the directors of key organisations are not present at high profile meetings hence are unable to obtain the needed information to inform policy and decision making. Organizations require a comprehensive perceptive of the various sectors and interest groups regarding their authorities, roles and responsibilities and such meetings are a platform to share information and issues as these.

#### **4.4.4 Articulate Shared Goals and Priorities**

Directors of disaster management organizations must demonstrate guidance regarding the objectives and priorities for interagency coordination. This would ensure that implementation would be dependent on agreed goals. Respondents from NADMO especially, iterated that, officers at the district levels are often not privy to actions and programmes executed at the National level. This often leads to non-uniformity of action with lower district levels operating differently from the broad national agenda.

#### **4.4.5 Ensure structured opportunity for information sharing.**

Systematic, standard and structured means for information as well as joint analysis and planning are essential for interorganisational cooperation. This enables organizational members develop a shared understanding of a phenomenon, develop a joint strategy, build consensus on overarching goals, and indentify specializations that leverages complementary resources and capacities. The National Disaster Management committees and emergency tasks force, helps in such instances however consistency needs to be maintained. Officials should institute, regular structured information sharing and support members to confront their own and other's assumptions as they work together to create solutions to potential problems. When asked about creating a centralized agency to coordinate information sharing and activities of other organizations, most interviewees disagreed to it because of a probable politicization of that agency. A Red Cross official made reference to a proposition about such as instance in the 1990's which was subsequently kicked against for apparent reasons. He said "*already NADMO acting as a lead agency is perceived to have been politicized, hence creating centralized institution would not help in improving disaster management efforts in the country*". *There would be too much political interference.* (Red Cross Official, 2019)

#### **4.4.6 Capacity Building of Staff**

Institutional capacity is one of the issues that affect effective discharge of duties of disaster management organizations. Respondents stated that government must commit resources to a strategic, systematic and consistent upgrade of technical capacities of staff. Participants revealed that, the lead coordinating agency, is particularly constrained in this respect and such action would enhance the effective discharge of their duties and consequently improve their effectiveness.

#### **4.4.7 Strengthen Legal frameworks**

Legal frameworks that spells out the mechanisms by which disaster management organizations should operate should be strengthened. It is apparent that some of these LIs exists however there is so much challenge with implementation. Moreover, organizations operate far off the legal frameworks which consequently reduces required efforts from these organizations. Right systems should be developed in order to lessen impact of disaster when it occurs. Legal frameworks are merely thought to exist just on paper which does not translate into proper action.

#### **4.5 Conclusion**

This chapter discussed findings from data collected from the previous stages. It provided a brief discussion into the roles of some of key disaster management organizations and discussed views gathered from interview sessions with participants of key disaster management and response organizations. These findings are thought to influence policy action towards improving disaster management and coordination in Ghana.

## CHAPTER FIVE

### SUMMARY, RECOMMENDATION AND CONCLUSION

#### 5.0 Introduction

It is apparent from literature and discussions that disaster management depends on a host of organizations at both national and international levels which requires effective coordination of their resources, programmes, expertise and tools. This section provides a summary, conclusions and recommendations to the research topic. It also recommends areas for future research to help improve disaster management in Ghana.

#### 5.1 Summary

The study sought to examine the effectiveness of disaster management and coordination in Ghana by an analysis of disaster management and response organizations in Accra. To achieve the sets of objectives, a qualitative approach was used by a review of literatures relevant to the topic and the conduction of interviews. A purposive sampling technique was used to identify key respondents who had special relationship with the phenomenon under research. Recordings were made during the interview process alongside taking notes on salient contributions made. Both formal and informal discussions were held. From the data gathered codes and themes were generated to aid with the analysis.

It was identified that several organizations with complementing and overlapping roles exist in Ghana to manage disaster situations in the country. Although with comprehensive frameworks, enforcement of these frameworks as well as coordination is a major problem among these organizations hampered by power relations, knowledge management, institutional capacity, information sharing among several others. Moreover, the politicisation of NADMO, the lead

agency was another issue identified as hampering on effective collaboration among disaster management organizations and consequently effective disaster management. It was also found that effective preparedness requires close coordination among the response teams and inadequate information sharing causes coordination failures. Recommended ways of improving coordination and disaster management was identified to include facilitative and strong leadership, transparency as well as structured opportunity for information sharing.

## **5.2 Recommendation**

In view of the discussions and analysis, it is important to devise workable and sustainable solutions aimed at addressing the identified challenges. In respect, these recommendations are made to help improve disaster management and coordination in Ghana.

### **Increased Collaboration and Partnership**

Increased Partnership from all collaborators will enhance the drive towards achieving effective disaster management and coordination in Ghana. Following any foremost disaster, numerous stakeholders emerge and as discussed earlier, ensuring the right coordination amongst these stakeholders becomes crucial. Recuperative and rehabilitative actions are implemented separately by authority groups, global organizations, local bodies and voluntary organizations and such actions sometimes overlap. This results in imbalances in their level of activities, duplication of efforts, gaps, leakages and waste of resources. Coordination requires goal setting, implementing priorities and ensuring various organizations or corporations operate collectively, easily and effectively. Perhaps by adopting the Meltcafe's policy coordination scale, these problems may be better dealt with. The policy coordination scale ranges from nearly total independence of programmes to very close policy assimilation.

### **Sustainable Relief and Reconstruction**

Experiences reflect temporary methods to disaster response and reconstruction efforts with less premeditated focus on disaster prevention, and disaster preparedness. Reliefs provided are unable to support the long term needs of affected victims. Despite the creation of disaster volunteer groups, the National Disaster Management Organization is unable to make use of community potential and increase their resilience particularly in disaster prone areas. More research is needed to provide a holistic and less bureaucratic framework to improving disaster risk governance and management and consequently reduce the impact of disaster situations in the country.

### **Knowledge Management**

Disaster and emergency situations change overtime and getting access to information is usually a challenge. Knowledge management helps organizations find, select, organize and disseminate information necessary for problem solving, planning as well as strategic decision making. Continuous monitoring and providing an up to date overview of disaster situations is needed to deal with future occurrence. Knowledge management is recognized as a plan for designing strategies, structures, systems and practices to enable an organisation use its current information to learn and generate socio-economic value for its customers and communities(FO Omotayo, 2015). Knowledge management is an important requirement for the survival of organizations. Effective disaster management and coordination is thus dependent on systematic knowledge management. The use of advanced information technology should be employed in order to keep and maintain proper records.

### **Disaster Risk Financing**

Disaster management organizations, perhaps directed by the National Disaster Management Organization, should create a pool of fund to support disaster related activities. Private organizations, individuals and voluntary groups should support by contributing to this fund in order to efficiently attend to the needs of affected persons in emergency situations. Moreover, since funding from government is quite minimal in supporting prevention, preparedness and rehabilitation efforts, this fund would help in carrying out activities that would help mitigate and prevent the emergence of disaster situations, build capacities of communities as well as workers of disaster management organizations and provide sustainable social protection programmes. Disaster risk financing can be effectively addressed with support from the government through the development of appropriate policies to guide actions of both individual and group philanthropists.

### **Organizational Understanding**

Disaster management organizations function as distinct organization with separate tasks and responsibilities. Crisis situations require the coming together of these organizations and other interest groups to manage unforeseen circumstances and mitigate impact. An official expressed that, these organizations have different opinions about issues of such nature which affects effective coordination and disaster management. To this end, organizations need to understand the various organizations, their activities and modes of operations.

### **Depoliticize the National Disaster Management Organization.**

Perhaps reflecting findings of Meyer-Sahling et al (2008), having political connections matters for recruitment and promotion across most civil service organizations. This tends to affect

performance of workers especially in instances where workers are unskilled. Moreover, qualified workers are demotivated and consequently reduce their work efforts. This situation as cited earlier, affects the overall performance of the organization and this could be discouraged by engaging meritocratic principles in recruitment, developing competitive promotion and pay policies in order to build a highly strong and competent work staff and discourage well performing employees from leaving to well-paid non-government jobs. Efforts should be made at limiting the excessive political interference in the activities of NADMO.

### **Public Relations and Branding**

NADMO needs to engage in an extensive public relations work in order to change the narrative of NADMO and restore public confidence in being able to be effectively coordinate respective organizations for successful and efficient disaster management in the country. Many people have limited knowledge and understanding on the activities of NADMO. A large section of the population associate NADMO to relief's distribution which is unfortunate. The perceived politicization of the organization also affects its ability to obtain grants and aids from both international and private organizations to fund their projects.

### **Engaging traditional authorities**

The role of our traditional authorities cannot be downplayed in ensuring effective disaster management in the country. Obviously in Ghana, our traditional authorities wield so much power in shaping members of their community however, they are often ignored in policy formulation concerning issues as these. Traditional rulers could make or mar policies and it is therefore important to engage them to effectively serve as change agents in promoting disaster risk reduction in Ghana. For instance, we need them to trumpet the call against building on water

ways, open defecation, felling of trees without planting, drunk driving and over speeding, and terrorism.

### **5.3 Areas for future research**

The role of the private sector in improving disaster management in Ghana.

### **5.4. Conclusion**

Essentially, effective disaster management that results in impact reduction involves employing robust disaster management techniques. It is necessary for state authorities to incorporate risk reduction techniques in developments plans and have political will to meet these needs. Projects planned in disaster prone areas should mandatorily take into consideration its disaster risks as well as other environmental impacts. In Ghana for instance, the Environmental Protection Agency needs to be proactive in conducting impact assessment to development projects. Other intuitions that partner the lead organization, NADMO, should be proactive in undertaking their roles towards effective disaster management. State administrators, managing impact, especially NADMO, should be able to coordinate and regulate activities of the various non-governmental and private organizations. It is worth noting that many of these organizations lack the technical understanding and expertise to effectively respond to disaster situations.

Generally, the findings show that the kind of coordination that exists among response organizations is more of a network mechanism where organizations where organizations put resources and ideas together towards effective disaster management however, these organizations need to apply sound principles of risk management such as hazard identification, analysis and impact and adopt a management approach based on scientific knowledge in handling disaster situations. As coordination is hampered by information, efforts should be made

at synching information which would be available to all parties with shared goals and priorities clearly articulated. Governments need to ensure effective implementation of disaster policies and programmes. Citizens should also support the government in the implementation of policies and enforcement of regulatory frameworks. According to Mashi et al (2019), disaster management cannot be successful without the collective action of various actors and a fine way of ensuring this is to make one organization in Ghana for instance NADMO, to have the authority if need be to compel the other interest groups to take measures that would enhance coordination and ensure disaster cases are successfully managed.

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**APPENDIX 1**

UNIVERSITY OF GHANA BUSINESS SCHOOL

DEPARTMENT OF PUBLIC ADMINISTRATION

AND HEALTH SERVICES MANAGEMENT

**INTERVIEW GUIDE**

This is an interview guide to elicit information on the topic **“Improving Disaster Management and Coordination in Ghana; Perspectives from Disaster Management and Response Organizations in Accra.”** in partial fulfillment of the requirements for the award of a Masters in Public Administration Degree at the University of Ghana Business School. The information provided shall be used solely for academic purposes and you are assured of your confidentiality.

Thank you for participating.

**SECTION A; RESPONDENTS PROFILE**

1. Organization.....
2. Designation.....
3. Department.....
- 4.. Work Experience.....

**SECTION B; ROLES OF DISASTER MANAGEMENT AND RESPONSE INSTITUTIONS IN GHANA.**

5. What is your general knowledge on the concept of disaster management?

6. What role does your organization perform in disaster management in Ghana? How do your roles link or complement with those of other organizations.

7. What should be the level of preparedness of response organizations in disaster management?

8. What local capacity building programmes are undertaken by your organization with respect to disaster management? How often do you conduct simulation exercises in the communities?

9. With reference to a recent disaster situation, can you please elaborate on how your organization contributed in addressing the issue?

### **SECTION C. COORDINATION MECHANISM OF DISASTER MANAGEMENT IN GHANA.**

10. What is the extent of coordination and collaboration between your organization and other response organizations?

11. How does your organization coordinate with other response organization in disaster management? Are there adequate human resources to ensure effective coordination across the national spectrum?

12. Is there any framework or plan that spells out the mechanism for coordination among response organizations. In your view, do you think the legal framework that established NADMO allows it to carry out its coordinating role effectively?

13. Is the country able to make use of external support?

**SECTION D: CHALLENGES OF DISASTER MANAGEMENT INSTITUTIONS IN GHANA**

14. What are the obstacles and major challenges encountered by your organization with regards to managing disasters in Ghana? What other challenges do you perceive in the near future?

15. What are the fundamental factors that contribute to these challenges?

**SECTION E: WAYS OF IMPROVING COORDINATION AMONG RESPONSE ORGANISATION**

16. In what ways do you think coordination and collaboration can be improved among disaster management organizations in Ghana?

17. What should be done to make NADMO more capable in undertaking its coordinating role effectively?