Disaster Management in Sub-Saharan Africa

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Disaster Management in Sub-Saharan Africa: Policies, Institutions and Processes

EDITED BY

ROLAND AZIBO BALGAH

The University of Bamenda, Cameroon

AND

JUDE NDZIFON KIMENGSI

Technische Universität Dresden, Germany

The University of Bamenda, Cameroon

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About the Authors

Harrison Esam Awuh is a Political Ecologist and Human Geographer by training. He is a Senior Researcher at Aeres University of Applied Sciences in the Netherlands, Head of Research at Flevo Campus (the Netherlands); and, Guest Researcher at the African Studies Centre (Leiden University, The Netherlands). His research interests cut across sustainable transformations, discourse and inequalities (exclusion/inclusion). His current focus is on healthy and sustainable food transformations from a consumer perspective. Prior to that, he has conducted research and published several peer-reviewed papers on sustainability in the nature conservation sector in Africa (Cameroon) and entrepreneurship in Africa (Ghana). He also worked on a collaborative research project on sustainability in the frugal innovation sector together. This was part of the Leiden University, Erasmus University Rotterdam and Delft University cooperation on frugal innovations. He has taught several courses on sustainability, urban political ecology and research methods to master's and bachelor degree students at Leiden University, Katholieke Universiteit Leuven (KU Leuven, Belgium) and Aeres University of Applied Sciences (The Netherlands).

Bishawjit Mallick is currently a Marie Skłodowska-Curie (MSCA) Global Fellow at the Institute of Behavioral Science (IBS) at University of Colorado Boulder, USA, and holds a Researcher position at Chair of Environmental Development and Risk Management at TU Dresden, Germany. He is interested in 'non-migration of people at risks' in the context of climate change adaptation (why do people at risk not migrate, and how do they survive in vulnerable environments?) and the role of short-term migration in shaping long-term non-migration. However, his current research (under the MSCA individual grant) focusses on the historical grounding of non-migration (the reasons why people voluntarily remain in place for generations; how the social, environmental and political regimes contribute to staying put). He employs both qualitative and quantitative social research methods in his ongoing researches.

Harry Wirngo Mairomi holds a PhD in Geography with specialty in Environmental and Resource Geography from the University of Yaounde I, Cameroon. Prior to this, he worked with the Geospatial Technology Group on forest inventory and management in Cameroon and the Congo between 2012 and 2015. His research

interest focusses on natural resources (rangelands, forest, wetlands) and in climate change and regional planning. He holds the position of Country Coordinator for the African Planners Institute in Cameroon. Presently, he is a Lecturer in the Department of Geography at the University of Bamenda, Cameroon.

Jude Ndzifon Kimengsi is Leader of the Research Group on Forest Institutions and International Development (FIID) at the Faculty of Environmental Sciences, Technische Universität Dresden (Germany) and an Associate Professor in Resource and Environmental Geography at the University of Bamenda. Prior to this, he was Senior Lecturer/Researcher and Head of Department of Geography and Environmental Studies at CATUC. He worked as Consultant on Sustainable Development and Coordinator of Research, Consultancy and Publications Division at the Pan African Institute for Development – West Africa. He is an Associate Editor for *Nature Social Sciences* (Springer); an Editor for *Scientific African* (Elsevier); and editorial board member for *Environmental Research Communications* (IOPscience), *Forest Policy and Economics* (Elsevier) and *Canadian Journal of Tropical Geography* (Laurentian University – Canada). Since 2018, he has been serving as Facilitator at a United Nations Environmental Programme (UNEP) International Postgraduate Course on Environmental Management for Developing Countries. He is a Pioneer Fellow of the Cameroon Academy of Young Scientists (CAYS), an Associate Fellow of the African Academy of Sciences and a Board Member of the Global Environmental Non-Migration Network.

Richard Achia Mbih is an Assistant Teaching Professor of African Studies and Rural Sociology at the Pennsylvania State University. He holds a PhD in Geography from the University of Missouri-Kansas City. His research interests focus on agro-pastoralism, natural resource conflicts, environment and development studies in sub-Saharan Africa.

Roland Azibo Balgah is Associate Professor of Development Studies at the University of Bamenda (UBa), Cameroon, and a Volkswagen Foundation Research Fellow. He holds a Dr Agriculturarum from MLU, Halle-Wittenberg, Germany. Prior to engaging with UBa, he coordinated several development projects in Africa and was Dean of Studies at the Pan African Institute for Development in West Africa (PAID-WA). His research focusses on human–nature interactions, the sustainability of both, thrusting on hazards and livelihoods. He is editorial board member of several journals and member of Emerald Literati Network. He is credited with 3 postdoctoral research experiences and over 80 publications.

Henry Ngenyam Bang is a scholar in African disaster management with substantial teaching, research and professional experience in Africa and the United Kingdom. He has been lead researcher in several disaster management projects at the national, regional and local levels in many African countries. Additionally, he is a Disaster Management Trainer with the Bournemouth University Disaster Management Centre (BUDMC0). He has a strong track record for high-quality publications on disaster management and related themes in top international journals.

His background is in Geology (BSc, MSc) obtained in Africa and International Development (PhD) obtained in the United Kingdom.

Jeremiah Ogaga Ejemeyovwi holds a PhD Economics degree with a successful academic and work track record. He naturally tends to maximise opportunities through the successful development and implementation of well-researched and successful initiatives. He is a research fellow at Center for Economic Development and Policy Research (CEPDeR). He was also the best doctoral graduate in the Department of Economics and Development and the College of Management and Social Sciences, Covenant University, Nigeria. He has authored several high-impact published papers in the field of Knowledge Economics, Development and Energy Economics.

Evans Stephen Osabuohien is a Professor of Economics and Head of Department at Covenant University, Ota, Nigeria. In 2020, he was recognised as one of the six youngest professors in Nigeria. He pioneered the Centre for Economic Policy and Development Research (CEPDeR) as well as the Regional Centre of Expertise, Ogun State (RCE Ogun) at Covenant University. He is a Visiting Professor at Witten/Herdecke University, Germany, and Eduardo Mondlane University, Mozambique. He is a Fellow of the Alexander von Humboldt Foundation and Swedish Institute, among others. He has published 3 books and over 150 scholarly articles. He is a member of numerous professional associations, a reviewer and editorial board member for many journals.

Oseghale Baryl Ihayere is a PhD candidate in the Department of Economics and Development Studies at Covenant University, Nigeria. He is an Academic Staff at the National Institute of Construction Technology and Management where he lectures macroeconomics, quantitative finance, applied statistics. He is also the Acting Head of the Department of Statistics. To further boost his knowledge base and contribution to knowledge, he was recently inducted as a Research Associate, Centre for Economic Policy and Development Research. His research areas include development economics, inclusive growth and applied economics. When he is not teaching, he contributes to impact programmes as a child rights advocate where he sits on the board of directors of various non-governmental organisations such as G.I.V.E Foundation, Target a Child, Art and Child.

Olanrewaju Olaniyi Omosehin holds a master's degree (MAgricTech) in the Department of Agricultural and Resource Economics, Federal University of Technology, Akure, Ondo State, Nigeria, and bachelor's degree in Agricultural Economics from Obafemi Awolowo University, Ile-Ife, Osun State. He also holds a mini MBA from Tekedia Institute, Boston, USA. He has some publications to his name with several others under review in a reputable journal. His research interest is focussed on international trade, agribusiness management, agricultural economics, production economics, econometrics, welfare economics and policy analysis. He's a member of many professional bodies including *International Food and Agribusiness Management Association*.

Angie Osarieme Igbinoba is a budding academic scholar, researcher and educator who holds a BSc and an MSc in Mass Communication. She has natural abilities and competency skills in various forms of communication, proofreading/editing, counselling/consultation (academic & non-academic), entrepreneurship, teaching and research. Her general teaching/research interests cover communication and leadership issues, communication and management issues, communication and legal/ethical issues, communication and religious/moral issues, communication and educational issues, communication and media issues as well as communication and science/technology issues. Her central research focus is Health Communication (which cuts across human health, animal health, plant health, occupational health and environmental health).

Theobald Mue Nji holds a PhD in Sociology from the University of Buea. He holds three master's degrees: MSc in Sociology from the University of Buea, MSc in Anthropology of Health and Development from The University of Douala and MPhil in the Teaching of Philosophy from The University of Yaounde I, all in Cameroon. He has over 25 publications and 17 years of professional working experience. He lectures at the Universities of Buea and Bamenda University of Science and Technology and researches at Research Foundation in Tropical Diseases and Environment. His research interest is in climate change-related hazards and disasters, control of emerging and neglected tropical diseases, behaviour change patterns and sustainable development.

Ayienda Kemunto Carolynne holds a Master of Science degree in Statistics from University of Nairobi-Kenya and Bachelor of Science degree in Mathematics from the University of Nairobi-Kenya. She has 12 years of professional working experience. She works with National Drought Management Authority Kenya whose mandate is drought risk management and adaptation to climate change. Her research interests are in climate change, disaster risk reduction, food security in changing climate, community sustainable development and support for girl and boy child education from vulnerable communities. She is extremely passionate about climate change and food security.

Emmanuel Yenshu Vubo, who is Professor of Sociology at the Department of Sociology and Anthropology of the University of Buea, holds a doctorate from the University of Yaoundé (1991). Postdoctoral studies at the Universities of Poitiers and Besançon led to the Habilitation (2009). He has published a wide variety of books (single authored or edited), articles and book chapters in the domains of sociology and anthropology with a more recent concern in environmental issues (climate change, hazards and disasters). He is a Fellow of the College of Social Sciences of the Cameroon Academy of Sciences.

Emmanuel Innocents Edoun holds a PhD from the University of the Witwatersrand, South Africa, in Public Sector Economics. He has well-grounded working experience in rural and urban settings in South Africa and abroad in this field, and wide interaction experience with policymakers, implementers and community

members across Africa. He is endowed with excellent organisational management skills. He has supervised many postgraduate students and has published many articles in DHET-accredited journals and has conference experiences in Africa, Europe and Canada. Currently, he works at Tschwane School of Business and Society in South Africa.

Genevieve Fotso Bakam holds a PhD in Quality and Operations Management with a focus in digitalisation and management processes from the University of Johannesburg in South Africa. Previously, she worked as IT Consultant on Management Software in many companies in Africa such as Barloworld Logistics, Incledon in South Africa; Heineken Breweries in Ethiopia; and National Electricity Company in the Democratic Republic of Congo. Currently, she is Senior Research Associate at the University of Johannesburg in South Africa. She has published articles in DHET-accredited journals and was lead scientist for 'Disaster Risk management in South Africa' Project in 2019.

Lydia Kwoyiga holds a PhD in Environmental Science from Technische Universität Dresden, Germany. She holds two master's degrees: MSc in International Environmental Studies from Norwegian University of Life Sciences and MPhil in Development Geography from University of Oslo all in Norway. She has about 10 years of professional working experience. She works at the University for Development Studies, Tamale, Ghana, since 2013 as a lecturer. Her research area straddles groundwater and local livelihoods, institutions and the environment, climate change adaptation, rural women and agriculture, community-based ecotourism and sustainable development and higher education.

Ebenezer Owusu-Sekyere is a Professor of Human Geography at the University for Development Studies, Ghana. He holds a PhD in Geography and Resource Development; Masters in Geography and Resource Development, from the University of Ghana and BEd(Hons) in Social Science with specialisation in Geography from the University of Cape Coast. His research interests include urban environment and governance, waste management, informal sector and disaster management. He has over 15 years of professional working experience and has collaborated with local and international partners on several research and development projects, funded by DFID, WFP and the World Bank, among others.

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Preface

More than ever before, disaster risk reduction (DRR) and disaster risk management (DRM) policies, institutional frameworks, processes and related issues are gaining increasing importance at national, regional and international levels. The importance is not surprising, given the current surging levels of hazards and disasters and their future predictions. According to the Global Assessment Report on Disaster Risk Reduction (UNDRR, 2019), multi-hazards affected over 88 million people worldwide between 1997 and 2017. Floods alone are accounting for almost 88% (76 million) of those affected by natural hazards and disasters.[1] In the past 50 years, some 11,000 mostly weather-related disasters (such as floods and droughts) claimed over 2 million lives, leaving behind economic losses to the tune of US$3.6 trillion. Thirty-five percentage of deaths related to weather, climate and water extremes occurred in Africa (WMO, 2020). Two of the three top affected countries (Kenya and South Africa) are in sub-Saharan Africa (CRED, 2019). In the absence of sufficient efforts, the number of people affected by disasters will surge by 50% in 2030 (UNDRR, 2019). A rapid paradigm reversal at global and regional levels is needed to backstop natural disaster effects. Policies that move from response strategies towards disaster preparedness, risk reduction and mitigation are urgently needed (Buchenrieder, Brandl, & Balgah, 2021).

The international community recognises this and has made tremendous efforts in the last decade towards DRR. The two key instruments in this direction are the Hyogo Framework for Action (2005–2015) and the Sendai Framework for Disaster Risk Reduction (2015–2030). Both are indicators of international political will to rapidly drift from disaster management towards risk reduction.[2] It then

[1]By definition, hazards are potentially damaging physical events capable of inflicting injury, property damage, social and economic disruption or environmental degradation (UNDRR, 2020). Disasters seriously disrupt the normal functioning of communities and societies, inflicting widespread (human, economic, material and environmental) losses, superseding the capacity of the affected to cope, based on endogenous resources (UNDRR, 2009). Disasters only occur when existing conditions favour the transformation of hazards into damaging events, which exceed endogenous coping capacities, demanding external interventions (UNDRR, 2015).

[2]On the one hand, UN (2017) defines disaster risk reduction (DRR) as the application of policies and strategies to prevent new disaster risk and to reduce existing disaster risk. On the other hand, disaster risk management (DRM) ought to contribute to the

becomes imperative for developing countries, which are currently hardest hit by hazards and disasters to develop policy frameworks which align with these international instruments (UNISDR, 2021; WMO, 2020). In fact, about 80% of the world's poorest countries will be living in fragile contexts by 2030 if considerable efforts are not made to enhance and strengthen DRR strategies in these countries (OECD, 2018).

Over 90% of the world's current poorest countries are located in Africa, the bulk of them in sub-Saharan Africa. At the same time, sub-Saharan Africa is hardest hit by natural hazards and disasters in Africa (UNDRR, 2019). The presence of widespread poverty and increasing natural disasters suggest an urgent need for policies and institutions, to backstop the escalation of hazards and disasters in the short run and their potential transformation into complex emergencies in the long run.[3] What is the current state of policy and institutional frameworks in sub-Saharan African countries? What challenges or shortcomings abound? How do these policies resonate with the African Union's strategy for Disaster Risk Reduction (AU-DRR)? To what extent does the AU-DRR align with international risk reduction frameworks? This edited volume provides urgently needed initial responses to these questions.

To set the stage, Chapter 1 presents a review of key concepts commonly used in the disaster parlance. This is intended as a quick reminder for experts in the field and to motivate understanding for non-expert readers. Chapter 2 reviews key international DRM frameworks, particularly the Sendai Framework for Disaster Risk Reduction and the Hyogo Framework for Action. This is important to eventually situate the African policies within important international regime frameworks. Chapter 3 critically assesses the AU-DRR strategy. Central to this is the analysis of processes, institutions and arrangements that shaped the development of the AU-DRR strategy document and the AU-DRR's alignment to international expectations. Chapters 4 and 5 analyse policies and institutional frameworks for DRR in Cameroon (Central Africa) and Nigeria (West Africa), respectively. These five review-based chapters constitute the first part of this book: *A Review of Disaster Management Concepts and Policy Processes*.

Part II of this book, *Disaster Management Institutions, Policy and Processes: Empirical Evidence*, constitutes three empirically oriented chapters from Kenya (Eastern Africa), The Republic of South Africa (Southern Africa) and Ghana (West Africa), respectively.

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strengthening of resilience and reduction of disaster losses. This definition suggests that DRR measures are mostly ex ante (e.g. obtaining an insurance policy), while DRM is largely ex post (e.g. paying out insurance premiums).

[3]A complex emergency is said to exist when humanitarian crisis in a country, region or society results from considerable breakdown of endogenous processes (such as ethnic conflicts and political decay), requiring an international response exceeding the mandate or capacity of the United Nations or any other mandated humanitarian organisation (Albala-Bertrand, 2000).

This edited volume contributes to the contextual knowledge on DRM in sub-Saharan Africa. It also contains an extensive glossary of disaster-related terms, which can be helpful to students, lecturers, other scholars and policy actors within and outside of the disaster management discipline. It is my fervent expectation that different actors will optimise the potentials offered by the insights of the scholarly contribution to DRR and DRM.

Gertud Buchenrieder (1 October 2021)
Universität der Bundeswehr München (UniBw M)
Department of Social Sciences and Public Affairs
RISK (Risk, Infrastructure, Security and Conflict) Research Center
Professor for Development Economics and Policy
Werner-Heisenberg-Weg 39
85577 Neubiberg, Germany

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Part I

A Review of Disaster Management Concepts and Policy Processes

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Chapter 1

Disaster Risk Reduction and Management: A Conceptual Overview

Harrison Esam Awuh, Bishawjit Mallick and Harry Wirngo Mairomi

Abstract

Though some disaster risk reduction and management (DRRM) abstractions and core concepts may appear transparently obvious to some readers, others might not easily grasp the complexities embedded in them. This chapter focusses on the main arguments connected to DRRM. It unravels some of the complexities that abound in the framing of key disaster risk reduction concepts in literature. This chapter is divided into three parts. The first part focusses on understanding the dynamics of disasters. This part revisits definitions of disasters in literature, how they have been conceptualised in academia and what makes them different from other related concepts such as hazards, crisis, vulnerabilities and emergencies. Furthermore, considering that some impacts of disasters are more obvious than others, it examines some of the less conspicuous relationships between disasters and other phenomena. The second part examines the concept of DRRM in existing literature, highlighting the importance of resilience in DRRM and revisiting key methodological approaches in building resilience among communities. The third part places the concept of DRRM within the African context. It demonstrates the delicate aspects embedded in successful DRRM in Africa amid institutional development and policy issues. This part concludes with the identification of key knowledge gaps in DRRM in Africa. These knowledge gaps identified in the wider literature are used to justify why the chapters in this book and the context covered (sub-Saharan Africa) are of utmost importance in DRRM.

Keywords: Disaster risk reduction; disaster management; concepts; methodological approaches; sub-Saharan Africa; resilience

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Introduction

The contemporary relevance of disaster and related concepts cannot be overemphasised. The term disaster is a contested term with no universal definition, as it varies depending on the professional requirements and perceptions of various disciplines (Shaluf, Ahmadun, & Said, 2003). A disaster is best defined as a sudden unforeseen event with natural, technological or social causes that lead to destruction, loss and damage (UNISDR, 2009). Further definitions of a disaster refer to an event, observable in time and space, in which societies or their larger subunits (e.g., communities, regions) incur physical damages and losses and/or disruption of their routine functioning (Peek, Abramson, Cox, Fothergill, & Tobin, 2018). A disaster is also defined as an event that causes damage, ecological disruption, loss of human life or deterioration of health and health services that warrant a response from outside the affected community (Lurie & Carr, 2018), due to their ability to overwhelm local capacities (Morganstein & Ursano, 2020; Ocal, 2019). An analysis of definitions of disasters by Al-Dahash, Thayaparan, and Kulatunga (2016) reveals that the key features of any disaster are sudden nature, being unforeseen, causing loss and damage, coping capacity, system recovery, external assistance and needing the involvement of multi-stakeholders. These are points of convergence for a unified definition of disasters. Nevertheless, the diversity in the aforementioned definitions suggests that until now, a unified definition of disaster does not exist. However, most definitions agree that disasters can be man-made or of natural occurrences, affect communities, environments and or social and economic states, cause damage or loss and require interventions.

Relationship Between Disaster and Other Related Concepts

The United Nations Office for Disaster Risk Reduction (UNISDR, 2009) confirms that disasters occur as a result of a combination of hazards and vulnerabilities which go neglected. The definition of disaster by Biswas and Choudhuri (2012) highlights this chain of events; they define a disaster as a dynamic mechanism that begins with the activation of a hazard and flows through the system as a series of events, in a logical sequence to produce a loss to life, property and livelihood by negatively influencing the emergency systems. This definition indicates an overlap between disaster and other closely interconnected and interdependent terms such as crises, hazards and emergencies. With the exception of emergencies, the other concepts (hazards and crises) are linked to a common characteristic – suddenness of the occurrence of an event which leads to damages in life and property.

Hazard

A hazard is defined as a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation (UNISDR, 2017). Relatedly, another definition of disasters highlights the link between hazards and disasters. This is the case with the definition of disasters by UNISDR (2018) as a serious disruption

of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts. This definition highlights that hazards can turn into disasters because of human acts of omission and commission rather than an act of nature, and disasters are caused more by socio-economic than natural factors. The link to hazards also highlights a contemporary argument that there is nothing like a natural disaster. In other words, while hazards can be natural (there are both natural and human-induced hazards), disasters may not. Hazards transform into disasters if they eventually end up harming humans or cause distractions. All disasters are hazards, but all hazards are not disasters (Babu, 2020). Fig. 1.1 shows an example of a hazard which can turn into a disaster if unattended to. This figure shows a choked stream with sewage in Yaounde (Cameroon) which can lead to flooding disaster if poor waste disposal goes on unchecked.

According to Shi (2019), examining hazards from their causes puts them into two distinct types: (1) hazards caused by natural factors and (2) hazards caused by human factors. In this sense, disasters are a fulfilment of hazards. For a disaster to occur, there must be a disruption in the natural functioning of environment and/or unexpected changes in community operations and lifestyle (Heginbotham, 2018). Disasters are known to have significant effects. Affected communities with limited resources often require outside assistance to manage disaster effects. Such communities can experience major demographic, economic or environmental losses.

Fig. 1.1. A Choked Stream in Yaounde (Cameroon) as an Example of an Urban Hazard.
Photo taken by first author in the Efoulan neighbourhood in Yaounde (August 2014).

Crisis

A crisis is defined as a time of intense difficulty, trouble or danger. It can be personal or confined to a small population, like a family or a company dealing with a very serious problem (Lighthouse Readiness Group, 2015). Crises often have past origins, and diagnosing their original sources can help to understand and manage them or lead to an alternative state or condition (Farazmand, 2001). Additionally, crises are generally associated with a system, organisation and group of people or individual. The key features of a crisis are uniqueness, danger, being troublesome or causing damage, being unexpected and usually emotional (Al-Dahash et al., 2016; Farazmand, 2001). Several common features have been identified between disaster and crisis, which makes the two concepts interchangeably usable to a certain extent. Some of these include aspects such as being unique, uncontrollable, triggering rapid public policy changes, presenting something extraordinary, being a high risk to business and disrupting a system as a whole (Al-Dahash et al., 2016).

Emergency

An emergency is defined as any 'natural or man-made situation that may result in substantial harm to a population or damage to property' (Shen & Shaw, 2004, p. 110). The word 'may' in the aforementioned definition highlights the point that emergencies do not always lead to disasters. They can be both imminent and actual threats to people, property or the environment, which require a coordinated and rapid response. Emergency differs from crisis and disaster because it can possibly be managed with local capacities if not left unchecked. According to Eshghi and Larson (2008, p. 63), an emergency is, 'an event that may be managed locally without the need for added response measures or changes to procedure'. These definitional nuances are best clarified empirically, by differentiating emergency events that can be handled locally from those that cannot. One thing which the definitions acknowledge is that local capabilities for handing emergencies can vary depending on the contexts. For this discussion, it is clear that an emergency could lead to a disaster if left unchecked, but not all disasters are preceded by an emergency. There is also a difference in timelines of disasters and emergencies which differentiates the two terms. A disaster has certainly already happened, while an emergency can still be pending.

Vulnerability

The UNISDR defines vulnerability as the conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards (Kelman, 2018). Different regions categorise different events as potential disasters based on their level of vulnerability and the priority, often dictated by the available resources (Roth, 2011). Vulnerability can arise from different physical, environmental, social and economic factors. Examples include poorly

constructed infrastructure and lack of public information and awareness on a given subject (UNISDR, 2009). Definitions of vulnerability range from one scholar to the other as well as within different disciplines. McEntire, Gilmore Crocker, and Peters (2010) define vulnerability as a socially constructed phenomenon, whose relationship to disaster is contingent on social changes. They also opine that inequalities which define social change are often echoed and perceived as the nature of vulnerability. In another perspective, Perrow (2006) believes that vulnerability is determined by the state of the economy and politics. A unanimous view of vulnerability is that in the phase of a disaster, it focusses on the social, economic and political dimensions of disasters. Vulnerability is a function of exposure of a system (i.e., the frequency, magnitude and duration of exposure), sensitivity (the environmental and human characteristics that contribute to how a system responds to exposure) and adaptive capacity – the capacity of systems, communities, households or individuals to prevent, mitigate or cope with risk and recover from shocks (IPCC, 2007).

The concept of vulnerability provides a logical explanation to why some mild hazards lead to disasters with huge impacts and some extreme hazards never transform into disasters. There is the need to reduce vulnerability in order to reduce disaster risk, (UNISDR, 2016). Fig. 1.2 shows warnings concerning the susceptibility of volcanic eruptions in and around the city of Buea in Cameroon's south-western region. In this case, Buea is a vulnerable settlement because of its high susceptibility to volcanic eruption on Mount Cameroon (Fako) on which the city is build.

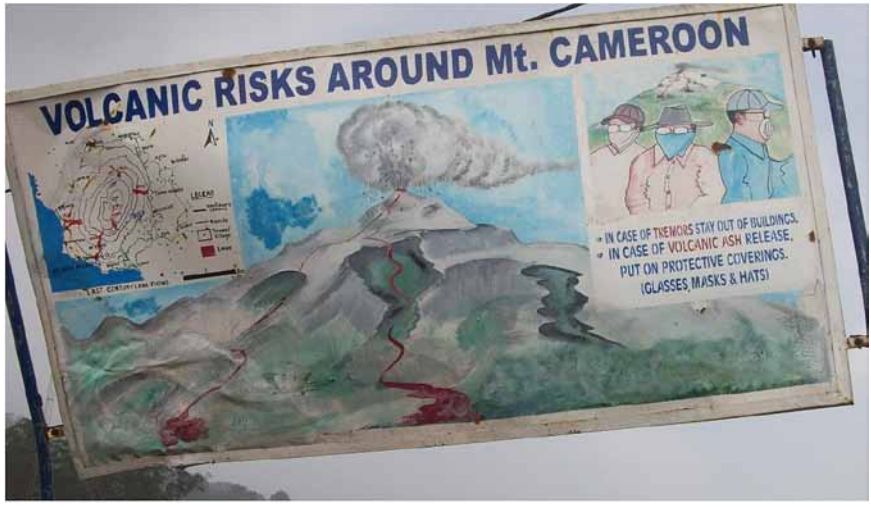

Fig. 1.2. Warnings on the Susceptibility of Volcanic Eruption in Buea (Cameroon).
Photo taken by the first author at Police Roundabout neighbourhood, Buea (January 2012).

Disaster: Natural Or Man-made?

Generally, disasters might be largely natural, but their prevention and mitigation are in human hands. While disasters were once viewed as God's punishment (like the plagues of Ancient Egypt in the book of Exodus in the Holy Bible), today they are understood in relation to our own (in)ability to prevent or predict them.[1] Other authors (see Chmutina & von Meding, 2019) have argued that 'natural' disasters are not completely natural. Instead, they are defined as the failure of a human system's ability to address complex interactions of interrelated processes of vulnerability between society and the environment (Oliver-Smith & Hoffman, 2019; Wisner, Blaikie, Blaikie, Cannon, & Davis, 2004). Both the causes and consequences of disasters are related to the social structures and processes of societies or their subunits. By continuously blaming 'nature' and putting the responsibility for failures of development on freak natural phenomena, curses, hard luck or 'punishment from God or the gods', we continue to enable those who create disaster risks (hazards) by accepting poor urban planning, increasing socio-economic inequalities, non-existent or poorly regulated policies and lack of proactive adaptation and mitigation to avoid detection. The seemingly increased frequency of disasters furthers the need for enhanced planning efforts to mitigate the effects of these events. While there remains debate about the degree to which future disasters may be prevented or mitigated through human intervention, it is clear that the increase in these events necessitates more resourcing by policymakers, rigorous planning by disaster managers, education of personnel involved in response and recovery and research to more effective articulate optimal timing and sequence of interventions (Morganstein & Ursano, 2020). A hazard becomes a disaster because its impact threatens the lives and livelihoods of people who are often vulnerable due to discrimination and marginalisation, inequitable access to resources, knowledge and support, as well as rapid urbanisation, environmental degradation and climate change. Hazards may not be preventable in some cases, but disasters are more likely to be preventable.

Despite the aforementioned arguments for discontinuing the use of the term 'natural disasters' based on the concepts of human negligence and the distinction between hazards and disasters, some advocates for the continued use of the concept 'natural disaster' base their arguments on the undeniable fact that humans are part of nature. For instance, Gill (2015) suggests that the widespread use of the terms 'natural disaster' may be due to multiple reasons, including a lack of awareness, wanting to differentiate a natural process from a human-induced one (i.e., an earthquake has a natural origin, whereas a nuclear incident is anthropogenic) and using the expression as a convenient term and a boundary object that

[1]A strand of literature continues to explore social representations and local perceptions to natural disasters. Balgah, Kimengsi, Bime, and Forti (2016) report that disaster-affected persons in their Cameroonian sample attributed climate variability and associated disasters to the anger of the gods. Bringing in local perceptions can enhance understanding of disaster risk reduction, mitigation, coping or adaptation strategies.