FRAMING OF CLIMATE CHANGE MESSAGES IN PRINT MEDIA: A QUALITATIVE CONTENT ANALYSIS OF SELECTED NEWSPAPERS IN KENYA FROM 2013-2017

BY

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DECLARATION

Declaration by the Candidate

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In memory of my brother, John Kipkemei, '*taitanyo'*

ABSTRACT

Despite the enormity of the climate change issue, the level of awareness of climate change issues and impact is low across the country. Most Kenyans feel they lack basic information to enable them cope with climate change. Since most people do not research environmental issues first-hand, they rely on the media to act as both researcher and presenter of information. This study therefore explored the textual and visual frames that have been used in climate change messages by selected print media in Kenya in a bid to understand how media framing impacts audiences' engagement and responses to climate change information. Specifically, the study sought to answer the following questions: What are the trends in how the selected newspapers cover climate change? How has the visual imagery on climate change been framed in the selected newspapers? What are the textual frames used in the selected newspapers? This study was guided by the Agenda Setting and the framing theories. It adopted a qualitative research approach premised on the relativist-interpretivist paradigm. Two newspapers (*The Standard* and *Daily Nation*) were purposively sampled due to their wide circulation and coverage. The study sample was selected from all the newspaper published between January 2013 and December 2017. This period represented two years before and two years after the launch of the Ministry of Environments' public communication strategy in 2015. The strategy laid emphasis on liaising with the media to communicate environmental issues. A total of 127 articles from *The Standard* and 119 articles from the *Daily Nation* that carried stories on climate change were analysed. A Content analysis guide was used to collect the data. The data was then analysed using frame analysis based on frames derived from the research questions. The study findings indicated that the majority of the articles in both newspapers were opinion pieces; climate change was not a major beat in both newspapers and the authors were not consistent; framing was mainly shaped by sources, climate change was framed as an immediate challenge, caused by them (developed countries) and affecting us (developing countries), whose solutions and actions were mainly attributed to 'big' actors (international bodies/governments) alienating the individual citizens. Most of the imagery used in the selected articles had no connection to climate change. Those that did depicted individuals based on their social class (elites- power positions, middle class- infrastructural impacts, poor-impacts on livelihoods). There is a major disparity between the problem (enormous) and the solutions (small individualized actions) which can lead to low self-efficacy. An alarmist tone is mainly used in depicting climate change. The attribution of causes and solutions of climate change to others removes responsibility from citizens leading to inaction. Framing of climate change messages still alienates the individual and communities from active engagement and action. The media can engage in constructive communication using relatable frames and frames that promote self-efficacy to boost climate change engagement and policy making.

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ACKNOWLEDGMENT

I thank God for his renewed mercies on me. He has kept me both mentally and physically well. He has also given me the ability to complete this journey. To Him be glory and honour always! Amen.

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OPERATIONAL DEFINITION OF TERMS

Frame: The arrangement of an issue from a certain viewpoint. In this study I adopted Chong and Druckman's (2007) definition and operationalized a frame as an argument that articulates a way of thinking about climate change information.

Framing: Assigning meaning; it's the act of presenting, emphasizing, including or excluding the various discourse in any text. In this study I adopted Wicks (2005) definition and operationalized framing to refer to the elements of a topic emphasized by the media to construct a specific angle or narrative about the content covered.

Climate change is the climatic changes caused by the rise in the earth's global temperature due to human activities, primarily the burning of fossil fuels. In this study it was taken to mean any human activity impacting on the environmental which has an effect on the earth's global temperature.

Presentation of climate change refers to the way the selected media portrays climate change. In this study it refers to the framing and priming of climate change information.

Climate change information refers to any message in the selected media which touches on climate change

Vulnerability measures the exposure, sensitivity, and ability to cope with climate related hazards by accounting for the overall status of food, water, environment, health, and infrastructure within a country (Netherlands Commission for Environmental Assessment 2015). In this study it refers to the susceptibility to the effects of climate change.

CHAPTER ONE

INTRODUCTION

> *… frames turn non-recognizable happenings or amorphous talk into a discernible event. Without the frame, they would be mere happenings of mere talk, incomprehensible sounds (Tuchman, 1978, p. 192).*

1.1 Chapter Overview

Climate change is one of the most extreme environmental challenges in the world today (Onyalo & Tembo, 2023; Terry, 2023). It threatens the livelihoods of people all over the world with its impacts currently felt in Kenya. Kenya is susceptible to natural calamities that are climate-induced and according to a 2020 report, Kenya occupies the 39th position among the countries that are the most prone to climate change (International Monetary Fund, 2023). Effective communication is indispensable in an effort to address and alleviate the effects of climate change. Nying'uro et al., (2024, p.27) contend that there is need for coordination among the many actors present in the climate change space to ensure efficient uptake and use of climate change information.

This study explored the textual and visual frames that have been employed in climate change communication by selected media in Kenya. In so doing, it presented the various themes that are dominant in communication on climate change in Kenya in addition to the tone set by these frames and themes. This study sought to give a view of the Kenyan media space in terms of climate change communication and the way selected media have framed climate change messages.

In presenting this thesis, the work is organized into a number of chapters with the first exploring the study background and the research problem. Also included is the research aim, questions and scope of the study. Lastly, the chapter discusses the limitations, justification and significance of the study. The second chapter brings to perspective the

concepts used in the study and the reviewed literature with emphasis laid on the previous themes and the existing gaps in literature. Also incorporated is a discussion on the theories that informed the study. The third chapter discusses the methodology adopted in the study. Additionally, the philosophical paradigm and its effect on the choice of methodology used in the study is explained. The fourth chapter presents the study findings while the final chapter discusses these findings in light of the literature that has been highlighted.

This chapter opens the reader into the concept of framing and explains why framing is an important concept as it turns indiscernible happenings into major stories.

1.2 Background to the study

Literature on environmental communication shows that climate change communication can be used to increase citizens' engagement with the climate change issues. To reach a large audience, mass communication can be used to transmit information on climate change. According to Kleinberga (2022, p.8), media play a pivotal role in the process of communication, increasing perceptions and shaping viewpoints towards climate change. This argument is supported by the Ministry of Environment, Water and Natural Resources (2014) who argue that media plays a crucial role in the control of climate change in the sense that it sensitizes the public about its attributes, causes, effects and possible solutions. Additionally, it probes and gives accounts of the catastrophic incidences occasioned by climate change.

Locally, the media has been used to bring attention of the citizens to matters climate change. For example, the media captured president Ruto's address in the UN assembly emphasizing on the adverse effect of climate change in the world (Oketch, 2024), the prospects of losing all glaciers on Mt Kenya by 2040 (Mwende, 2024) as well as the

effects of climate change on the agricultural sector (Mwende, 2024). In the international sphere, climate change has gained global recognition through the highlights of the media such as the heat waves that sparked wildfires in Greece, the monsoon rains that displaced families in Pakistan and the prolonged drought that deepened food insecurity in East Africa (Wainaina, 2025).

The mass media has been brought forth as a tool that helps people decipher climate change which is a scientific subject. They are the link that breaks down the science in the climate change message to promote understanding and engagement of the lay people. The media does this by emphasizing some elements of the climate change topic to construct a given angle or narrative about climate change. The media also affects the choice of voice (sources) that is used to convey the climate change messages. The voices chosen by the media to a large extend determine what is said and how it is said. An exploration of the narratives and angles (frames) presented by the media as well as the voices chosen can provide an insight into how climate change communication is carried out and the main themes presented by the media. This can then point to what the people will be talking about and the kind of engagement they will have in regards to climate change communication.

The media is an interpreter of information that comes up from the interplay between humans and their surroundings. Media affects the voices and content of information conveyed; meaning, the media shapes the choice of people to speak, what and how it is said and ultimately how it is likely to be interpreted. The depictions of the media ranging from news to entertainment provide crucial connections between formal environmental science and politics and the realities of how people perceive and interrelate with their surrounding (Boykoff, 2009, p. 431). The mass media acts as a link

between science and the people as it helps breakdown how environmental science is understood in the daily lives of citizens. Corbett and Durfee (2005) argue that most people will on many occasions depend on news to connect occurrences such as floods, drought or extreme heat, to climate change especially when they directly experience such happenings. Boykoff (2009) further asserts that most people turn to the media to understand the experiences they go through relating to environmental science. Dirikx and Gelders (2008) support this assertion arguing that it is the media that translates science into popular discourse by simplifying personal experiences. This means that if the media coverage of environmental experiences is misleading, inaccurate, or unclear, it will negatively affect public understanding as well as policy actions.

One of the greatest environmental issues in the contemporary world is climate change (Onyalo & Tembo, 2023; IPCC, 2023). The past few years have been characterized by major concerns for the environment. For instance, according to Boykoff and Boykoff (2007), one of the grave environmental perils of the twenty-first century is climate change. This is echoed by President Ruto in his UN assembly address where he re-emphasises the major climatic concerns such as the rising oceans, spreading deserts, and increased wars due to the climate crisis (Oketch, 2024). In Kenya the environment cabinet secretary Soipan Tuya calls climate change a “the eminent experiential menace that is presently facing humankind” (Mwende, 2024). Similarly, Carvalho (2010) observes that climate change is one of the most serious pitfalls that humanity will have to deal with in the years to come. Scientists and climate change experts warn that in 2024, the world reached a sobering milestone as world temperatures increased by more than 1.5C above pre-industrial levels entering the dangerous territory where climate disasters become more severe and unpredictable (Wainaina, 2025).

Although climate change came forth as a matter of science, its wide-ranging effects and prospective alleviation techniques imply that it is of importance to people from all spheres of life across sectors, interests and nations (Badullovich, Grant, &Colvin, 2020, p.1). It is an issue that affects individuals, communities, countries and geographical regions in varying degrees. According to the Kenya Meteorological Department, the average yearly temperature has risen by one degree Celsius since 1960. This pattern is predicted to continue, with acute ramifications for health, agriculture and water resources (Mwende, 2024). The effects of climate change are already being experienced by Kenya with extreme weather linked to poor health, altered wildlife migrations, damage to infrastructure, and food and water insecurity (Nying'uro et al., 2024, p. 16). National Environment Management Authority [NEMA], Government of Kenya (2015, p.4) posits that the costs of the effects of climate change specially droughts and floods could be equal to 2.6 per cent of Kenya's annual GDP by 2030, with disastrous outcomes on the habitat, community and the broader economy.

Globally, the impacts of climate change across sectors and livelihoods are rampant. It is seen as set to destroy the world (Oketch, 2024). Climate change effects are projected to be severe on the poor and most socially vulnerable people characterised by low adaptive capacity in developing countries. According to Cevik and Jalles (2023, p.3) "Every country will experience the consequences of climate change, but the extent of vulnerability depends on the size and composition of economies, the resilience of institutions and physical infrastructure, and the capacity for mitigation and adaption to climate change." Countries that are developing are therefore the most affected by the impacts of climate change because their economies and their wanting infrastructure are impeding their capability for alleviation and adaptation of climate change. On average, African countries are losing 2–5 percent of Gross Domestic Product (GDP) moreover; a

great number of these nations are redirecting up to 9 percent of their budgets in response to the climate extremes (World Meteorological Organization, 2024). Therefore, there is need to act swiftly since climate change is both an environmental and a developmental challenge.

The effects of climate change include depletion of human subsistence systems such as water resources, reduced food production, flooding, drought, changes in ecosystems, widespread acidification of the oceans, heat waves, potential forced human migrations, insurance and reinsurance difficulties, devastating health effects and reduced labour productivity (Climate Investment Funds, 2020; Trisos et al., 2022; O'Neill & Nicholson-Cole, 2009). These effects are already being felt in various sectors such as food, security, human health, tourism, physical infrastructure and many others. The World Bank (2010) contends that developing countries are prone to the effects experienced due to climate change estimating that these countries will bear some 75 to 80 percent of the costs of damages due to climate change. The World Bank attributes this large percentage to the fact that developing countries have limited financial, technical and infrastructural capacities as well as their over reliance on climate based agriculture (World Bank, 2010).

Most of the natural disasters are as a result of extreme climate change (Cevik & Jalles, 2023). Mearns and Norton (2010) postulate that in the year 2008, the economic catastrophes amassed from the effects of climate change universally were almost equivalent to the Official Development Assistance (ODA) from developed to developing countries. Additional evidence that brings to perspective the effects of climate change includes meagre crop yields, increased water stress, human and wildlife deaths due to emergent diseases among others. All living things depend on the

environment for their survival and yet the resources available in the environment are getting depleted with each passing day.

The effects of climate change are anticipated to be detrimental in Kenya since its economy is to a great extent reliant on rain-fed agriculture, tourism and natural resources. These sectors are vulnerable to variation and change in climate and extreme weather events (USAID, 2023). The country is expected to be generally warmer and to experience a significant degree of variation in rainfall with extreme weather events which will have widespread implications on sectors that are not only climate sensitive but also support the country's economy (Republic of Kenya [RoK], Ministry of Environment and Mineral Resource, n.d). Kenya is set to lose over 3.1 trillion shillings from the economy by 2050 due to climate inaction (Mutwol, 2024). The alarming rate of climate change in the world calls for multifaceted approaches to achieve lasting solutions.

Climate deterioration is a consequence of many issues. Tihagale (2004) attributes environmental deterioration to the exhaustion of the natural resources as a result of the need to sustain the people's lifestyles and the lack of awareness among citizens making them engage in activities that cause and worsen the problem. The Intergovernmental Panel on Climate Change IPCC (2023) opines that the effects of climate change can be evaded, reduced, or deferred through suitable mitigation. Communication influences the way people perceive environmental risks. These perceptions determine whether we support or disregard environmental policies, trust or express scepticism about environmental issues and adopt or reject climate change messages (IPCC, 2023). Environmental issues are mainly unobtrusive and are thus directly influenced by media

coverage since the public has no direct connection with them as well as their effects (Zucker, 1978).

The media acts as the mediator between the scientist or climate specialist and the general citizenry. According to Boykoff (2009),

> Media representations—from news to entertainment—provide critical links between formal environmental science and politics and the realities of how people experience and interact with their environments. People abundantly turn to media—such as television, newspapers, magazines, radio, and Internet—to help make sense of the many complexities relating to environmental science and governance that (un)consciously shape our lives (p. 434).

The scientists and climate specialist communicate the climate change information, but it is the media that in most instances frames or reframes this message before it gets to the audiences. Framing is a technique that focuses attention on particular features of an issue over others and as a consequence shape how that issue is comprehended (Badullovich et al., 2020). The way in which the issues of climate change are covered or framed will therefore affect the way they are perceived by the citizens and in turn affect their attitude towards climate change issues.

Most people universally say they have limited knowledge or none at all about climate change (Leiserowitz et al., 2023). According to the Organization for Economic Co-operation and Development (OECD) (1999), there is a wide gap between what the public understands about the technical scope of the environment and what the experts know. Therefore, the focus of environmental communication should be on all citizens in the country and not only on students and scholars. UNESCO-UNEP (1978) argues that learning to care for the environment should not only be a reserve of pupils at school but also of the whole community. MEMR (2012) further reinforces this assertion and aver that the management of climate change necessitates the vital engagement of everyone in

the society as it portends a significant challenge to the socio-economic development of the country.

Our knowledge, action and understanding of the environment depends on the scientific discourse propagated by experts, the ordinary conversations people have, what is shared in the media and the internet and general public debates. Productive conversations about the environment can only be realized when citizens are properly informed on environmental issues, including the causes, effects and mitigation strategies of climate change. According to Khatibi et al. (2021) "the community needs to be made aware of the risks, acquire knowledge about the options that are available for a response, and be empowered to take their own actions. Effective public engagement is therefore key to success in planning for climate change. (p.1)" As such, effective communication strategies are indispensable in dealing with climate change. According to BBC World Service (2010), there is a shortfall of pertinent and useful information on climate change for the African Continent impeding the citizen's response to climate change. Otiende (1991, p. 15) also points out to the need of creating awareness on climate change among the citizens to help avert the annihilation of the habitat. It is important to equip the citizens with the skills necessary to adapt to the destructive effects of climate change as well as educate them on the opportunities presented by it (Ministry of Environment and Mineral Resources [MEMR], 2012).

The role of the government in advancing awareness and preparedness on climate change issues is important. As stakeholders, they should be at the forefront in promoting climate change issues. A National Climate Change Response Strategy (NCCRS) was launched by the Government of Kenya in 2010 to enhance the country's preparedness in building and reducing vulnerability (MEMR, 2012). To understand the Key climate

change thematic areas, a stakeholder's forum was held; it identified the following key areas of which citizens need good information: forecasts of utmost weather events, such as floods and droughts; food security; climate change adaptation and alleviation techniques; change in rainfall patterns; soaring average temperatures; consequences of climate change on economic performance, health and hygiene and domestication of matters on climate change (MEMR, 2012, p.1).

The role of media in the mediation of climate change information cannot be down played. It plays a central role of disseminating information and viewpoints about science and technology to citizens (Hase et al., 2021; Swain, 2022; Carvalho, 2007; Cox, 2009; Nelkin, 1995). During the opening of the African Conference on Media and Climate Change in 2014, Prof. Judi Wakhungu, Kenya's former Cabinet Secretary in the Ministry of Environment, Water and Natural Resources emphasised the role of the media in managing climate change. She pointed out that the media creates awareness on the causes, consequences and solutions of climate change and reports on its effects (Ministry of Environment, Water and Natural Resources, 2014). This view is in consonance with the assertions of the Director of Information and Communication at the African Union Commission, Mrs. Habiba Mejri-cheikh, who says that one of the key functions of media professionals in the African continent, is to inform and educate the African citizens about the menace of climate change (African Union, 2011). Indeed, studies (Hase et al., 2021; Zhao, 2009; Nisbet, Cooper & Ellithorpe, 2015) have established a positive effect between exposure to newspapers and the public's knowledge on climate change. This study therefore found it imperative to explore the way selected print media (newspapers) in Kenya prime as well as frame climate change information.

1.3 Statement of the Problem

Climate change is a major inhibitor to development with significant effects on the global and local front. Kenya is classified as highly vulnerable to climate change impacts (World Bank Group, 2021) with more than 70 percent of natural disasters in Kenya attributed to extreme climatic events (International Monetary Fund, 2023).

Despite the enormity of the climate change issue, the level of awareness of climate change issues and impact is low across the country (Ministry of Environment and Mineral Resources, 2012; National Environment Management Authority, Government of Kenya, 2015, p.11). A survey conducted by the British Broadcasting Corporation (BBC) also confirmed that most Kenyans feel they lack basic information to enable them cope with climate change (BBC, 2009). African citizens' response to climate change is hampered by a fundamental shortage of information that is relevant and useful to the continent's audiences (BBC World Service, 2010). This is in agreement with AfroBarometer's (2022) finding that only a slim majority of Kenyans have heard of climate change.

Studies have shown that people mostly receive climate change information through the mass media. Nisbet, Cooper and Ellithorpe (2015) have demonstrated a positive effect of exposure to newspapers on the climate change knowledge of readers. A survey carried out by AfroBarometer in Kenya showed that most respondents received climate change information from newspapers more than they did from television or radio (Barasa, 2023). Dotson (2009) argues that since most people do not research environmental issues first-hand, they rely on the media to act as both researcher and presenter of information. As such how the media frames climate change issues

determines, to a considerable extent, the kind and amount of climate change information that reaches the public.

Studies on how the media frames climate change issues have previously been carried out, however most of them have been done on mainstream media in Western countries while such studies in Africa and similar regions are rare (Asplund, 2014, p. 18). Among the studies that have been carried out in Africa and Kenya in particular, most of them have examined the framing of texts in isolation of climate visuals. This research therefore endeavoured to bridge this gap by exploring media framing of climate change in Kenya and incorporating both textual and visual frames in its analysis.

1.4 Aim of the Study

This study was designed to explore the way print media in Kenya frames climate change messages in a bid to understand how media framing impacts audiences' engagement and responses to climate change information.

1.5 Research Questions

The following research questions guided this study:

i. What are the trends in how the selected print media cover climate change?

ii. How has the visual imagery on climate change been framed in the selected newspapers?

iii. What are the textual frames on climate change used by the selected newspapers?

1.6 Scope of the Study

Adam (2007) defines a scope as the boundaries or limits of a study in terms of contents, sample and geographical spread, which help a researcher to focus on significant issues and steer clear of digressions. This study examined how the mass media in Kenya

frames climate change information. There are other sources of climate change information but the mass media was chosen because they are the most significant sources from which information about climate change is derived (Schafer, 2015). Specifically, the study only focused on the print media, thus helping the researcher to reduce the amount of climate change media content to be analysed and subsequently making the study more practical. Narrowing the content scope also helped the researcher to undertake a more in-depth analysis of print content and identify different frames. Print media was also chosen because studies have shown that it is the most dominant means for communicating environmental information. A survey carried out by AfroBarometer in Kenya showed that most respondents received climate change information from newspapers more than they did from television or radio (Barasa, 2023). The newspaper is thus an important source of the climate change information and messages for the public.

With reference to the print media, the researcher narrowed the study to two newspapers, namely *The* S*tandard* and the *Daily Nation*, which are the two most rated newspapers in terms of readership and coverage in Kenya. Therefore, it was deemed that an analysis of how these two newspapers mediate the climate change information can reveal the understanding and perceptions of the Kenyan citizens on issues of climate change.

The study covered a period of five years, 2013, 2014, 2015, 2016 and 2017. By focusing on the five years, the research accounted for the probability of different amounts of climate change coverage over the years. This time frame also allowed the researcher to collect contemporary data without interfering with the need for prompt completion of thesis and graduation.

1.7 Limitations of the Study

There are numerous mass media channels in Kenya presently however, this study was restricted to the coverage of climate change issues by two newspapers only. It excluded content and approaches used in climate change coverage by other smaller and less popular newspapers and which could be pertinent to the study. This also means that the study findings may be restricted in terms of general applicability due to limited sample. However, these limitations were countered by selecting information-rich cases for in-depth analysis, namely the two newspapers with the widest coverage and readership.

Methodologically, the study used qualitative content analysis whose pitfall includes the risk of imposing own meaning system instead of deriving it from the content (Mc Quail, 1983). The limitations of the content analysis meant that some categories could be accommodated within the same basic framework. This could have presented a challenge in analysis. However, these pitfalls were overcome by borrowing from the already established frames and also merging them with the evolving frames to guide the study.

Time limitations prevented me from carrying out reception research. To curb this limitation, I further interpreted the study findings, theorized on their prospective ramifications and linked them to prior frame-effects studies (de Vreese, 2005; Entman, Matthes & Pellicano, 2009; Scheufele, 2006; Scheufele, 1999; and Tuchman, 1978). Thus, I believe that the findings still make an important addition to knowledge on the print media coverage of climatic change message and its impacts in Kenya.

1.8 Justification of the Study

Climate change is not a subject in which the lay person is an expert; thus, for information on climate change, many people mainly depend on others presumed to have more expertise such as the media (Weber & Stern, 2011; Soroka, 2002). Weber and

Stern (2011) further aver that exposure to "climate change" for many Americans has been almost completely indirect, intermediated by news coverage, internet postings, non-formal discourses and documentaries and video footage of events (p.320). Without communication, the entire environmental undertaking is jeopardized (Flor, 2004). Therefore, an understanding of the framing of climate change issues by the media, and in this case, the print media, is key in determining the commitment of the public to issues on climate change. Cissel (2012) posits that the news media, particularly print media, serve as beneficial sources of information.

This study comes at a time when the effects of climate change are evident in and around Kenya. With the current threats caused by climate change, it is necessary to study more about the appropriate frames of communicating climate change information to create more awareness among the publics.

Thaker, Zhao and Leiserowitz (2017) argue that "numerous studies on media and public engagement with global warming have been conducted in advanced economies. Comparatively, limited studies have investigated media coverage and public understanding of global warming in low- and middle-income countries" (p. 354). This is in agreement with Asplund's (2014) assertion that "the dominant media in Western countries have been thoughtfully studied concerning their reporting on climate change, while studies of media in other geographical inclinations are scarce (p.18)." This justifies the need for a study of media coverage of climate change in developing regions, such as Kenya which is this study's focus.

1.9 Significance of the Study

One of the means of creating awareness on climate change in Kenya is the print media. A study of how print media frames climate change messages is thus relevant in

decision-making on communication strategies employed by the media. Because the mass media helps to initiate criteria for public conversations, or how people deliberate and converse about a subject (McCombs & Shaw, 1972), comprehending the essence of print media coverage of (the way it frames) climate change messages may assist scientists and environmentalists perform more efficient sensitization on climate change management activities.

The structuring of challenges such as climate change is of critical significance for how they are addressed (Larsso, 2004). An understanding of the framing of issues of climate change by the newspapers in Kenya can help to show how the media influences citizens' interpretation of issues of public and global concern. Such a study also informs policy formulation on public response to climate coverage. This could pave way for improved communication strategies, which could further strengthen mitigation efforts by individuals and governments.

It is hoped that the study findings have made contributions to the existing knowledge in the field of environmental communication. The findings of this study could be useful to climate change agents, policy makers, scientists and other stakeholders involved in tackling matters of climate change. It will give them a better understanding of how climate change messages are disseminated through the print media to help them understand the communication gaps or weaknesses, strengths as well as opportunities in the current framing and priming practices by the print media. In addition, key players in climate change response may find the study useful as a basis for making rational decisions aimed at improving alleviation and adaptation techniques. It is crucial for policy makers to know that "taken-for granted" frames can subtly shape the public's conceptions of reality. They can thus make decisions by creating more explicit frames,

for instance, by reflecting on the frames that promote engagement and action. The findings on framing of climate change visual imagery can provide a resource for media professionals in making choices in their use of climate change visuals.

1.10 Chapter Summary

From the foregoing discussions, it is evident that without frames, the climate change message would not easily attract attention. The media comes into to mediate and turn what would be mere happenings into major events that attract attention. They do this by the frames they adopt and the agenda they adopt as they present stories to the public. The arguments presented in this section have also shown the challenge of climate change in the world as well as locally and demonstrated how framing affects the engagement and response of the general public on climate change issues. From these arguments, it is evident that a study needed to be undertaken to determine the trends in how the print media frames climate change messages. This chapter has also specified the scope as well as the limitations and given the significance and justification for the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

The key concepts in the field of environmental communication are explored in this chapter. Moreover, a review of both literature related to the current study as well as theories related to environmental communication is undertaken. The first section situates the study in the discipline of Communication Studies. This is done by explaining why climate change is a communication issue by demonstrating that it falls within the field of environmental communication; it then goes ahead to explain the concept of framing and why it is a crucial part of communication in climate change. The function of the media as source from which information is obtained is then explored before the key drivers of climate change coverage are analysed. In addition, the function of the media in covering climate change and the challenges experienced are also explored. To allow a clear understanding of the frames, frames used in previous research are presented before a presentation of how visuals are used in climate change communication is done. The role of information sources and their impact on the kind of frames to be used is analysed before the general trends of how climate change is covered by the media is examined. The final section in this chapter explores the theories that have been employed in this study and explained how they have been used to explain the various concepts in the study.

2.2 Situating the Study within the Field

Research work in the sphere of Environmental communication can be tracked back to the 1970s (Hansen & Cox, 2015). The discussions on issues surrounding climate change emerged in the 1970s when various nations realised that the issues of climate change

were universal in nature (Larsso, 2004). Later in 1988 after the climate change issue was politicized, the World Meteorological Organization (WMO) and the United Nations Environmental Programme (UNEP) formed the Inter-governmental Panel on Climate Change (IPCC). “The duty of the IPCC is to evaluate scientific information linked to varied constituents of climate change and the information required to assess the environmental and socio-economic implications of climate change (Skodvin, 2000, p. 98)”. The formation of IPCC later gave birth to the environmental communication as a field of research, as scholars began to look into strategies for dealing with climate change issues.

This research is confined within the sphere of study known as environmental communication. This field of study focuses on how individuals apply communication to manage the environment. It examines how individuals, groups, and organizations convey information about environmental issues to influence our understanding of the environment and our actions towards it (Comfort & Park, 2018). Environmental communication is a planned (Nitsch, 2000; Organization for Economic Co-operation and Development [OECD], 1999) and strategic (OECD, 1999) activity that applies communication viewpoints, tenets, tactics and methodologies (Flor, 2004) to support environmental management and sustainability (Flor, 2004; OECD, 1999; Nitsch, 2000). In other words, environmental communication focuses on the planned exchange of information or knowledge as a way of sustaining the environment. Sharing of this information or knowledge should be done using various instruments and techniques to ensure it reaches the target audience and achieves the desired goal, that of environmental sustainability (OECD, 1999). Various scholars (Flor, 2004; OECD, 1999; Nitsch, 2000) point to the adaptation of communication strategies in managing the environment as the main focus of environmental communication.

In order to comprehend environmental communication, Cox (2006) introduces another element. He looks at this field of study as the mediating factor to the understanding of environmental matters. According to Cox,

> environmental communication is the pragmatic and constitutive vehicle for our understanding of the environment as well as our relationships to the natural world; it is the symbolic medium that we use in constructing environmental problems and in negotiating society's different responses to them (p. 19).

The definition of environmental communication given by Cox points to two main aspects: First, environmental communication is pragmatic. It prevails upon, instructs, notifies, and assists us to solve environmental challenges. It is the means used in problem solving and is often part of public education campaigns. Second, environmental communication is constitutive. This means that it helps us to build representations of environmental problems as subjects for public understanding. Through this role, it shapes the perceptions we have in relation to matters environment.

The principal goal of studying environmental communication, according to Jarreau, Altinay and Reynolds (2017), is to inform, communicate scientific reality and concurrence, portray science precisely and raise awareness among the general public. A well-crafted environmental communication message should, therefore, seek to call the people's attention to, implore them to act, or lobby some policy change on matters that aim to preserve the environment and, in turn, society. It is through environmental communication that awareness on environmental matters is raised. This can then stir citizens into taking the necessary action and making informed choices on matters that affect their livelihoods and are related to the environment.

Environmental communication can include engaging in conservation programmes or having a conversation to push policy makers to legislate favourable strategies for environmental protection. This is well echoed by Cox who asserts that "Environmental

communication describes the numerous methods and the assemblies in which citizens, firms, public officials, journalists, and environmental groups raise concerns and endeavour to influence the significant resolutions that affect our planet" (Cox, 2006, p. 11). Cox further asserts that environmental communication makes inquiries into the dynamics of human communication – speech, art, symbols, street performances, media, and campaigns – that shape our understandings of nature and environmental challenges (Cox, 2006, p. 29). Environmental communication is required to confront environmental problems, as communication is an important part of transforming society towards sustainable development. According to Pavelle and Wilkinson (2020), encouraging public engagement and pro-environmental action requires awareness of conservation issues, as well as opportunities for constructive collaboration between science and society.

Environmental issues are varied in coverage and even in nature. They include issues that touch on climate change, energy supply, pollution, depletion of the ozone layer, jungle conservation, population increase, exhaustion of natural resources, animal rights, species annihilation, universal climate change, hazardous waste, environmental protection and environmental justice and morality, human sustenance and viewpoints in respect to other entities on the planet (Dryzek 2005). The diversity of these issues point to the need to just pick an issue that can be studied extensively with the limited time available. Climate change was selected as an area of interest in this study. The selection of this issue was informed by the fact that when one studies climate change it encompasses a number of other issues on the environment. Hansen (1991) considers climate change an "umbrella" term for any other issue related to the environment. Since the late 1970s, the concept of Climate change has been a pivotal area of scientific

research (Doyle, 2007). The focus of this study was therefore climate change as an issue which falls under environmental communication.

Cox has grouped the handling of environmental issues into key areas, including: environmental discourse and the social-symbolic "configuration" of nature; citizen engagement in nature-based decision-making; environmental cooperation and dispute resolution; media and environmental journalism; depictions of nature in corporate advertising and popular culture; public awareness campaigns and message construction, and finally, science and risk communication (Cox, 2009). In addressing the climate change issue, the study selected the media and environmental journalism sub-field. By so doing it enabled me to focus on one area of research and allowed for an extensive study and a clear grasp of issues. Cox and Pezzullo (2016) argue that this sub-field:

> centres on ways in which news, advertising and commercial programs paint a picture of nature and the challenges of the environment in addition to the impacts of various media on public viewpoints. Subjects include the agenda-setting role of news media, that is, its potentiality to influence which matters audiences ponder about; journalist values of impartiality and harmony in reporting; and media structuring or the way that the depiction of news influences readers' or viewers' sense-making and elicits specific insights and values (p. 16).

The selection of this sub-field enabled this study to comprehensively analyse how the Kenyan print media communicates climate change messages, and how it influences the different perspectives and agenda on environmental communication in Kenya. This study thus sought to emphasize the contemporary place of media in setting the agenda on climate change in Kenya. This was achieved by analysing the framing of climate change in selected newspapers in Kenya. The next section tackles the concept of framing. This study centres on how climate change issues are framed hence comprehending the concept of framing is important.

2.3 Concept of Framing

Unprocessed data on matters such as climate change and the environment can be incoherent and senseless to sections of media audience. To ameliorate audience understanding of such information, the media may sift and reorganize both the information and the experiences that produced it. This process of trying to make meaning from information is usually done consciously or unconsciously. The media engages in a filtering and restructuring process in their daily media production. This process is what entails framing; it is a process of creating meanings and narratives from a given content or information. The media is faced with the challenge of limited space and time to publish all the events that require for its attention. This thus calls for selection and organization of limited content and information.

For the media, framing is more organized and structured. According Entman (1993) the process of framing involves:

> Choosing or highlighting particular matters, sources or perspectives while excluding or underplaying others; accentuating specific quotes at the expense of others; crafting narratives premised on a selection of certain actors, causes, repercussions and elucidations. Giving one or a variety of pictures and deciding how to include them into the news article (p. 52).

Framing is both a theory and methodology concerned with social construction of realities. Tuchman (1978) and Gamson and Modigliani (1989) are deemed the initiators of framing in the context of communication and media studies. It was sociologist, Goffman (1974), utilizing the perspectives of anthropologist, Bateson (1972), who established the foundations for frames and framing. In the subsequent decenniums nevertheless, ‘framing’ was settled upon by a great number of other specialities, such as cognitive psychology. Since then, framing has grown into an exceptionally well liked frequently employed notion and strategy in mass media (Weaver, 2007). Reese (2007) values framing as a ‘connecting model’ that keeps alerting us to different opinions,

standpoints and theories (from different disciplines) that hinders us from growing too rigid or imprudent when hypothesizing and operationalizing.

Presenting messages in the print media entails a conscious process of selection of language and words to ensure specific messages or meanings are conveyed to the public. This choice of words represents the structures that the media uses to paint or project certain images. These structures are generally referred to as frames. Frames include semantic functions, connections between functions, and connections to other frames (Lakoff, 2010, p. 71). Gitlin (1980) defines frames as "insistent patterns of perception, elucidation and exhibition of selection, focus and exclusion by which symbol handlers frequently organize conversation." de Vreese (2005) argues that by highlighting some elements of a topic above others, a frame provides a way to understand an occurrence or matter. According to Entman (1993), "to frame a communicating text or message is to promote indisputable facts of a 'viewpoint' and make them more prominent in such a way that [it] validates a particular challenge definition, causal explanation, moral appraisal, and/or a treatment suggestion" (p. 51). Di Nocera, Couyoumdjian and Ferlazzo (2006), on the other hand, argue that frames are the coordinate systems that people use to reconcile data from their recollection and data from the surrounding, for example, to connect with objects. Reese (2010) defines frames as "overriding principles that are collectively shared and persistent over time, that work symbolically to intelligibly present the public sphere". Therefore, framing is a way of presenting a matter. It is also a way of simplifying the complexity of issues leading to predetermined understanding or interpretation.

The manner in which the media portrays or frames various aspects of climate change affects the understanding and viewpoints of the citizens. According to Hilgartner and

Bosk (1988, p. 53), societal issues cannot be seen as objective and distinguishable societal conditions with inherently damaging consequences; instead, a social problem exists primarily with regard to how it is defined and envisaged in society. Druckman (2011) also avers that, beyond the drafting of agenda, journalists can also structure narratives in specific ways to impact the audience's comprehension of the subject matter being covered. This is exemplified by Hardisty, Johnson and Weber (2010) who found that 65% of Republicans were ready to pay a carbon dioxide emission reduction fee on airline tickets when the fee was labelled a carbon offset, but that this percentage declined to 27% when the fee was labelled a carbon tax. This example by Hardisty et al. underscores the effect of framing on the resolutions made by people. It is not only the amount of information but also how this information is framed that is important.

Frames can be conveyed by diverse portrayals, such as how a problem is formulated, who is anticipated to make a declaration about it, which questions seem pertinent and what variety of answers may be suitable. A frame is regarded as a perspective of scrutinising a matter that may include varied sets of propositions. It also includes not just a chain of debates that share a common view of the challenge, but also a set of symbols, analogies, catch phrases and visual depictions that can be easily recognised as being constitutive of that frame. Media framing is seen in the amount of time and space that the media devotes to an issue making an audience receptive and alert to distinct themes.

The media generally uses frames as methods of structuring central ideas mostly contentious ones so as to reverberate with essential principles and presuppositions held by the public. Either tacitly or comprehensively, frames tend to restrictively give advantage to certain elements, or policy responses, of a complicated matter. They may

be examined as the individual frames of reference that people make use of to comprehend the world, which may also be jointly held, or with regard to how frames are established and organised in the global community that is encountered by individuals (Hulmes, 2007, p. 3).

Chong and Druckman (2007) assert that the term frame refers to the organizing principles by which people develop a specific conception of an issue or reorient their reasoning about a matter. Frames are, therefore, used by way of organizing devices that permit journalists to choose and highlight topics, to decide 'what matters' (Gitlin, 1980). Gamson and Modigliani (1989) consider frames as being entrenched within 'media packages' that can be seen as 'giving meaning' to an issue. Carragee and Roefs (2004), on the other hand, assert that media frames do not develop in a political void, but are influenced by rival stakeholders or claimants such as politicians, organizations and social movements. "Framing in communication describes how the coverage of news in the media can shape public opinion by using these particular structures to help direct their reader to comprehension." (Cissel, 2012, p. 67). These frames help individuals to understand and respond to events.

The frames constructed are communicated through language and visual imagery (Lakoff, 2010). Visual framing refers to "the choosing of one outlook, scene or perspective when portraying the image, clipping, polishing or selecting it" (Coleman, 2010, p. 237). This is in agreement with Rebich-Hespanha et al.'s (2015) assertion that visual framing makes reference "to the manner in which visual depictions such as photos (…) assist in directing attention to specific elements or constituents of a matter." p. 493). The visual element has an impact on the overall reception of messages. Dahmen's (2012) study found out that photographic framing did have an important

influence on the viewpoints of respondents with regard to what should be undertaken in terms of foreign policy. This is in agreement with Nurmis' (2017) assertion that whatever subsidiary information or framing is carried into a news story by the photograph, it matters in the way the story is read and understood.

According to the framing theory, the exact same message presented in different ways can impact audiences' choices and evaluations. This theory asserts that news contains not only plain facts but also value frames that help us understand these facts. Reporters "influence how issues are structured, disputes are settled, and citizens assess the legislative process" (West, 2001, p. 125). By entrenching frames in their news items, the mass media dictates which matters should be in the public limelight and which one's should be on peoples' minds and for what period of time. In the words of de Vreese (2005):

> The *repercussions* of framing can be envisaged on the personal and communal levels. A personal level repercussion may be altered mindsets about a matter on the basis of exposure to particular structures. On the communal level, frames may contribute to shaping social level processes such as political fraternization, decision-making, and combined efforts (p. 52).

Chong and Druckman (2007) have shown that differences in the strength of frames, the frequency of exposure, the existence of opposing frames, and source authenticity mediate framing effects.

> If a person is subjected to one frame more regularly than another opposing frame (of equal strength), the frame with a 'competitive edge' is destined to have a considerable influence on a person's mindset. And frames (of equal levels of exposure) ascribed to sources with advanced levels of perceived authenticity are more probable to be compelling than those from unreliable sources (Hayes, n.d, p. 4).

This means that source credibility mediates the effectiveness of framing attempts (Chong & Druckman, 2007). One can never avoid framing; only that the frames may vary in the brains of the public. Consequently, it can be noted that media frames

comprise a “cognitive window” (Pan & Kosicki, 1993, p. 59) by means of which the issue of climate attains meaning. According to Lakoff (2010), “What truly occurs is that the facts must be logical with regard to their system of frames, or they will be ignored. The facts, to be relayed, must be systematically arranged” (p. 73). Chong and Druckman (2007) argue that citizens’ mindsets can be profoundly impacted in accordance to how elites carefully structure and present their messages in the mass media. The effect of news coverage is dependent on the content of the frames installed by political players that are carried in the news, and the authenticity of the source of the frame (Chong & Druckman, 2007).

Framing has made social movements such as civil rights, feminism and various workers unions effective. How these movements frame their issues has stirred up the attention of the citizens leading to the mobilization of large number of people to join the movements. Fruitful social movements need the comprehensibility furnished by coherent framing (Lakoff, 2010, p. 80). The same is true of environmentalism as a movement dealing with climate change. The way climate change information is framed affects its reception by the audiences. However, it goes beyond determining the number of occurrences of words, phrases and perspectives to incorporate prominence, tone, worldviews, tenor and alterative benchmarks that jointly yield a more subtle set of outcomes than simply evaluating the widespread presence of doubting voices. In their study, for example, Chong and Druckman (2007) found that framing effects depend more on the strength of the frame rather than the frequency. The frames have an effect on the constructions that people have of climate information and affects its reception in the long run. By harnessing into the mass media’s established proficiency to tell narratives skilfully and expeditiously, social movements, including environmental

organizations, can proceed to utilize the mass media as a channel to disseminate their information and promote public engagement.

This section has highlighted the concept of framing and its importance in communication. It has pointed to the media's role in framing and how key it is in the understanding of concepts. The manner in which the media portrays or frames various aspects of climate change affects the understanding, engagement and perception of the citizens. This thus inspired the dimension taken by this study in focusing on framing to understand the climate change communication in Kenya. In the next section I discuss the significance of media as a source of information. It is a powerful device that can be used to disseminate climate change information.

2.4 The Media as a Source of Information

The media can help pass a message about a given situation and its potential solutions across to a diverse audience. As a source of environmental information, it can disseminate the information to policy makers, environmental activists as well as the general citizens. Government officials, who are mainly policy makers, read, watch and listen to the media (Tearfund, 2011) and thus it can be used to highlight the problem across to them. Governments are responsible for creating policies that can help the citizens respond to climate change. On the contrary, the media also reaches the ordinary people who are affected by the situation and who may want to get involved in dealing with it (Tearfund, 2011). Communities, individual citizens and activist organizations can play an effective role in helping government make good decisions on climate change. This can be done through activism or exerting pressure for the government to take action. The media "… plays a pivotal role in structuring our identities as citizens, enabling the discourses and reflections in the midst of citizens and their representatives

so essential to fruitful self-rule" (Wahl-Jorgensen & Hanitzsch, 2009, p.3). Lester (2010) asserts that the media plays a primary role in structuring how we reason about the surrounding. News media voices main concerns about matters and happenings moreover, it acts as a channel through which other subsidiary voices can affect public viewpoints. As Wahl-Jorgensen and Hanitzsch (2009) put, narratives in the news encapsulate the evolving drama of the conflicts between the prevailing ideology and its contenders. Mass communication methods may be effective to disseminate scientific findings, with the aim to elicit environmental action (Leighton & Serieys, 2025, p.88). We can therefore say that the media is a powerful tool for informing and driving policy as well as advocating for action.

The influence of mass media is unparalleled specifically because it not only attracts but it also has a wide coverage thus reaching people from all walks of life (Ferguson, 2000). It extends to a multitude from all demographic segmentations. It also has the potential to change the viewpoints of the public consequently giving direction to political action. Studies have shown that many individuals rely on the media for news about climate change (Newman, 2020). For environmental organization to be effectual in advancing the environmental movement, it must also appeal to and keep hold of a broad base of support they require to be functional agents and powerful actors of progress on behalf of the environmental movement.

The media as a source of information reaches and influences its audience by the content that it presents. Media content is the totality of all the material available in a given media. Shoemaker and Reese (1996) assert that "By talking about the *subject*, we imply comprehensive numerical and linguistic repertoire as well as pictorial information

dispensed by the mass media—put differently, practically anything that appears there (p.4)."

Media content thus reflect the conception of reality by a given media at a specific time in a specific context. By studying content, we are able to understand the variables at play among the media producers and the media houses. An analysis of content will help assess how information has been framed and even suggest the reasons why it has been framed so. This is in agreement with Shoemaker's and Reese's (1996, p.24) assertion that learning the subject matter assists us to deduce issues about occurrences that are less apparent and noticeable: the individuals and institutions that generate the content. For instance, by studying content on issues of the Hague cases in Kenya, we can easily tell the political alignment of the media producers and/or the media house. Thus, for example, by comparing the way the *Daily Nation* and *The People* Newspapers cover this issue, we can easily deduce the political leaning of the media.

Analysing content also enables us to deduce the impact the material will have on its audience (Shoemaker & Reese, 1996). For instance, if the material incites the audiences against each other, there is a high chance that the consumers are likely to engage in violence. "If we work on the assumption that the media gives most of the actuality" that people know without their lived experiences, then learning media content actually assists us evaluate what actuality it is that they consume" (ibid. p. 25).

Analysing content allows us to understand the newsworthiness of a specific article/news item. Events of exceedingly great inherent significance will get extensive coverage, conceivably on the lead page of a newspaper or at the initial stages of a television newscast; happenings of only average newsworthiness will still be covered, but merely on the interior pages of the newspaper or in the centre of the newscast; and happenings

that are insignificant may not be covered by the mass media at all (Shoemaker& Reese, 1996, pp.5-6). This is the gate keeping role of the mass media. This role of the media is complex and necessitates an outcome about the duration of time/space assigned to a news event, where in a publication or news program the narrative is located, the use of visual presentations, and narrative count about the happening in a day or over time, and whether the narrative repeats itself in a recurring manner (Donohue, Tichenor & Olien, 1972).

From the discussion in this section, it is evident that the media acts as an outlet of communicating matters and happenings in our surroundings. In addition, it is a channel used by other lobbying forces that intend to affect viewpoints of the ordinary citizens. It plays a significant role in circulation of information to the ordinary citizens, government officials or even activist organizations. This power to reach so many people makes it an influential platform that can be earnest for efficient climate change communication. An analysis of media content and the evident trends (a focus of this thesis) can therefore paint a picture of the kind of climate change information disseminated by the media and even enable us to deduce the impact it may have on the audience. It is critical to comprehend the main drivers that trigger the coverage of climate change issues in the media. The next section will explore this to unravel the main drivers of climate change.

2.5 Main Drivers of Climate Change Coverage

In studying climate change as an environmental communication issue, it is pivotal to comprehend the main drivers of the news coverage. Therefore, this section sheds light on the trigger events or trigger issues that invite media coverage of climate change. It is premised on the assumption that by examining the background of a media article and the climate change events covered, one can interpret the “operators of media attention

for climate change", as referred to by Schäfer, Ivanova and Schmidt (2013). Schäfer and Schlichting, (2014) discovered that global summits on global heating are principal movers of news coverage of global warming. In their study, Schäfer et al. (2013) found that the influential forces of news coverage on climate change were international climate summits and the agenda-setting efforts from international non-governmental organizations. They additionally come to a conclusion that weather and climate features are not significant drivers for issue attention.

Some scholars have examined how environmental issues are articulated in media publications. For instance, Gkiouzepas and Botetzagias (2017) analysed the coverage of climate change in the Greek national press. The aim of the study was to identify how much the Greek media's climate change reporting is manifesting the expected features of a "segmented diversity" media-system. Their findings indicated that the coverage predominantly focused on climate change related policy issues. Their findings are contrary to those of a study carried out between the years 2007-2009 in which 409 news articles were selected from five Canadian newspapers to give an evaluation of media coverage of the Canadian bituminous sands (Tran, 2014). The goal of the study was to give a refined conceptual framework for the analysis of environmental news coverage. Tran found that information was predominantly on financial aspects of bitumen, and marginally, on ecological, political, scientific and extra facets. Billet (2010) also claims that the way in which India structures media information on climate change is founded on equitable systems based on the aftermath of colonial rule.

Anderson, Allan, Petersen and Wilkinson (2005), in their study, found that most coverage of environmental events covered issues using the political and economic frame. The choice of these two frames can be ascribed to the fact that both economic

and political considerations mainly influence journalists' perception of the significance of a news item (Leung & Lee, 2015) or the fact that political and economic debates are more prominent than scientific evidence debates in most countries (Schäfer, Ivanova & Schmidt, 2013).

From the reviewed literature, many of the researches carried out on the triggers of climate change were done in developed countries. Although these studies provided insight to the current research on the print media's framing of the Kenyan climate change matters, they point to a gap in literature in studies that are from developing countries. This study therefore attempted to address this gap by exploring the triggers in climate change stories in the print media of Kenya.

2.6 Media Coverage of Climate Change Issues

As a method of imparting significance and reason, language affects human understanding, shaping insights, inspirations and deeds. Consequently, human ideologies and conduct about nature and the state of the environment are arbitrated or impacted by communication. This means that the subject matter and the diction used in communication affect how information is grasped.

The main role that the media plays is the dissemination of information which is evidenced by its capability to package and offer for sale goods and perceptions. As it transmits information, mass media notifies, enlightens and captives its audiences. Moreover, it arouses curiosity for information on particular problems and concurrently distracts from some issues. Accordingly, the media mightily affects the matters to be emphasised and those to be ignored by the public. Heightened media attention is one way to inspire the universality of a specified plan or topic. In its role of setting the agenda, the media shapes public perceptions and beliefs by way of choosing the items to

be covered and structuring of matters (McCombs & Shaw, 1972). McCombs (2004) additionally contends that by selecting the narratives to publish daily, the media can set the agenda with regard to matters the ordinary citizens should discern as paramount.

A significant source of information for the general citizens on issues related to change in climate is the mass media. The media influences public viewpoints and comprehension of matters on climate change in addition to government initiatives (Dirikx & Gelders, 2008; Doulton & Brown 2009). An argument propagated by Fernández-Reyes, Piñuel-Raigada and Águila-Coghlan (2017) is that knowledge of media coverage of climate change and global heating is crucial to policy establishment. As a critical area for the fabrication, refabrication and transformation of meanings, the news media affects collective understanding and policy administration on issues of climate change (Carvalho, 2010). Because the populace (of which policy agents are involved) acquires much of its knowledge about science from the mass-media, critically evaluating the media's representation of climate change – and analysing the manner and reason why information on climate change is translated into news – is vitally important" (Boykoff & Boykoff, 2007, p. 3).

In 2013 and 2014, the media in Kenya covered a story on the ruins caused by flooding in Lake Baringo as most investments had been submerged under water (Citizen News, 2014; Aviation, Tourism and Conservation News, 2013). The landslides in Keiyo and Marakwet (Bartoo, 2011; Ndanyi, 2011) as well as the floods in Budalangi (Ochieng, 2011) have also repeatedly received Kenyan media coverage over the years. These highlights from the media help to bring the issues of climate change into the public's consciousness. These stories triggered some dialogue among politicians in relation to the effects of climate change.

Internationally, climate change has attracted a lot of attention due to the disasters highlighted by the media, such as Hurricane Katrina, the Haiti floods, and the Bangladesh oil spill (AFP, 2014). As such, media coverage continues to capture the attention of the world to matters of climate change. For this reason, the media remains a powerful institution in reflecting and establishing public awareness on issues of climate change. Quigley (2008) posits that the enterprise of the outlets of mass media, typically relies on their capability to make a huge, varied audience care about the matters being covered, to keep such audience listening, subscribing and making payments to get their perspective on the most recent information and the most urgent news. The mass media is hence a device that environmental organizations can employ to capture and keep the huge support base of viable agents and potent actors of positive environmental transformation (Quigley, 2008).

Mass media embraces a wide array of media types encompassing television, film, books, brochures, newspapers, magazines, radio and the internet. Among the studies conducted on the function of media on environmental communication, some have focused on print media (Anderson et al., 2005; Antilla, 2008; Antilla, 2005; Carvalho, 2005; Cook, Robbins & Peiri, 2006; Dearing, 1995; Entman & Rojecki, 1993; Gamson & Modigliani, 1989; Kepplinger, 1995; Koomey et al., 2002; Liu, Vedlitz & Alston, 2008; Nisbet & Huge, 2006; Stephens, 2005; Szasz, 1995; Trumbo, 1996; Ungar, 2008; Ungar, 2000), others on the television (Boykoff, 2008; Boykoff & Boykoff, 2007; Cottle, 2000; Smith, 2005), and a few on the radio (Harbinson, Mugara & Chawla, 2006). For the studies that have focused on the print media, most of these studies have been conducted in developed countries. Africa and similar regions have tended to have fewer studies on the function of the media in communicating issues on climate change. This therefore warranted a study on one of the developing countries (Kenya was

selected) to bridge this gap. In the next section I discuss some of the challenges faced when covering climate change issues.

2.7 Difficulties encountered in the coverage of climate change issues

Tairo (n.d) notes that many journalists and other media practitioners are oblivious of the consequences of climate change. Some people cannot distinguish between climate change and climate deterioration. He additionally asserts that poor collaboration between African governments and the media is the cause of failed campaigns on climate change conducted by the media. Other points emphasised include; limited or no donation to facilitate campaigns for environmental protection in Africa; scarce resources in the media houses-lack of resources including equipment and insufficient funds to cater for the costs of travelling.

Moggi and Tessier (2001, p.19) bring to the core some contemporary problems the media in Kenya face which include: numerous roadblocks which bar journalists from obtaining public information from any type of institution be it hospitals, courts, the public administration among many others; the function of the local media is unclear or unapproved in Kenya; the partnership between journalists and "specialists" needs to be advanced as a crucial fora grounded and able to provide in depth information for the populace; the media professionals need to enhance their skills in emerging technologies; and the standing and rank of the journalists.

Obonyo (n.d) conducted a study that found out that even though articles on the impacts of climate change in the Kenyan society are written in Kenyan newspapers, they are scarcely any informative ones giving prominence on climate change. He asserts that Kenyan journalism emphasizes local ideas that are usually repeated with a regional view that falls short of framing narratives against a broader context of climate change or their

lasting consequences. In some situations, reporters provide information that is irrelevant or falsify facts in their reporting. Bell (1994), noted that of narratives on climate change that were reported in New Zealand, 80% of them were marginally inaccurate; one out of the six narratives was substantially distorted. Carvalho (2007) on the contrary, contends that the way in which the media covers matters on climate issues has evolved over time to integrate political issues into its analysis. Politicization of climate change debates hinders its reporting resulting in distortion and falsification.

Aghan (2011) opines that science narratives have to battle for space and contend for airtime in opposition to others from the field of business, art, music, sports, politics, education, disputes, unlawful acts and misfortunes. To guarantee that a story goes on air, one has to be inventive and imaginative. This makes it difficult to cover environmental narratives which are likely to be objective hence occasionally lacking in excitement. In contrast, some reporters don't put the stories in their appropriate places. Giving reports on happenings or news advanced by different political leaders unquestionably affect their worth or consistencies in line with environmental policies affect its value. Therefore, using unbiased news obscures the journalist's vision of detecting apparent paradoxes.

In some situations, the mass media has been accused of being associates in promoting climate change denialism. Ukonu, Akpan, and Anorue (2012) posit that most media enterprises globally have adopted regular sequences of giving accounts on climate change particularly in a manner geared towards safeguarding the interests of their administrations, nations and even firms that are carbon-based. In addition, Ukonu, Akpan, and Anorue, (2012) opine that the principal objectives of most media have been: to individually perceive visual representations of climate change to depict in the

media to shape public perceptions/knowledge along with government regulations on climate change; to make certain that they safeguard their nation ‘s wellbeing in the worldwide dialogues on climate change in spheres such as the strategies of combating climate change, financial support, reduction of emissions vs. fiscal considerations, adapting to climate variability; and presentations to make during climate change discussions/workshops. Sometimes, the media structures change in climate as unpredictable, complicated, challenging to tackle and needing resolutions that will gravely affect world economy (Ukonu, Akpan, & Anorue, 2012, p.7). This framing influences the perspectives of the ordinary citizens on matters of climate change.

This section has demonstrated the varying challenges faced in the reporting of climate change. The next section explores some of the previous frames that have been identified and used in the literature reviewed.

2.8 Frames Used in Previous Research

The establishment of a shared framework in research allows for a clear understanding of the issues while at the same time enabling comparison across studies in the field. For a researcher, this can then guide the prediction of how items are presented in the mass media. A clear comprehension of the notion of structures can help to widen or restrict the view of the framing process.

Studies have shown that the media uses frames to promote certain agenda and prime concerns by putting discursive pressure on nations and stakeholders viewed as blocking human advancement (Christensen & Wormbs, 2017, p. 2). de Boer et al. (2010), in their research, discuss numerous pivotal aspects of frames and their role in decision-making in the area of climate change. Their findings indicate that frames can be used to add fresh viewpoints to a deliberation process and check if the players in that proceeding

can understand one another. None of these previous studies analysed agree on the frames to be used in climate change. However, in this section, an attempt is made to identify some of the frames discussed and recommended by various scholars. The identified frames were also adopted in data analysis in this research. In so doing, the present study also helped to make contributions to building on the empirical conceptualisation of framing in the discipline of environmental communication.

Some of the frames discussed in previous research include disaster/implicit risk (Painter, 2013), economic frame (Nisbet, 2010; Boykoff, 2008; Anderson, Allan, Petersen & Wilkinson, 2005; Nisbet, 2009; Nisbet & Scheufele, 2009; Ford, 2010; Tran, 2014; Hulmes, 2009), uncertainty (Nisbet, 2010; Painter, 2013; Thaker et al., 2017), political/public accountability (de Vreese, 2005; Nisbet, 2009; Nisbet & Scheufele, 2009; Nielsen & Kjaergaard, 2011), opportunity (Painter, 2013), consequence (de Vreese, 2005), explicit risk (Painter, 2013), environment/ecology frame (Hedding, 2017; Boykoff, 2008; Lakoff, 2010; Nisbet 2010), nationalistic frame/civic society/community/government administration (Hedding, 2017; Thaker et al., 2017; Boykoff, 2008; Nisbet, 2010), apocalypse/alarmist/pandoras box frame (Nisbet, 2009; Painter, 2013), controversy frame/conflict (Hedding, 2017; de Vreese, 2005; Nisbet, 2010; Thaker et al., 2017), health and safety/security (Nisbet, 2010; Nisbet & Scheufele, 2009), science and technology/progress frame (Boykoff, 2008; Nielsen & Kjaergaard, 2011; Nisbet &Lewenstein, 2002), morality/ethics frame (de Vreese, 2005; Sen, 1999), culture frame (Boykoff, 2008), policy making frame (Boykoff, 2008; Nisbet, 2010; Gkiouzepas &Botetzagias, 2017), equity frame (Billet, 2010) and human interest frame (de Vreese, 2005). Table 2.1 gives a summary of some of the frames examined in previous literature.

Table 2.1 A Selection of Textual Frames used in Previous Research to Analyze Climate Change Messages

Author	Frames employed
Thaker et al. (2017)	a) Scientific uncertainty b) Nationalistic frame c) Controversy
Boykoff (2008)	a) Ecology b) Policy making c) Economic/energy interest d) Science and technology e) Civic society f) Culture
Nisbet (2010)	a) Environmental and public health effects/benefits b) Economic development/loss c) Balance for the community d) Government administration e) Technical/policy frame f) Technical/policy uncertainty
Painter (2013)	a) Disaster/implicit risk frame b) Uncertainty frame c) Opportunity frame d) Explicit risk frame
de Vreese (2005)	a) Conflict frame b) Human interest frame c) Responsibility frame d) Consequence frame e) Morality frame
Entman (1991)	a) Conflict b) Human interest c) Consequence d) Morality e) Responsibility
Hulmes (2009)	a) Economic, b) National and global security, c) Morality and social justice
Olausson (2009)	a) Collective action b) Scientific certainty
Shanahan (2007)	a) Scientific uncertainty b) National security c) Polar bears d) Money e) Catastrophe f) Justice and equity
Entman (1993)	**Fundamental constituents of a frame** a) Problem definition b) Causal interpretation c) Moral evaluation d) Treatment recommendations

Source: Researcher, 2025

In doing frame analysis, this study borrowed the idea of Entman (1993) who argues that a frame encompasses four essential components, namely: “problem definition, causal interpretation, moral evaluation, and/or treatment recommendation” (p. 52). In analysing the frames, the current investigation sought to determine if the climate change messages transmitted contained these fundamental components. For a climate change message to be complete, it not only needs to be framed appropriately but it also requires that all the components are presented pointing to the definition of the challenge, establishing causes, the effects, the remedies and its ethical assessment or judgment.

Visual frames are important components in analysis of climate change communication. Boykoff (2011) has argued that in the instances of climate- related visual reporting, frames usually depict fundamental beliefs and underlying values. Rebich-Hespanha et al. (2015) argue that “prominent visual depictions perform the vital task of connecting new information to the audiences”. The framing of climate change imagery can play a major role of emphasising some issues over others- they can easily shape meaning as they create an illusion of reality. Doyle (2007) however warns that continued use of photographs depicting well versed climate change effects advances the danger of fostering hopelessness in viewers as no action can be done to stop what has already taken place.

In the analysis of visual frames, Nurmis (2017) suggests four commonly used frames in environmental images. These include: nature as untamed, unusual, perilous, symbolic of the act of barbarism and catastrophe; nature as a resource to be restrained and manipulated for entertainment or commercial enterprise; nature as spotless, magnificent, exquisite, symbolic of ideal beauty, chastity, authenticity and; nature as endangered, a victim to protect (Nurmis, 2017, p.42). Studies have suggested that most of the images

used in visual framing are mostly generic pictures which do not spur public engagement (Nurmis, 2015; Nurmis 2017).

Metag et al. (2016) provides five broad visual frames which include: impacts and threats; politicians/ newscasters; graphs and models; pure nature landscapes; depictions of energy – either generating carbon pollutions or mitigating through alternative fuels. O'Neill (2013) identified two principal visual components: the disputed structures, which predominantly featured individuals, and the distancing frame, which revealed the effects of change in climate long shots of isolated hinterlands; Lester and Cottle (2009) grouped them as visual representations of the effects which gave prominence the universal ramifications of climate change, and images showing players brainstorming about the underlying causes and contemplating remedies emphasizing a nationalistic dimension; Smith and Joffe (2009) classified them as images of impact and images of people. Smith and Joffe (2009) argued that visual documentation of the after effects and those of victims, particularly those taking place "close to home," broaden the perspective of the climate change risk as pressing and authentic instead of remote in both time and space. The conceptualization of the 'Impact' frame tends to vary amongst the three scholars. Whereas O'Neill's (2013) definition lies on the impact as evident on remote landscapes, Lester and Cottle (2009) depiction of impacts focuses on the global dimension and Smith and Joffe (2009) look at impact as that affecting people in the locality. Wessler et al. (2016) in their study identified four themes grounded on 432 pictorial articles: victims of global heating; civil society stipulations; political bargains; and renewable energy frameworks. Rebich-Hespanha et al.'s (2015) on the other hand unearthed 15 classes of the visual representations of climate change: wild area and nature entertainment; people-powered leaders; typical/endangered individuals; food and agriculture; effects on polar animals and landscapes; future environmentally fragile

landscapes and adaptation; storms; temperature record; worldwide perspectives from space; climatology (and scientists); government, politics and diplomacy; fuel effectiveness; alternative energy, environmental consequences of industry and, finally, observing and measuring.

It is evident from the previous studies discussed that the visual frames used previously overlap. Table 2.2 summarises some of the frames used in previous studies.

Table 2.2 A Selection of Visual Frames used in previous research to analyse climate change

Author	Frames employed
Metag et al. (2016)	a) Impacts and threats; b) Politicians/ talking heads; c) Graphs and models; d) Pure nature landscapes; e) Images of energy – either causing carbon emissions or preventing them by using alternative fuels
Rebich-Hespanha et al. (2015)	a) Wilderness and nature recreation; b) Citizen leaders; c) Regular/vulnerable people; d) Food and agriculture; e) Impacts on polar animals and landscapes; f) Future climate vulnerable landscapes and adaptation; g) Storms; h) Temperature record; view of globe from space; i) Climate science (and scientists); j) Government, politics and negotiation; k) Energy efficiency; l) Alternative energy, industry impact on the environment m) Monitoring and quantifying
Smith and Joffe (2009	a) Images of impact b) Images of people
Lester and Cottle (2009)	a) Global dimension b) National dimension
O'Neill (2013)	a) The contested frame (mostly feature people) b) The distancing frame (Shows climate change impacts in long shots of remote landscapes
Wessler, Wozniak, Hofer,	a) Global warming victims;

and Luck (2016)	b) Civil society demands; c) Political negotiations; and d) Sustainable energy frames
Entman (1993)	**Fundamental components of a frame** a) Problem definition b) Causal interpretation c) Moral evaluation d) Treatment recommendations

Source; Researcher (2025)

Entman's (1993) four frame functions were adopted and modified in the analysis of visual frames. The moral evaluation component was left out in the visual frames as it was not easily evident. Moral evaluations can easily be deciphered from the verbal texts rather than the visual elements.

This section has explores some of the frames used in reviewed literature. In the next section I explore the importance of visual communication and how it has been used in previous literature. Specifically, I explore how visuals linked to communication on climate change have been employed in previous literature.

2.9 Communicating climate change through visuals

This thesis borrows from Schafer and O'Neill (2017) who define visuals as the concrete image content elements of media reports which may incorporate photographs, scientific figures, cartoons, infographics and artistic imagery (p.20). The visual element is something that the reader will easily notice first and therefore to a great extent influences how the presented information will be taken up. Visual representations employed by the media to portray science can aid individuals' comprehension of complicated procedures and formulate significant connections with audiences (Léon & Erviti, 2015, p.183). It is the pathway through which the reader's interest is brought to the forefront in the work. They assist pass across the core of the message without

reading the entire article. If the photograph is captivating, it may oblige the reader to go into the particulars of the information penned down and vice versa. Smith, K. (2005) postulates that readers enter the newspaper page through the image that is predominant. The use of photographs influences the reader's perspective of significance of an article (Wanta, 1988) aids memory (Zelizer, 2004), enhances persuasion (Joffe, 2008), influence the audience's emotions (Joffe, 2008), and stimulate both intellectual and emotional responses (Lester, 2003). Visual images are used to 'catch' the reader's attention and make an article appealing to the reader. "Photographic images are employed as a strategy of popular appeal in any political campaigns with the intention of inspiring voters, particularly in print media such as newspapers, as it is one of the most prominent techniques adopted in implementing their plans and to arouse and maintain the audience's attention" (Padil & Azahari, 2014, p.215).

Visuals are selective windows to the world. They aid in structuring opinions and information that the writer is seeking to disseminate. Schneider and Nocke (2014, p.16) contend that visual representations have the capability to engage and sharpen human perception. Accordingly, the selection of an image to be used can lead to the readers thinking about a specific matter, which may eventually lead to such a matter sticking in the minds of individuals.

Nurmis (2017) has argued that 'visually pleasing', remarkable, impactful visuals are limited in the context of climate change. This may affect their placement in a newspaper. The access to a vivid image could explain the reason of putting an article on the front page that would otherwise not have been considered as particularly newsworthy (Moernaut, 2018). Thus, the absence of powerful pictures may be an

impediment in the placement of climate change stories in the prime pages of a newspaper.

In depicting climate change some of the ‘classical’ climate imagery that has been used include stranded polar bears, smokestacks, melting ice and deforestation (Corner et al, 2015; Nurmis, 2017). Studies have shown that these ‘classical’ images are easily understood by viewers, the level of understanding influences judgment and consequently action. Scholars have however criticised the use of classical images in climate change stories. They argue that familiar, ‘classic’ images do not help to broaden or deepen public commitment with the broader issue of what climate change means in everyday life nor why people should care about it (Corner et al., 2015, p.22; Nurmis, 2017, p.22). In the African context, some of these classical images do not link with the reader’s cognition as they are ‘foreign’ images not existing in their environment. They cannot therefore identify with the images used, as they are ‘far’ fetched.

In the use of photographs, one pays attention on the placement of items in the composition. The items may be placed on the foreground, middle ground, background or on the margins. In terms of placement, the separation may suggest a difference and, potentially, particularization (Verschueren, 2011) while the blending of diverse elements can imply equality, resemblance, and thus, generality (Moernaut, 2018).) Individualization (the narrative of a person with a name and a face) in visual depictions tends to promote identification and depiction of the human side of the subjects (Stibbe, 2015). The reader is thus able to relate to the subject and even stir up emotions in relation to the depiction. Nicholson-Cole (2005) has argued that people react forcefully to images of a single or two people rather than many. Corner et al. (2015) have argued that “An obviously troubled person, in a scene of utter chaos is likely to stir up strong

unpleasant feelings" (p.16) just as the experience of an individual through a calamity. However, it is not enough to use individualization in climate change, one has to take the next step by coupling such images with practical solutions-vivid imagery of messages to guarantee that the audiences'' focus and emotional connection are foresighted. This can also be done by connecting the story of an individual with large scale destructions thus the viewer doesn't trivialize the matter.

Generalizations (summary of statistics) may erase the subjects and distance the reader from context (Stibbe, 2015). The reader is thus not able to relate to the depictions and feels that they are temporally and emotionally distant from them. When the depictions of climate change impacts are larger than life, it may make individuals feel helpless to do anything. The visual power of the consequences of climate may be so immense that the viewers feel helpless to act. It is therefore important to specify concrete actions that the viewer can undertake to deal with climate change (Corner et al., 2015). An exaggerated emphasis on individualization or an excessive use of generalization may hide relevant environmental influences or wider socio-economic, political or cultural layouts (Lester, 2003). In the use of visuals, it therefore becomes important to use the two elements, individualization and generalization, in a balanced way.

The individuals selected as players in the photograph have an influence on the explanation of the photograph. Scholars (Machin & Mayr, 2012; Moernaut, 2018) have suggested that the use of elite actors in photographs can disconnect the problem from our daily lives and make individuals feel that they have nothing to do with the elite group. This can distance the audience and make it 'their' (elites') problem rather than an issue that needs everyone's attention.

The general outlook of the actors depicted in the visuals is also an important element in understanding and making sense of climate visuals. The general appearance such as tattoos, beard, wearing a suit/smartly dressed, or even the general background reflecting what they own such as an office, or a grass thatched house are important in the interpretation of photographs. The general gaze of a participant in the photograph can encourage the reader to imagine the thought of that participant. Machin and Mayr (2012) aver that the 'up' or 'down' look of a participant function as metaphors for positivity or negativity. This is in agreement with Bell's (1994) argument that the facial expressions of a participant are explained as signs for specific features such as dependability, moods or mental state.

The appearance of the actors is also important. Their dressing, their physique, the background they are in as well as their facial appearance. An actors' dress can depict one's financial ability. For example, if one has worn out clothes it depicts the level of poverty; on the other hand, a sharply dressed individual will depict an aura of power and money. The eye gaze is also an important element in visuals. Corner et al. (2015) aver that eye contact capture viewers' attention in any visual. The background is also an important element in photographs. "Photos depicting regional consequences of climate were a compelling way of associating with people. Seeing familiar locations being overwhelmed by flood waters sparked a powerful, unpleasant emotional reaction, and these pictorials produced some of the greatest support for government policies to combat change in climate, and yearning amongst individuals to alter their conduct (Corner et al., 2015, p.32)". According to Moernaut (2018) the setting of a visual image can legitimize some sources such as politicians by portraying them in a setting which suggests their plausibility, commitment or authority to act, such as when they are addressing a crowd. She goes ahead to argue that the same visuals can be used to

delegitimize social environmental groups by being separated from the centre of the political happening; passively standing in common green areas. Corner et al. (2015) aver that politicians ‘taking’ pictures to demonstrate change in climate were widely detested.

The photograph depictions or general outlook can also be used to emphasize some stereotypes. When there is a constant repeated depiction of participants in a given environment or background it may end up generalizing the characterization of particular groups. These depictions of actors as generic types or categories can be used to reinforce or reproduce stereotypes (Lester, 2003).

Studies on visual imagery have given suggestions on the methods of enhancing the persuasive aspect of messages on climate change. Corner, Webster, and Teriete (2015) have advocated for visuals that depict consequences of climate – e.g. floods, and the destruction caused by severe weather- rather than those which focus on ‘causes’ or ‘solutions’. Nurmis (2015) and Corner et al. (2015) have advocated for the use of local images to demonstrate local relevance of the impacts of change in climate.

Corner et al. (2015) have argued that the use of images depicting protests (or protesters) attract widespread cynicism in climate change stories. There are a limited number of photographs of climate change mitigation and adaptation specialists or those who gain from “business as usual in the visual depiction of climate change driven by human activities (Nurmis, 2017; Rebich-Hespanha et al., 2015). A similar sentiment is voiced by O’Neill (2013) who argues that fruitful alleviation or adaptation efforts are scarcely visually shown as compared to visuals pointing to the consequences of climate change. Research (Nurmis, 2017; Myerson & Rydin, 1996; O’Neill & Nicholson-Cole, 2009:) suggests that the heavily employed negative structures which evoke fear, such as visual

representations of environmental degradation, annihilation among others, obstruction of public commitment makes people feel powerless and alienates them from climate change. Thus, they suggest that when a climate change message with a threat is given, it must be accompanied by information on measures that can be taken to mitigate that threat. Images showing the impacts and threats of climate change should then be accompanied by those offering possible alternatives such as "carbon-neutral power installations, researchers exploring sustainable energy, and ecocity infrastructure" Nurmis, 2017, p.49). Studies (O'Neill & Nicholson-Cole, 2009) have shown the existence of dilemma when presenting visual images to fulfil the salience and efficacy criteria. When images are used to provoke an increased apprehension on climate change, they also reduce the perception of competence (ability to act).

In analysing the visuals that were used in the selected articles, this study used Entman's (1993) guide on the foundational constituents of a frame; a) Problem framing b) Causal explanation c) Ethical assessment and d) Treatment recommendations. By using this guide the researcher sought to find out if the visuals used met any of the fundamentals according to Entman. It sought to find out if the visuals used had a direct link to the subject of climate change or if there was no evident link to it. It is good to note that the selected articles were articles on climate change and thus the researcher aimed to determine if the visuals used also communicated the theme of climate change. As the old adage goes "a picture is worth a thousand words", the use of photographs could have a great impact in the communication of climate change message if they are chosen and placed appropriately. They could become the entry or attraction level that will pull the readers into the articles.

In the review of visual imagery used in climate change communication, it has been demonstrated that the impact of visualizing is key in the circulation of information. When effectively utilized, they can create an impact in the minds of the audience and even stimulate involvement with climate change issues. According to Pearce et al. (2019), environmental communication literature on visual forms of media is limited. Furthermore, most of the studies (Nurmis, 2017; O'Neill & Nicholson-Cole, 2009) that have been carried out on visual imagery have been done in developed countries. This prompted the researcher to carry out a study in Kenya, a developing country, to bridge the gap in literature.

2.10 News Sources and Writers and their Impact on Frames

The study of newscasters and their contacts draws its roots from questions about bias, dominance and impact (Berkowitz, 2009, p.102). According to Van Gorp (2010, p.103), framing devices originating from a source that are included in the news give a valuable input in the recreation of a structure. The kinds of frames depicted as well as their impact can therefore be attributed to the source. The reporter makes a deliberate choice in picking the sources from whom to draw their facts. This selection can be biased-done subjectively by the reporter based on their own relationships, feelings, access etc. It can also be because of the authority and in turn the exerted influence displayed by the source.

The place of the source in disseminating information is a very crucial one as their ideologies are being propagated. McQuail (2000) says that the relationship between reporters and sources has been consistently portrayed as a power struggle over popular belief and agreement. Depending on the place of the source in the society, they could be focused on propagating their own ideologies and pushing their own idea. Using them

can therefore be a way of propagating their ideas. In describing this relationship, Berkowitz (2009, p.102) avers that "the journalists take up the protective role of safeguarding the society from corruption, while officials in government and business pursue personal gains above all else.

It is important to note that reporters are not allowed to provide their own opinions in news items. They rely on sources to provide facts which are then reported as news. Herman and Chomsky (1989) argue that expert and officials- as a source- become suppliers of this data, so that reporters are obligated to them for basic materials of news. The reporter is thus limited to just be a conduit through which events are presented to the consumers. They are not creators of the news but rather they are tasked with packaging this news for the consumers. Berkowitz in making this assertion says that, "reporters are forbidden from expressing a thought- even when recounting a happening- so that the understanding is restricted to such things as the size of the crowd, approximates, description of settings, portrayal of people and what those people uttered" (p.103).

An understanding of the source in relation to the article is therefore key in understanding the framing that has been adopted. In most instances, each of the sources has a vested interest in the journalist's report. Berkowitz (2009) says that

> "For authority figures, keeping public opinion in their favour enhances the ability to remain in that position of authority. For elected authority figures, the imperative to favourably influence public belief becomes even stronger: at stake is their ability to remain in office and implement their desired policies. For leaders or organizations and businesses, what news says about them helps maintain social permission to continue their current course of doing business: losing public favour can require a change of course (p.103)."

The understanding of the relationship that is negotiated between the reporter and the source is thus important in understanding how the message is ultimately framed. Both

the journalists and their contacts have a lot at risk. Reporters put their authenticity and plausibility on the line with each news item they write. Likewise, sources habitually endanger the prosperity of their careers. Each of these actors negotiates the relationship wishing to attain their goals and sustain their organizational principles and social standing (Berkowitz, 2009, p.103) ultimately affecting the way the news will be framed. Van Gorp (2010, p.103) avers that a statement or element stemming from an outside source and the prominence the newscaster gives to it in a news narrative are part of the developmental procedure.

The position the source holds in the society can impact the believability of the information presented. Official sources are used as they present the sense of truth. The statements of dependable sources can be taken as fact validating news without requiring to investigate the precision of the "fact" (Berkowitz, 2009). The source, thus used, has a bearing on the overall tone that the news will adopt. As argued by Berkowitz, the aura of factuality is borne by the source which in turn affects the overall perception of the article by the consumers of the information. Cissel (2012) investigated the connection between media structuring and the manner in which both established and non-mainstream media sources depict same news happenings and discovered that portrayal was based on the source.

Takahashi, Huang, Fico and Poulson (2017) examined if using sources that are scientific in nature in conveying information on climate change may have connections to factors such as geographic location, interval of reporting, and composition, in the eminent press as well as regional and community-based media. Their study findings reveal that more non-scientists than scientists are selected as sources despite their geographic setting, interval of reporting, or authorship. Dotson (2009) found out that

despite climate change being a science topic, scientists are not the principal sources used to convey information on matters of climate change; the biggest class of sources used were those from government. This is in contrast with the findings of an earlier study by Albaek et al. (2003) who revealed that in the last few decades the number of specialists cited as sources of news has grown. This study therefore examined the various sources of the environmental communication change message to pinpoint the main sources of information. In the modern society, it is believed that the source of authoritative information, which will generally impact on policy, is from experts.

In a study carried out by Takahashi (2011) in regards to prominent sources; government officials make up 35% of all the frames, international organizations for 26%, and researchers for 23%. Takahashi (2011) thus concluded that the media overwhelmingly depended on government sources, providing little room to opposing voices like environmentalists. Takahashi (2011) and Takahashi et al.'s (2017) finding that most stories were from non-scientific sources put to question the reliability and authority of the message. This study aimed at examining the Kenyan context by analyzing the main sources of the environmental communication articles in the selected print media.

The concept of sources can also be categorized in terms of local and non-local sources. This is in reference to the origin of the sources; are they from the local/national or regional front or are they from the international community. Shanahan (2009) in his studies concluded that there was a dependence on reports from news agencies from the west instead of more regionally appropriate news. He avers that Brazilian newspapers depend heavily on materials from international news agencies and the voices that are given prominence are those of foreign instead of regional scientists.

In meeting their objective of informing the consumers, the reporter's attributes contribute to the power that they and their articles can wield. Berkowitz (2009) asserts that three elements are distinct for the newscaster: exposure such that a reporter with a long duration in the profession gains status over the years; track record for writing narratives of influence and intra-organizational power. Berkowitz' assertion is in consonance with Takahashi et al. (2017) findings which indicated that the greater the volume of narratives journalists report on the topic of climate change, the highly probable their stories make science sources outstanding. Other studies done on the reporter's story production frequency on specific topics have argued that this had an influence on the balance of the story. For instance, Fico and Balog (2003) discovered that reporters who wrote a bigger share of the narratives on disputes were inclined on writing impartially than those who wrote a smaller share of the narratives on the same subject matter.

News writers and news sources are instrumental in the direction that an article will take. The more a writer writes the more experience and thus the more balanced their articles. News sources on the other hand impact how an issue is portrayed. News sources were analysed based on which source appeared first in the article. According to Takahashi et al. (2017) sources quoted early in the story are more prominent and impactful than those quoted later. Most of the previous studies (Takahashi et al., 2017; Fico and Balog, 2003; Takahashi, 2011) on news sources and news writers have been carried out in developed countries. This study aimed to address this gap by carrying out a study in Kenya.

2.11 Tone and climate change communication

To comprehend the concept of tone, this study adopted Ereaut and Segnit (2006) classification of tone in climate change studies. The two classify tone in three main

ways: alarmist, optimistic and pragmatic. The alarmist tone uses language of fear and disaster. Key terms in this category include ‘despair’, ‘hopeless’, ‘overwhelmed’, ‘chaos’ and ‘helpless.’ Ereaut and Sengit aver that this tone “permits no complications or in between – it is utterly intense (p.13).”

The use of the alarmist tone in presenting climate change messages has some disadvantages as stated by Ereau and Segnit (ibid). First, the use of the alarmist tone mostly excludes action by the reader and therefore undermining the possibility of any action and any change ever taking place. It elicits a form of despair as the reader feels overwhelmed by the catastrophe and thus unable to do anything about it. Secondly, it serves to disengage from the matter. When an issue is sensationalized it ends up taking the form of a movie which is devoid from the reality. This then makes the reader not identify with the issue at hand-it is too abstract to relate to. Ereau and Segnit warn that alarmism can become secretly thrilling. Lastly, the use of the alarmist tone could situate climate change as another devastating creation that could be a product of our cultural beliefs. Generally, an unrestrained use of alarmist tone can have a negative impact on climate change communication. Instead of prompting people to action it can curtail action.

The optimistic tone according to Ereaut and Segnit (2006) gives hope to the reader. The two scholars divide the optimistic tone into two main parts. The optimistic one that propagates the philosophy “it will be alright” and the pragmatic optimistic which argues that “it will be alright as long as we do something”. This tone points to the small action that can be carried out by the reader to tackle climate change. There is a ray of hope in this tone. Something can be done to remedy the situation. By using the optimistic tone, the reader is given a ray of hope with no action taken. It tends to portray the fact that

things will be okay with inaction. This will tend to propagate an attitude of inaction from the reader, that climate change will somehow be solved even if they did nothing about it. On the other hand, the pragmatic tone pushes some need for action. It tends to remind the reader that there is some hope if something is done. It therefore promotes the need for some form of actions. It seems to remind the reader that 'we have a responsibility to do something; to take action'.

The importance of the tone adopted when communicating information cannot be downplayed. It is an important aspect which needs to be considered. Most studies (Albaek, Christiansen, and Togeby, 2003; Anderson, 2011; Anderson, 2007) that have explored the dissemination of climate change message have not explored how tone has been used. This study therefore intended to comprehend the tone used in the communication of climate change information in selected Kenyan Print media.

2.12 General trends in media coverage

Quigley (2008) argues that the media tends to tell stories of individual events that are specific such as individual oil spills and not linked to the environment as a whole. This is an unfortunate practice as it clouds the main problem of climate change. Shanahan (2007) criticises this practice of focusing on individual stories for failing to encompass the broader context in which phenomenon is taking place. This means that in solving the challenges caused by change in climate, the whole picture is not in perspective and thus is treated as independent phenomenon. The public consuming the information from the media are also led to view the event as an isolated one and thus cannot understand its impact globally.

In Kenya, it has been shown that Kenyan newspapers cover stories on the impacts of change in climate on the society but barely any featuring academic pieces on climate

change (Obonyo, n.d.). A study by Obonyo (n.d) also posits that most of the stories by the Kenyan newspapers focus on local themes with a local angle and thus end up obscuring the bigger picture of climate change and its detrimental effects. The studies (Shanahan, 2007; Obonyo, n.d) only focused on the analysis of the texts in print media. Depiction of climate change in newspapers can be through the written word/texts or through the visuals. This study sought to bridge this gap and look at the way the visuals were depicting climate change in the chosen newspapers.

Quigley (2008) conducted an examination of print media attention to climate change and found out the following subject matters: 1) specific authors are writing most of the articles, 2) climate change is examined in US-centred ways, 3) articles about climate change are within the boundaries of political considerations, 4) climate change is depicted as a complicated matter, 5) articles bring to the fore varied causes of climate change, 6) articles detail diverse outcomes of climate change, 7) articles about climate change discuss those regularly impacted, often mentioning groups with same attributes (like environmental organizations) interchangeably, 8) articles state the names of politicians regularly, and 9) remedies to climate change are aimed at politicians. Ballantyne's (2018) findings concur with those of Quigley (2008) as she also found out that the responsibility for action in climate change is mainly assigned to politicians.

McComas' and Shanahan's (1999) study of the conception of stories by the media about global heating found that the impacts of global heating became more pronounced in newspaper coverage in the *New York Times* and *Washington Post* during the surge in newspaper coverage. The study also found that the disputes among scientists who investigate global warming became well known during the "servicing" phase of the

news cycle, when breathtaking and captivating narratives of the menace of global heating were unavailable (McComas & Shanahan, 1999).

Another study (Feldman et al., 2011) in the US broadcast media looked at the essence of climate change coverage in 2007 and 2008 of the three mainstream media outlets (Fox News, CNN and MSNBC). It resolved that of the three networks Fox News was concurrently the least likely to be accepting and the most probable to show disregard of climate change. Whereas nearly 60% of Fox News broadcasts were dismissive, only 7% of CNN broadcasts were dismissive and none of the MSNBC broadcasts.

From 1985 through 1994, Craig Trumbo discovered that the quantity of political sources in newspaper stories of global warming were on the rise as scientific sources diminished in quantity (Trumbo, 1996). On the other hand, Piñuel-Raigada and Teso-Alonso (2012) argue that, "the prevailing narrative on climate change in Spanish television news programmes is distinct for its strong focus on visual grandeur about the dispute, whose principal characters are politicians and governments and whose statements refer successively to their own controversial discussions" (p.182). The focus of these studies thus point to political players in the climate change message.

Dotson (2009) found out that newspapers were most likely to report about climate change issues highlighting the problems linked to climate change than to focus on solutions —dynamic or feasible. In a further finding, newspapers focused more heavily on the effects of climate change on people than the scientific consequences and outcomes of climate change alone.

Since time immemorial, climate change has been presented as something that cannot be reversed or changed. It is therefore useless to put any effort to deal with it. This believe

can impact how the citizens interpret the whole climate change message. It can also affect the perception of journalists when it gets to reporting on climate change stories and even affect the frames adopted. “Local climate change news is depicted as a hopeless case, failing both due to the lack of news value and due to the stakes involved when it acquires some news value. The outcome is the structuring of climate change within the top governmental levels and foreign affairs, and reporting it in international news sections” (Oxford Research Encyclopaedia, 2016, p.7). This study, thus, sought to comprehend how the Kenyan media presented the climate change narrative with a view to understanding the trends in how it is depicted.

Story placement is another important trend in climate change stories. The placement of a news article is mainly determined by the editors based on the newsworthiness of the article. The prominence of an article is depicted by its placement in the newspaper as explored by the agenda setting theory. Articles placed on the fore front are deemed to be more prominent than those placed in the middle. Page space is a basic index of coverage (Hulmes, 2007, p.7). This is in agreement with Shoemaker’s and Reese’s assertion that events of tremendously high fundamental interest will get extensive coverage, possibly on a newspaper's first page or at the onset of a television newscast; events of only passable news value will still be given coverage, but only inside the publication or in the middle of the newscast; and non-newsworthy events may not be covered by the mass media at all (Shoemaker& Reese, 1996, pp.5-6).

Apart from the prominence of the article, the placement of an article can also be affected by the type of the article for instance, commentaries, news, international news opinions, or even sports. The type of the article would in most cases determine its placement based on the format adopted by the media house. For instance, news items

would mostly be in the first few pages, opinion pieces/editorials in the mid pages followed by international news section and the sports section appearing on the rear of the newspaper. Hulmes (2007) avers that the placement of articles often reflects the strategic framing (e.g. domestic before global, political before environmental) of every newspaper (p.7).

2.13 Theoretical framework

In this part I will discuss two main theories that guided the analysis of the data. The two theories namely: framing and agenda setting are related. The agenda setting theory focuses on the media effect on what people think about, it focuses on the attention that the media attaches on issues. It explains how the issues and topics presented by the media are prominent and thus accessible. The emphasis media place on issues creates a sense of importance by the readership. This importance is created by the placement of articles on the selected media; meaning those that appear on the first pages are more important that on the latter pages. Also, those that are discussed often are more important. On the other hand, framing puts weight on particular concepts enhancing their applicability for the comprehension of issues or topics. It focused on how issues are discussed and presented affecting how they are then interpreted.

2.13.1 Agenda setting theory

This theory was initiated by journalist Walter Lippmann, who in his book, *Public Opinion,* contended that the news media shape our perceptions of the world (Coleman et al., 2009). However, it was Maxwell McCombs and Donald Shaw who gave the phenomenon described by Lippmann a name- “agenda setting” (McCombs & Shaw, 1972). “Agenda setting is the act of raising particular matters regularly and conspicuously by the mass media resulting in the populace recognizing such matters as

more significant than others. Basically, the more attention a matter gets, the more valuable it is to people" (Coleman, McCombs, Shaw, & Weave, 2009, p.147). McCombs and Shaw (1972) assert that agenda setting refers to the notion that there is a strong link between the focus that mass media gives particular matters (e.g., based on relative placement or amount of coverage) and the significance the general public ascribes to these matters. According to Cissel (2012), studies have revealed that there is a meaningful connection between the length of the news article and its significance. The space available in newspapers to publish articles is limited and therefore, editors adjust the length of an article based on its importance. Articles deemed to be more important are allocated more space compared to those not very important. McCombs and Shaw (ibid.) argue that the "Mass media is able to transmit the prominence of items on their news focus to the civic initiatives." As they put it, "We evaluate as significant what the media assesses as pivotal." According to this theory, Media do not tell us *what* to contemplate, but rather what to ponder *about*. The mass media is successful in deciding what audiences see as notable. Based on their content, media can validate a narrative or downplay either the whole story or specific aspects of it. Generally, the agenda setting theory suggests that a rise in media coverage of an issue leads to an increase of it being at the fore of people's minds. Individuals can readily remember it, are more concerned about it and there is more awareness about it. This means that it can easily form the focus of any discussion that individuals have.

Newspapers, magazines, radio, and television have a confined space and time, so only a portion of the news of the day can be included. It is this mandatory correction process, governed by established journalistic principles, that receives widespread publicity intended for a few issues and other topics as the most important of the day (Coleman et al., 2009, p.148). The agenda-setting role of the news media plays an important part in

drawing attention to the problems that government and public institutions can work to settle. This theory measures and rank-orders the count of narratives focusing on particular topics in the media using thematic analysis (Coleman et al., 2009) a method that was adopted for this study. Agenda setting theory can furnish the field of environmental communication a deeper understanding of the underlying reasons and processes about specific matters while predominantly disregarding some.

The agenda setting theory not only focuses on the issues that the media emphasises and how it affects the public but it also focuses in how the media analyses the issues that have been highlighted. Coleman et al. (2009) argue that:

> The original concept of agenda setting, the idea that the issues emphasized by the media become the issues that the public thinks are important, is now referred to as the "first level" of agenda setting. Whereas first-level agenda setting focuses on the amount of media coverage an issue or other topic receives, the "second-level" of agenda setting looks at how the media discuss those issues or other objects of attention, such as public figures. Here the focus is on the attributes or characteristics that describe issues, people or other topics in the news and the tone of those attributes. The general effect is the same: the attributes and tone that the media use in their descriptions are the attributes and tone foremost in the public mind. The first level of agenda setting is concerned with the influence of the media on which objects are at the center of public attention. The second level focuses on how people understand the things that have captured their attention (pp. 149- 150).

The concept propagated by Coleman and others (2009), first and second level of agenda setting effects, lead to the second main theory that further explains the agenda setting theory: Framing theory.

2.13.2 Framing theory

The framing theory is credited to Erving Goffman (Goffman, 1974). This theory suggests that audience's impression to media occurrences depends on the way media messages are presented. As stated in this theory, similar messages presented in various ways can influence audiences' considerations and assessments. It asserts that news

contains not only everyday factuality but also a value system that assist us make sense of these facts. This is centred on the notion that the manner in which an issue is delineated and explained in news reports can have an influence on how it is comprehended by the audiences. Framing has been defined as "the manner in which occurrences and matters are structured and deciphered, principally by media, media practitioners, and their audiences" (Reese, 2010, p. 7). Entman (1993) argues that frames contain four core constituents "problem framing, causal explanation, ethical assessment, and/or treatment recommendation" (p. 52).

The style in which the information is communicated can influence a person's comprehension and mould public opinion (Boykoff & Rajan, 2007). According to Chapman and Lupton, (1994) a structure is a way of organizing and presenting a matter so that it expresses a particular meaning. It is the focus point on specific matters which aim at portraying the major concern or focus of the issue. Framing directly affects individuals' opinions and attitudes. The media, when writing stories, can decide to structure a matter in different ways like presenting an issue from a morality, economic or conflict perspective (Semetko &Valkenburg, 2000). "The Mass media crafts social reality by portraying aspects of reality in a predictable and ordered way" (McQuail, 1994, p. 331).

Media framing is seen in relation to how the issue is presented in terms of the quantity of time and space that media dedicates to it drawing the attention and interest of the audience to particular themes. In the same manner, public understanding of happenings is affected by their lived context which is deciphered through experience or through media. Gamson and Modigliani (1987) assert that a frame should be perceived as a conceptualizing idea that gives meaning. "To structure is to choose certain elements of

interpretive reality and accentuate them in an informative text, with the intention of advancing a certain problem framing, causal explanation, ethical assessment, and/or treatment recommendation for the item described" (Entman 1993, p. 52). For Edelman (1993), "the choice of frames often is 'fuelled by dogma and intolerance, how people think about an issue is influenced by the reachability of frames". The frames in media messages could trigger a feeling of metal discomfort that prompts a deeper reception of information with respect to the issue and heightened reception leads to setting the issue on the personal agenda.

2.13.4 Integrating the application of the two theories

The tenets of the two theories discussed in this section were used in explaining the research findings. They are all interrelated and their ideas can be borrowed to comprehend the climate change concept. The Framing theory focuses on the weight that is given to specific themes and thus the formation of frames which affect engagement (of the citizens with the content). Framing works at moulding and changing the interpretations and choices of the audience through priming (Entman, 2010, p. 336). In other words, frames raise the importance of certain ideas, promoting engagement that encourage target audiences to think, feel, and decide in a particular way. It can thus be said that framing presents or favours one side over another of a possible dispute.

On the contrary, the agenda setting theory highlights the attention given to issues and thus promoting attention and accessibility to some issues while down playing others. Because of the little space, time and resources, the media has to select a given sequence and a given way of presenting (framing) stories that will create the desired influence. The theory of Agenda-setting gives an in depth understanding of the function of media in promoting awareness on a topic and influencing engagement on the matter through

framing and frequent coverage of the matter (agenda). These theories were complimentary in three facets: In the first face, the agenda-setting theory was relevant in the study and analysis of how the media enlisted the climate matters in their coverage; specifically in understanding the general trends that are evident in the selected media. It guided this study in analysing how the same media gave climate topics condition of antecedence or precedence over others in terms of sequencing and agenda. From the second face, framing theory guided the analysis on how the matters were fitted together by the selected media so as to communicate about climate change. It sought to explore the textual and visual frames evident in the selected media. By carrying out these two facets of analysis it would then help paint a picture of how climate change message is presented in the chosen print-based media in Kenya and thus one can easily predict the kind of impact it can have on the audience.

Within the confines of this study, public comprehension and engagement of information on climate change is dependent on the way the media sets the agenda, frames issues and organises its presentation- sequential preference. It is the media that will define whether climate change is an issue worthy of public, government and international attention based on how they select and present climate change stories.

2.14 Research gaps

The studies analysed depicted various gaps in literature which this study seeks to address. The area of focus was the first area I looked at. Earlier studies that have ventured into the print media have focused on various areas. Mungai (2021) looked at the drivers of print media coverage and extend of prominence in Kenya; Kakonge (2020) conducted a web-based survey on Kenyan media. This was a quantitative content

analysis similar to that of Mungai (2021), Hase, Mahl, Schafer & Keller (2021), and Gunay et al. (2021).

From the literature reviewed on previous frames, it is clear that most of the studies (Nisbet, 2010; Boykoff, 2008; Anderson, Allan, Petersen & Wilkinson, 2005; Nisbet, 2009; Nisbet & Scheufele, 2009; Ford, 2010) that have been carried out have focused on the quantitative analysis of frames. Quantitative analysis of frames mainly focuses on the statistical dimension of the frames. However, counting the frequency of occurrence of words and themes may at times be insufficient. The meaning depicted by a word may vary depending on its use and thus counting its appearance and frequency may not give a true understanding of the usage of the word. This short coming of quantitative analysis can be addressed by qualitative studies that going beyond merely counting the occurrence and frequency of words to analysing the meaning in the words used. This study therefore employed qualitative analysis of the content depicted by selected newspapers to get a deeper insight in the framing of climate change.

Other studies carried out (Antilla, 2005; Antilla, 2008; Anderson et al., 2005; Anderson, 2007; Boenker, 2012; Billet, 2010; Christensen & Wormbs, 2017; Dearing, 1995; Dirik & Gelders, 2008; Dotson, 2009; Freyenberger, 2013; Gkiouzepas & Botetzagias, 2017) have focused on the written text and rarely ventured into visual images and the frames they portray. The analysis of textual frames is an important component of frame analysis; however, it doesn't capture a complete conceptualization of frames. Visual frames form an important component in the understanding of climate change content depicted in the newspapers. This study sought to bridge this gap by focusing on both the text-based parts as well as the visual imagery.

Studies (Metag et al., 2016; Rebich-Hespanha et al.'s, 2015; Smith & Joffe, 2009; Lester & Cottle, 2009; O'Neill, 2013; and Wessler, Wozniak, Hofer & Luck, 2016) that have focused on visual frames have mostly been carried out in developed countries. The aim of this study was to bridge the gap in literature on developing countries by exploring the visual frames that are used in the Kenyan print media.

2.14 Chapter Summary

In this chapter I have explored various literatures in relation to the climate change message. The discussion presented has shown that climate change falls under the subtheme environmental communication situated in the communication field. Environmental communication is an area which seeks to inform, communicate scientific reality and raise awareness among the general public. The role and influence of the mass media ain relaying climate information has also been emphasised The importance of studying media content has been emphasized. It helps assess how information has been framed and one can even predict how th einformation can influence others. From the literature explored, it is evident that the climate change message is one of the most needed messages by the public as the climate change effects are adverse and far reaching. The media, according to the literature, is key in disseminating the message and creating the desired impact among the public. The following chapter explores the methodology that this study adopted.

CHAPTER THREE

RESEARCH METHODOLOGY

If there were only one truth, you couldn't paint a hundred canvases on the same theme
(Pablo Picasso, 1966)

3.1 Chapter overview

This chapter discusses the methodology that was employed in this research to examine the print media framing of the climate change message. It also addresses the research framework, strategy as well as the method. The sampling techniques, the data generation procedures and the way data was analysed are also discussed. The chapter closes by exploring issues dealing with trustworthiness and ethics.

3.2 Philosophical paradigm

Guba and Lincoln (1994, p. 107) argue that "A paradigm may be viewed as a belief system (or metaphysics) that deals with ontology. It embodies perspectives that defines, for its holder, the way things are," the person's position within the context, and the spectrum of potential connections to that world and its components, as, for example, worldviews and doctrines do". It is "a broad mental outlook of the world and the research orientation that a researcher possesses" (Creswell, 2009, p.6). A paradigm present sets of ideas or beliefs which depict how the world is seen and how it functions. It gives a plan of how the research will be carried out by dictating how the researcher views the world and how he/she interprets it. Thus, an understanding of the philosophical paradigm guiding the study helped guide in the procedure of gathering, analysing and presenting the data.

This study ontologically was premised on the relativist paradigm. Epistemologically, it was premised in the interpretivist realm, whereas axiology in the particularism

paradigm. Subjective relativism varies from individual to individual as our perceptions shape our understanding of reality (Guba & Lincoln, 1994, p. 110). Thus, reality is crafted by the link between features of a self-governing society and language. This paradigm argues that knowledge is contextually governed; it depends on several social issues. It can therefore be gathered using interpretation and construction and therefore it is subjective. Creswell (2009, p.8) avers that, 'people give personal interpretations of their encounters-meanings aimed at particular entities or things. These meanings are diverse and multifaceted, driving the researcher to explore the nuances of viewpoints instead of limiting meanings into a smaller number of classes or notions.' The researcher's focus in this paradigm is to interpret what others make of the world. What we make of the world is mainly affected by the cultural and historical aspects that exist in an individual's life (Creswell, 2009). Therefore, it can be said that it looks at the world as being socially constructed with meaning being derived from the social constructions made. The researcher's input in this paradigm is key to the study as they interpret other people's views based on their own background and experience (Crotty, 1989). This argument is in line with the framing theory which looks at the frames as being socially constructed. Based on how issues are presented and the context in which they appear meaning can then be derived.

Meaning is not something that already exists but it is constructed as we interact with the world. It is contextually governed and thus formed by co-constructions by individuals in the real world. Crotty (1989, p. 42) says that insight and significant actuality are intermittent interaction between humanity and their environment and are evolved and shared within a culture. The social world can thus be understood based on the views and positions of the individuals who are a part of it. This paradigm emphasises that there are diverse interpretations that can be applied to the world. Our interpretation of the world

is dynamic in the sense that it depends on the meanings available and how one sizes up the situation (Taylor, 2015).

Interpretive research technique is aimed at comprehending occurrences from a person's standpoint, examining interpersonal interaction as well as the historical and cultural settings inhabited by people (Creswell, 2009, p. 8). Therefore, the individual constructions are understood through interaction with them. Thus, understanding is generated from the data collected. Interpretive methods elucidate behaviour from the standpoint of participant, give insight and understandings of behaviour, and do not dominate the participants; it is sensitive to individual meanings of a phenomenon.

An understanding of the depiction of the climate change message by the print media can only be done in a natural setting. The researcher has to fully participate in the interaction with the various articles to fully understand, respond and describe the way the climate change message is mediated by the media. Thus, the focus is to identify a contextualised meaning of the multiple points of views from the sample population. In this study, I interacted with the selected articles to understand their construction of climate change messages.

3.3 Research Approach

The research strategy employed in this study was the descriptive one. Physical hardcopies of the selected articles were reviewed with attention being placed on the placement of the articles, genres of the stories, as well as the framing of these stories. A qualitative approach was adopted in data collection and coding criteria of the selected articles in the study.

This research used a descriptive research strategy which is consistent with the relativist-interpretivist-particularism paradigm. ‘Descriptive research aims to investigate and decipher the meaning individuals or groups attribute to challenges of humanity. The research often leads to new questions and processes, data routinely acquired in the participant's setting, data analysis inferentially building from specific to general themes, and the researcher analysing and interpreting data’ (Creswell, 2009, p.4). As such, I carried out the study on selected newspapers as they appeared in the daily print.

In the first step, I used the inverted pyramid in identifying articles that focused on climate change. The inverted pyramid looks at news items organized in the form of an upside-down triangle. The top of the triangle is represented by the wide base which contains the most important information in the story. News articles follow a bottom-line up-front model where the chief information is in the first paragraph of the article (Takahashi & Salas, 2024). By reading the heading and the opening paragraph, one is able to understand the main focus of the story, the facts as well as the main characters in the article. It captures the who, what, when, where, how and why of the all article. Headlines can produce complementary and convergent results compared to a full text analysis of news stories and an appropriate down-sampling alternative in content analysis (Haider & Hussein, 2020). By reading the lead paragraph, I was able to identify the main focus of the article and select articles that focused on climate change. I then did a descriptive thematic analysis of the selected articles from the two newspapers (*The Standard* newspaper and the *Daily Nation*) to get the various frames guiding the climate change message.

3.4 Research method

A research method encompasses a systematic process of inquiry that allows us to gain knowledge about our social world (Salah, 2024). It reflects detailed methods and protocols used to gather and interpret data. It is the methodological technique that researchers employ in the collection of data necessary in the process of analysing and interpreting social dynamics that are being investigated (Firdaus, Zulfadilla, & Caniago, 2021, p.2).

In this study, qualitative content analysis which is an analytical research method was employed. In qualitative content analysis researchers examine the existence, significance and connections of language and thought, then understand the messages' implications, the author(s), the readership, and even the way of life and time of which these are a part (Clatworthy & Jones, 2001;). The aim of qualitative content analysis is to generate knowledge through indepth analysis of pre-collected data pertinent to what is being studied. This secondary data preserve knowledge, embodies people's attitudes thoughts and believes. It also embodies changes in ways of doing things over time as well as successes and failures. The main focus was to identify the arguments given by the authors and describe, organize and summarise them. This process was driven by the investigative questions. Thus, the visual imagery used, the tone, the visual and textual frames employed as well as the actors and the emergent trends were explored.

Content analysis as a method has been used traditionally as far back as 1910 by sociologist Max Weber (Krippendorff, 2004). This method has been chosen because it is content sensitive, unobtrusive, flexible, can be applied to large amounts of data and it is feasible to extract the essence of words into a more consolidated classification (Cavanagh, 1997; Harwood & Garry 2003; Krippendorff, 2004; Krippendorff, 1980;

Macnamara, 2005). Krippendorff (1980) and Riffe, Lacy and Fico (2005) argue that with the use of content analysis, the aim is to condense broad description of phenomenon into concepts or categories according to rules describing the phenomenon.

Content analysis is divided into two principal classifications quantitative content analysis and qualitative content analysis. Smith and Taffler (2000) refer to these categories as structural content analysis and conceptual content analysis while the Colorado State University (1997-2004) refers to them as conceptual analysis and relational analysis respectively. Shoemaker and Reese (1996) say that social scientists taking a behaviourist approach to content analysis depend majorly on statistical content analysis, while human centred strategies to media content gravitate towards qualitative analysis. Quantitative content analysis focuses on 'manifest' elements which are physically present and countable. The researcher therefore counts and later transforms these figures into scores which are represented quantitatively. The focus is on the relationship between counts of the apparent features (Hair et al., 1998). Quantitative content analysis assumes that language mirrors a pre-existing social reality. This reality is seen to detach from the observer and is marked by defined data driven patterns. It is evident that this method of inquiry ignores the context of the text as it assumes some uniform reality. To some extend quantitative content analysis detaches the researcher from the study. My view of the process of getting knowledge as a researcher is that meaning is constructed from the context in which it is occurring. This is consistent with my philosophical orientation the relativist-interpretivist/constructivist paradigm (see section 3.3). To enable me capture the meaning of the words and derive the specific frames based on the particular contexts it was occurring in, I left out quantitative content analysis (quantitative) and focused on qualitative content analysis.

Hsieh and Shannon (2005) have defined qualitative content analysis as a "research methodology for the personal elucidation of the content of text and data through the codification process and uncovering underlying issues or routines." Qualitative content analysis is based on the idea that words derive their meanings when they are used in specific situations. This means that the researcher in her analysis concentrates on acquiring the meaning of a word or phrase by situating it within the framework which it is appearing in. This could be in relation to the surrounding texts or paragraphs or even the text as a whole.

Qualitative content analysis concentrates on acquiring 'actual meanings and explanations' (Johnson et al., 2006, p. 132). This necessitates mindful usage within the framework in which they are employed (Hardy et al., 2004, p. 20). Qualitative content analysis is consistent with 'naturalistic observation' (Denzin & Lincoln, 2017) which 'dismisses observable facts of unearthing legal framework by implementing hypothetico-deductive methods' (Johnson & Duberley, 2003, p. 1298) and regards the researcher as the key driver of data analysis. Built on the premise of diverse interpretations of documented fact, qualitative content analysis thus corresponds to the 'critical narrative research' tradition (Beattie, 2014, p. 31). This research method therefore does not assume that mass media content reflects an objective reality. It does not mirror the world around us. Rather, media content is shaped by a variety of factors that result in different versions of reality.In carrying out my analysis, I borrowed from the steps advocated by Schreier (2012). The first step entailed deciding on the research questions. This was done in consultation with my supervisors and the research questions formulated as shown in section 1.5. The second step involved selecting the materials to be analysed as shown in section 3.5. A coding frame was developed to mark the third step. In the fourth step the researcher divided the materials into coding units (see section

3.6.1 which identifies the unit of analysis) before trying out the coding frame (step five). The intercoder reliability test (section 3.8.2) enabled the researcher evaluate and modify the coding frame (step six) to arrive at what was used in the study (Appendix 1). The seventh step involved the main analysis which is done in chapter four and the final step entailed the interpretation of findings (chapter 5).

Using this method I sought to explore how the selected print media constructed the climate change message. This was done paying attention to the words used in connection to the whole text. In identifying the frames, the study borrowed from previous frames as well as developed new frames from emerging themes. The visual imagery was also analysed in relation to the context that it appeared. This analysis guided me in making inference on how the presentation of climate change messages can affect the perception and actions of the citizens.

3.5 Sampling

3.5.1 Study Population

A target population is a larger group from which a sample is taken. This study concentrated on the print-based media in Kenya. From previous studies (McCallum et al., 1991; Wilson, 1995) newspapers were the highest rated source of environmental messages compared to other forms of mass media. The press is also considered to be the most powerful approach to engage opinion leaders (West, 2007). Obonyo (n.d, p.10) argues that “In spite of their low circulation numbers the print media is still important particularly in setting the news agenda. In terms of complicated subjects, such as the science of global heating and change in climate, it is the print media that has the capacity to devote appropriate time for the lengthy coverage required”. I focused on print media for the duration of this study because focusing on print media was one way

to cut the huge amount of mass media coverage down to an appropriate size for the scope of this work while still allowing me the opportunity to comprehensively study one segment of the mass media. In addition, in choosing to follow only the media coverage printed in trendsetting print media outlets, I was following a precedent that has been set by other similar studies (McComas & Shanahan, 1999; Quigley, 2008; Boykoff & Boykoff, 2007; Shoemaker & Reese, 1996; Trumbo, 1996; Dotson, 2009; Boykoff, 2007; Dotson et al., 2012) and therefore my research fits in to the current relevant framework. A period of five years was selected for the study (2013, 2014, 2015, 2016 and 2017). The selected newspapers (The Standard and the Daily Nation) are daily publications.

3.5.2 Study Sample and sampling procedure

A sample is a portion of individuals, entities, or items that are taken from a bigger group for measurement. There are four main newspapers in Kenya today: *Daily Nation* (*Saturday Nation* and *Sunday Nation*), *East African Standard* (and *The Standard on Sunday*), *The Star* (and *Sunday Star*) and *The People* (Obonyo, n.d, p. 9). This study purposively focused on two newspapers in Kenya with a daily circulation. Purposive sampling techniques may be defined as selecting units (e.g., individuals, groups of individuals, institutions) based on specific purposes associated with answering a research study's questions. *The Standard* and *Daily Nation* were purposively chosen because of their comprehensive reporting and extensive readership in comparison to the other newspapers in the market. According to research, the two newspapers have a majority of the market shares with the *Daily Nation* leading with 40% of the market share producing 150,000 copies a day while *The Standard* has a market share of 20% producing 80,000 copies a day (Kenya Audience Research Foundation [KARF], 2019).

The two newspapers are the oldest and largest newspapers in Kenya (Kakonge, 2020) with a broad coverage of subjects such as Sports, politics, governance, agriculture, science, international and regional news. Similar studies have also focused on the two newspapers (Obonyo, n.d) and therefore I was following a precedence already set.

Purposive sampling was used to choose the articles published by the chosen print media for a duration of 5 years (2013, 2014, 2015, 2016 and 2017). This study coincides with the Climate Change Action Plan 2013-2017 making the coverage of data critical during this period. It is also during this period, 2015, which the Ministry of Environment water and Natural Resources came up with a public communication strategy. One of the issues in this strategy is liaising with the media to clearly communicate environmental matters. It is with this in mind that this study sought to examine the trends of media coverage with the launch of this strategy. I select two years before and two years following the implementation of the approach to find out the framing trends that were evident during this period. The selection of these years also ensured that I captured the most recent data while bearing in mind the academic timelines that I had.

To identify the articles that formed part of the study, I identified relevant articles through web based search through a data base. The selected media houses have in-house libraries which contain data bases with soft copies of newspaper printed in their media. These libraries are open to the public at a fee. I visited these libraries and used their data base to search for the key words used in this study. Articles with the key words (climate change, global warming, and greenhouse effect) were chosen for further analysis. The key words were chosen as they are well established key words in the climate change media analysis (Billet, 2010; Boykoff & Boykoff, 2007; Schäfer & Schlichting, 2014). Only narratives that particularly concentrated on the subject matter of climate change

were included. These stories were identified by reading the headline and the lead paragraph of the article. This is because of the conventional style of the bottom-line up-front model (explained in section 3.3) that is used in writing news. The numbers obtained from each publication might not be exhaustive of all the articles published during the period of the study but were deemed sufficient to enable the study to make a comprehensive analysis in line with the research questions. From the study a total of 127 articles from *The Standard* and 119 from the *Daily Nation* were analysed.

3.6 Data generation

3.6.1 Qualitative Content Analysis

In this study, qualitative content analysis was used as a research method as well as a data generation tool. Content analysis is a data generation tool used to determine the presence and relationship of certain words or concepts within texts or sets of texts. The term text is a favoured term in numerous critical analyses and implies not just written text but also any other message type that is considered in its entirety. According to Schreier (2024) the word ‘Text is used as a generic term, covering all kinds of qualitative material, visual as well as verbal. For example, the text of a film includes its dialog, its visuals, production techniques, music, characterizations, and anything else of meaning presented in the film (Neuendorf, 2002, p. 14-15)”. In this study the texts that were analysed were both visual and written texts.

Borrowing from the tenets of the framing theory, researchers are able to carry out thematic analysis by clustering messages also referred to as frames with focus on the action of incorporation done by the audience (Entman, 1993). Berelson (1952) suggests five main purposes of content analysis which are; To describe substance characteristics of message content; To describe form characteristics of message content; To make

inferences to producers of content; To make inferences to audiences of content; and to predict the effects of content on audiences..

Macnamara (2005, p.6) argues that "media content analysis is an unobtrusive research method that allows scrutinization of a vast collection of data over a prolonged period to identify prevailing conversations and their probable interpretations. Another benefit of content analysis is that it can be carried out routinely (eg. every month), whereas audience research such as wide-ranging surveys are, because of their cost and time taken, constrained to yearly or every few years". Content analysis also allows access to dependable source of information for a long period of time as the documents can have a lifetime spanning multiple decades or centuries.

I analysed the content of the two newspapers for a period of five years. This was done by analysing the various articles covered on climate change and how they were framed. This study is premised on the fact that content analysis is both a quantitative and a qualitative approach (This study used the qualitative approach). Just like the stand held by this study, Shoemaker and Reese are some of the recognized authorities in the field of media content analysis who oppose the fact that content analysis is only quantitative (Macnamara, 2005).

Quantitative content analysis collects data about media content such as topics or issues, volume of mentions, 'messages' determined by key words in context (KWIC), circulation of the media (audience reach) and frequency (Macnamara, 2005, p.4). The goal of any quantitative analysis data generation is to produce counts of key categories, and measurements of the amounts of other variable (Neuendorf, 2002). Newbold et al. (2002) note that: "The problem [with quantitative content analysis] is the extent to which the quantitative indicators are interpreted as intensity of meaning, social impact

and the like. There is no simple relationship between media texts and their impact, and it would be too simplistic to base decisions in this regard on mere figures obtained from a statistical content analysis" (p. 80).

Simply put, it is not justifiable to assume that quantitative variables like size and prevalence of media messages equate to impact. Nor is it valid to assume that these quantitative factors are the only or even the principal drivers of media impact (Macnamara, 2005, p.4). Thorough examination of selected content using qualitative research methods is required to comprehend possible implications (obvious and dormant) for audiences and potential outcomes of texts (Macnamara, 2005). This study addressed the interpretive content analysis (qualitative content analysis) of media texts. This is what Shoemaker and Reese (1996) refer to as humanistic (qualitative content analysis) approaches to media content (other scholars also call it relational analysis (Colorado State University)).

Meaning oriented analysis was employed to investigate the trends and perspective through stories, accounts and explanations. In this study stories of climate change were defined as those which contain one of the following phrases: "global heating," "greenhouse effect," or "climate change." As a guide to coming up with frames, I borrowed from Schreier (2024) who has advised that one has to identify the main dimension and the subcategories to guide in frame formation. The main dimension is the key aspects of focus. This delineates the things a researcher wants to know more about in relation to the research area. For instance, in this research it referred to the area of interest in relation to climate change messaging. For instance, who are the main sources of climate change stories, which are the main textual and visual frames used in the selected articles, who are the principal writers of narratives on climate change, what

kind of messages are mainly disseminated in the selected articles and many more areas. The main dimension is then broken down into subcategories. Subcategories identify what is said about the main dimension. Subcategories can be identified based on familiar information before examining your material, i.e. work in a manner that is concept-driven (deductively), or by looking at what is there in the material, i.e. work using a data-centric approach (inductively), or both (Schreier, 2024).

In the selected print media, I focused on all the articles available. In identifying the frames, I was able to identify the subcategories based on earlier literature (see Table 2.1 and Table 2.2) as well as from the texts themselves (new categories identified). The subcategories were thus created by using a combination of techniques that was both conceptually-oriented and fact- based. In further classifying the articles, I was guided by the four frames propagated by Trumbo (1996): Define problems, Diagnose causes: Make moral judgments, and Suggest remedies (Also see appendix 1).

•Define problems: These stories deal with what will happen as a consequence of this phenomenon. Impacts may be negative (coastal flooding), positive (improved regional agriculture), or debated.

• Diagnose causes: evidence as to reality of climate change as a problem. These are typically presentations of scientific findings that support the idea that there is a problem (evidence of rising sea level), refute the idea that there is a problem (evidence that changes are within limits of natural variance), or present the argument that the nature of the problem is unknown.

• Make moral judgments: action statements. These stories present general statements calling for action or reporting action taken (the USA should sign a

treaty, did sign a treaty), arguing against action or reporting action blocked (emission standards not needed, scientific testimony altered), or present the argument that a course of action is not clear.

• Suggest remedies: provide specific information about how solutions should be implemented. These stories report specific solutions that have been proposed or implemented (tougher emission standards), solutions that have been rejected or deemed inadequate (voluntary programs), or present a debate about a specific solution or solutions. Note that the specificity of the solution—a statement of exactly how the solution should be carried out—is an important distinction between an action statement and a solution statement (Trumbo, 1996, pp. 272-273).

In conducting my analysis, I followed the guidelines of Winett (1995). I read each article thrice to understand how the issues were being exhibited. Secondly, I made notes of the debates being employed to identify the main dimension and the subcategories evident in the selected articles.

3.7 Data analysis

Data analysis in qualitative research is a systematic process of transcribing, collating, editing, coding and reporting the data in a manner that makes it sensible and accessible to the reader and researcher for the purpose of interpretation and discussion. In this study, data analysis was done using frame analysis by identifying, analysing and interpreting patterns in the texts to establish codes, themes as well as existing frames.

Frame analysis is a type of content analysis which focuses on frames evident from the emerging themes. Matthes (2014) differentiates four typical kinds of frame analysis:

Hermeneutic" or "qualitative" frame analysis; comprehensive and integrated" techniques in examination of frame; Manual reductionist" approaches to frame analysis and; "linguistic" or "computer-assisted" approaches to frame analysis. The manual reductionist approach was not employed in this study as it tends to leave out the thematic analysis of content and focus more on the quantitative elements. Schäfer and O'Neill (2017) argue that in the use of this method assembling ideas to frames can be challenging as the clusters, variables, or categories statistically generated use experiential co-existence instead of thematic consistency as the guiding principle. The Linguistic approach was also not used as it leaves out visual elements. This study sought to analyse the framing of both the written and visual imagery in the selected articles however, the linguistic approach is restricted to the interpretation of only written texts, making visual material obsolete in the examination of frames (Schäfer & O'Neill, 2017, p. 11).

This study used the Hermeneutic" or "qualitative" frame analysis which is a qualitative, interpretive approach. It allows for the analysis of latent meaning of texts and visuals and relies on one giving a detailed description of data. Matthes and Kohring, (2008) aver that in this approach frames are thoroughly described and no quantification is provided. This allows one to produce issue specific frames. To strengthen this approach, this study borrowed from the ideas of the Manual holistic approaches which borrow from pre-existing frames to conduct its content analysis (Schäfer & O'Neill, 2017). These could be frames form previous studies conducted (literature reviewed), or pre-studies. This is an argument supported by Schreier (2024) who argues that in qualitative analysis one can make use of theory or of coding frameworks established by other investigators, but one has to adapt these to the material being studied.

In my analysis, I first catalogued each of the articles selected. Denscombe (2010) has advised that each unprocessed data element' should be distinctly labelled for future use (p.275). This allowed me to revisit the points in the data that were interesting as they emerged in the process of analysis. "Lacking proper labelling system will make it extremely unlikely for the researcher to move to and fro across the data, or to focus on the key parts of data are important" (Denscombe, 2010, p.275).

Frame analysis shares heavily on the steps followed in thematic analysis. Fereday and Muir-Cochrane (2006) posit that thematic analysis is a form of identification of pattern within the data, with developing themes constituting the analytical groups. I analysed the data using frame analysis following the format adopted by Quigley's (2008) study.

In every content analysis, the unit of analysis must be identified. For this study, the theme as proposed by Zhang and Wildemuth (2005) was the unit of analysis. Zhang and Wildemuth (2005, p.2209) have argued that qualitative content analysis usually uses individual themes as the unit for analysis, rather than the physical linguistic units (e.g., word, sentence, or paragraph) most often used in quantitative content analysis. The use of themes as a unit of analysis focuses on the expression of ideas which may be found in a word, a paragraph, a sentence or in the meaning depicted in the whole text. This means that a theme can occur in any size of the text be it a single word or the whole article. Thus in this study theme was the unit of analysis.

Quigley (2008) gives a number of stages that are followed in thematic data analysis which were adopted in this study for frame analysis. The first stage involved analysing the fundamental information. Particularly, this encompassed the title of the article, the authorship the date of publication, name of publication, the place where the article was published, and the visual representations (see appendix 1).

I also analysed whether or not the article had visual imagery in it and whether or not climate change was the main focus of the article. I collected this basic article information so that I could fully understand the broader themes involved in print media coverage of climate change information – like who writes the majority of the articles, where in the publications the articles tend to be placed, etc (see appendix 1).

I also analysed the detailed notes about article content information. I noted what the geographic focus of each article is (local, national, international, etc), what the overall frame of the article is, what results of climate change were mentioned, what parties or practices were explained as being responsible for climate change, who was mentioned as being concerned about climate change, who was mentioned as acting to help solve issues related to climate change, who was mentioned as halting the process of solving issues related to climate change, what interest groups or stakeholders were mentioned, what solutions related to climate change were mentioned, and finally, who those solutions were oriented towards (see appendix 1).

To identify the main dimensions and the subcategories which evolved into frames, I first read all the data repeatedly (both written and visual) to achieve immersion and obtain a sense of the whole passage. I then read the data (written) word by word to derive codes by first highlighting the exact words from the text that appear to capture key thoughts or concepts. I then approached the text and visuals by making notes of my impressions, thoughts and initial analysis. From this process, labels for codes that were reflective of more than one key thought formed part of the first coding scheme. According to Dörnyei (2007), coding is used to reduce or simplify the data while emphasising their specific features in order to connect them to broader concepts. Neuman (1997) aver that coding is an integral part of data analysis guided by the

research question. It encourages higher-level thinking about the data and moves a researcher toward theoretical generalizations. I then sorted the codes into categories based on how different codes were related and linked. Categorising refers to developing meaningful categories into which words, phrases, sentences, can be grouped, while comparing means making connections between categories The emergent categories were used to organize and group codes into meaningful clusters. I kept the clusters broad enough to sort a large number of codes.

I then drew conclusions on the basis of the text and the results of the analysis. From the trends which emerged, I then analyse them in relation to the dominant frames which were evident. In presenting the frames evident in the findings, I have provided "thick description" of their cases through the inclusion of direct quotations as suggested by Wesley (2009).

3.8 Trust worthiness

Trustworthiness is making sure that the research process is genuine, diligent and stringent enough to make the claim that it does (Lincoln & Guba, 1985). In both quantitative and qualitative research, the terms used to demonstrate trustworthiness are different. Quantitative researchers use the terms, external validity, internal validity, objectivity and reliability whereas qualitative researchers tend to use transferability, credibility, confirmability and dependability respectively.

3.8.1 Confirmability

This is the extent of neutrality of the findings. In qualitative research, the concept confirmability refers to the degree to which the outcomes of a study are free of both interior and exterior influences either of the investigator(s), respondent(s) or

establishment(s) (where applicable). Mugenda (2013, p.97) argues that confirmability implied that biases, interests or perspectives of the investigator or others are minimized or eliminated.

To ensure confirmability, I preserved the narratives in the articles in some parts of my final report. I paraphrased the emerging ideas from the articles and retained a few direct quotations and visuals that are a representation of the voice in the articles to show that the study is giving a report of the happenings in the chosen print media.

3.8.2 Dependability

This is the degree to which the processes followed can always be used by other investigators to obtain the same result. It is based on the assumption that a qualitative study can be repeated in another setting, under the same conditions and still yield the same results (Mugenda, 2013, p. 95). Jwan and Ongondo (2011) posit that dependability it is the extent to which a researcher gives comprehensive information lucidity of the whole process of research in a manner that makes it workable for a reader to envision and appreciate and for a researcher to recreate the study where necessary. “Duplicability is influenced by complete transparency on techniques and processes. With regard to content analysis, this should entail the Code Book/Coding List; coding conventions and directives to coders; methodology adopted for coding in the case of human coding; specifics of implemented software programmes; as well as data validating assertions (Macnamara, 2005, p.6)”. As Neuman (1997) observes, a researcher carrying out content analysis “meticulously crafts and records processes for coding to facilitate duplication” (p. 274). In this study, I have attached the code sheet (see appendix 1) to allow a clear comprehension of the procedure I employed to collect the data.

Another way that I ensured dependability was through the interrater/intercoder reliability. Rourke, Anderson, Garrison and Archer (2001) postulate that dependability is the degree to which various coders, each coding similar content, reach the same coding conclusions. There are different methods that can be employed to check the interrater reliability such as Cohen Kappas's statistics, Krippendorff's Alpha and Percentage agreement. The easiest and prevalent procedure of reporting interrater reliability is the proportion consensus statistic (Rourke et al., 2001). Rourke et al. (2001) contends that this statistic is a reflection of the number of agreements per total number of coding decisions. Holist (1969) provides a formula for calculating percentage agreement:

C.R= 2m/n1+n2

Where: m= the number of coding decisions upon which the two coders agree

n1=number of coding decisions made by rater 1

n2= number of coding decisions made by rater 2

C. R.= coefficient of reliability

Riffe, Lacy and Fico (1998) opine that in communication research, a minimum level of 80% is usually the standard for the intercoder reliability percentages.

Two individuals (the principal researcher and an assistant) coded the sample. As the principal researcher/coder, I trained the assistant by reviewing the coding scheme and instructions together to ensure that both of us understood the requirements. We then started coding a sample of 40 selected articles from one of the newspapers (*Daily Nation*). In the process of coding, each coder scrutinized and coded each of the 20 (we divided the 40 into two) articles independently. After which we met physically to discuss our findings and analyse any discrepancies. For the discrepancies, we did

reconciliation by actively engaging in discussion to review our respective codes with the aim of getting to a point where all the codes were agreed upon. After which we did another round of coding (the remaining 20 articles) and calculated the percentage of agreement and found an average of 89.4% agreement. Because we had a high agreement rate, the rest of the articles were left to be coded by the researcher.

To also ensure dependability, the methodology employed in this study has been clearly explored from the sampling procedures to how the data was analysed. This means that one can follow the steps which were used as they are clearly stated.

3.8.3 Transferability

This refers to the degree to which the results of the research may be generalized to other incidences or settings. Jwan and Ongondo (2011, p. 137) assert that transferability "is the degree to which the outcomes of a study or elements of it could be pertinent or appropriate to other environments where the study was not conducted or other individuals who were not part of the study or involved in the issues under investigation".

The choosing of a representative group and the comprehensive approach ensured that the findings are transferable. Nunan (1992, pp.62-63) argues that the researcher should describe the phenomenon so explicitly that they can be compared with other studies. This is in agreement with Mugenda's (2013, P.96) assertion that findings in qualitative research must be rich and trustworthy to be transferable to other contexts. The various steps used in data generation and the description of the context will enable the reader to show relationships between the description in the study and their own situations. Thus, it will enable the readers identify with the findings.

3.8.4 Credibility

Credibility focuses on the accuracy of the data. It refers to the degree to which the study scrutinizes what it asserts to explore and if it documents what transpired in the field (Yin, 2001 cited in Jwan & Ongondo, 2011). According to Macnamara (2005, p.6), legitimacy of content analysis is accomplished by perceiving the objectives of research, initial review of a sub-set of relevant data, and diligent picking of the sample of media content to be analysed. First, I engaged my supervisors throughout the various stages of my study. Being professionals in the field, they were able to give me the necessary guidance in this research. I was also able to use previous research findings to support my interpretations and conclusions in the study as suggested by Mugenda (2013).

3.9 Ethical consideration

I first got a letter from the University which enabled me to seek for a research permit (Appendix 2) from the Ministry of Science and Technology to enable me carry out the research. In the presentation of data, I used narrations to ensure that I presented data which accurately reflected the study findings.

3.10 Chapter Summary

The method of research employed in this study has been discussed in this chapter. The world view adopted in this study looks at the world as being socially constructed and contextually governed and thus holding multiple truths. This is in line with the framing theory which looks at frames as being socially constructed. This world view affected the choice or research method with the qualitative content analysis method being selected. This method believes that meaning is derived from the context it is appearing in. The patterns evident from the findings were analysed using frame analysis which is also a qualitative method consistent with my world view.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

The view through a window depends upon whether the window is large or small, has many panes or few, whether the glass is opaque or clear, whether the window faces a street or a backyard. The unfolding scene also depends upon where one stands, far or near, craning one's neck on the side, or gazing straight ahead, eyes parallel to the wall in which the window is encased (Tuchman ,1978, p.1)

4.1 Chapter overview

The findings of this study from the analysis of selected newspaper articles are presented in this chapter. In the selection of the articles for analysis, the researcher delineated stories with phrases related to climate change, such as "global warming," "greenhouse effect," or "climate change". During the first stages of analysis, guided by the inverted pyramid structure, it was noted that some stories used these phrases but did not directly mention climate change. For example, if the article talked of a pandemic and related it to climate change, and did not proceed to delve into the matter of climate change, then, it was eliminated from the study. For a story to qualify for incorporation in this study, it had to specifically focus on the topic of climate change.

In this study, opinion-page content, including editorials and op-eds, were included as it is ranked among the top tiers of persuasive writing (Connor, 1996). They were deemed informative on the structuring of climate change message in the selected articles. Through them, just like the other sections of the newspaper, the frames adopted in the newspapers were exhibited.

From the study results 127 articles from *The Standard* newspaper and 119 articles from the *Daily Nation* were selected. Of the selected 127 articles from *The Standard*, 124 were analysed and of the 119 articles from the *Daily Nation*, 108 were analysed. The articles that were eliminated from the analysis had the key words during preliminary reading, guided by the inverted pyramid. However, upon close scrutiny, it was noted

that these articles did not highlight climate change. The elimination of these articles did not, however, negate the validity of the study findings. The articles identified were analysed extensively and were sufficient to provide data to exhaustively address the research questions.

4.2 Trends in Media Coverage of Climate Change in Selected Newspapers

The trends in climate change reportage evident in the chosen newspaper articles were examined in this study. Some of the areas of interest included the triggers of climate change stories, the temporal distance of climate change issues, placement of articles, sources cited, attribution of blame, as well as the message focus.

4.2.1 Authorship of the articles

The results indicated that the articles presented in the sample showed that there were no consistent authors who covered the climate change stories in both newspapers. Different authors covered the stories. From the findings the lack of consistency undermined the analysis of articles authorship. This means that no one author covered a substantial number of articles to warrant analysis of the same.

In seeking to understand their expertise in writing these stories, the analysis of the authors was then deemed insignificant to the study findings. This is because analysis and comparison were to be made between authors who had written a significant number of articles and those who had just done one or two articles and the difference in their framing and presentation of issue. This area was thus eliminated from further analysis.

4.2.2 Catalysts of Climate Change News Coverage

The research sought to establish some of the main catalysts for climate change stories. Greater emphasis was given to news articles than to commentaries, letters to the editor

or editorials. This was mainly done guided by the inverted pyramid metaphor which is a common story telling structure for most news items. The who, what, when, where, and why contained in the lead paragraph guided the research in identifying the main focus which in turn was taken as the main trigger of the story.

The results from the *Daily Nation* indicated that many of the articles that covered climate change narratives were opinion pieces which mainly comprised of letters to the editor and a few media house's editorials. For example *Daily Nation May 7, 2013* has an opinion piece which talks about how the poor are bearing the brunt of the rising heat; *Sunday Nation December 7, 2014* has an opinion piece which urges the reader that it is time to take action on climate change but then goes further to pose a question on who should pay for these actions on climate change; whereas *Daily Nation November 28, 2015* has an article which urges the government to involve youths in the fight against climate change. Most of these articles were not directly linked to any specific trigger as analysed in the first paragraph. The most notable category which had clear triggers was news items with world events being the main trigger of climate change stories. A large percentage of the news items on climate change were covered at the backdrop of major conferences. Human interest/calamity triggers as well as triggers caused by innovations and research had few entries.

For example, in the *Daily Nation*, the story was written at the backdrop of a major news event, namely United Nations-sponsored summit in Paris. The author says "The global leaders yesterday met in Paris at the start of two weeks of UN sponsored summit to save the earth from adverse effects of climate change" (*Daily Nation December 1, 2015*). In another story which focuses on indigenous women from Asheninka communiy demonstrate in Lima during the UN COP20 and CMP10 conferences, to demand action

(*Sunday Nation December 7, 2014*). Another article covers the president Uhuru Kenyatta going to Marrakech in Morocco for a climate summit (*Daily Nation November 17, 2016*).

The findings from *The Standard* were a replica of that of the *Daily Nation*. Most of the articles in *The Standard* newspaper were under the opinion piece category. For example, *The Standard July 23, 2014* which talks about '*Rights to water needs to be implemented*; *The Standard June 27, 2014 'more needs to be done to conserve the environment; The Standard March 23, 2013 'Remove environmental concerns from back burned*' and The *Standard February 18, 2015 'Can science solve climate change*?'. This category had no direct trigger as most were independent opinion not tied down directly to any major event or occasion. The news items which were then the main focus of analysis in terms of triggers pointed to major world events/conferences as the main trigger of narratives on climate change. New policy issues as well as research and innovations were also dominant triggers of stories on climate change. Human interest issues as well as politics were the least evident triggers of climate change. For instance, the article in *The Standard September 1, 2013* was written as a follow-up of the Conference proceedings (East African Climate Innovation Network EACIN). *The Standard January 21, 2013* gives a story on how *'Failure to fight climate change may cost Kenya sh 87 billion Annually'* reflecting on the discussions which were carried out in an international event. Other stories covered the world leaders' major proclamations on issues climate change during major conferences or international events.

From the study findings, it is thus evident that most of the news items on climate change in both *The Standard* and *Daily Nation* were triggered by major conferences or summits. The writers covered climate change in relation to international events attended

by prominent leaders. Results from the study also indicated that other catalyst for reportage on climate change in the news articles included natural disasters/calamities (see *Daily Nation January 31, 2017*, *Healthy Nation* which focuses on '*Hunger, disease and death the new norm'*, the human element of climate change and its impacts on livelihoods (see; *The Standard January 9, 2017* which focused on '*misery from drying rivers of Mt. Kenya forest'*; *Daily Nation April 20, 2016* focuses on the brunt born by people in Nyanza region due to climate change) scientific discoveries/innovations (see *The Standard March 21, 2017* which focused on '*Technology in environment sustenance'; Daily Nation November 4, 2016* focuses on how greenhouse technology is aiding in mitigating climate change) and political intrigues/conflicts (See *The Standard July 28, 2014 'state seeks to control climate billions'*; *The Standard August 4, 2015* which talks of ' *Obama sets more rigorous power plant reductions in universal climate crisis in the face of political contention'*; *Daily Nation December 2, 2015* focuses on '*State must agree on climate change remedy*").

4.2.3 Sources cited

The aim of the study was to unravel the sources cited in the selected articles. The selection of a source has an impact on the reliability of the article. This study found out that in both newspapers, most of the sources cited were scientific sources. A focus on scientific sources meant that the reliance on scientific sources could boost the reliability of the articles which were published.

The outcomes of the study from *The Standard* newspaper indicated that the sources that were attributed to included: government sources, scientific sources, individual sources, university sources and articles whose sources were not specifically mentioned. Study findings showed that most of the articles made reference to scientific sources. These

were mainly specialist (including organization officials) in areas environment and climate change who were giving their voice on the climate change issue. Among the scientific sources, their views centred on the effects of climate change, solutions to climate change and the contributions of different sectors to climate change. For example, in *The Standard March 19, 2015* the author cites the fifth assessment report of the intergovernmental panel on climate change as the source of his arguments on the impacts of climate change. In *The Standard December 3, 2015* Ban Ki-moon, the UN Secretary General is cited criticising the nations for not doing enough to close the emission gap in the Paris conference. *The Standard November 27, 2015* cites UN officials –United Nations Environment Programme Under-Secretary General, Achim Steiner, the Executive Director and Genrala Sahle-Work Zewde, the UN Nairobi office Director as lauding the calls from the pope for environmental conservation. *The Standard July 29, 2014* alludes to studies carried out previously and say "many researches by renowned world agricultural institutions have noted that as changes in climate go on, we should be ready for new ailments and pests that will go against basic methods of control." On *The Standard December 10, 2014* Margrethe Van Heeswijk of the Worldlife Foundation is cited discussing the benefits of using the Water Box technology in providing solutions to climate change.

Government sources were the second main source attributed to in the narratives on climate change. The assertions made by the government sources mainly pointed to the government's perception on the effects of climate change and the efforts made by the government to deal with climate change. For instance, some point to the establishment of climate innovation centre, policy implementation and progress, and funding. *The Standard March 5, 2015* cites the CS for Devolution and Planning Ann Waiguru who notes that many people are starving due to climate change as well as President Uhuru

Kenyatta who is cited as leading Kenyans in marking two important days- World Wildlife Day and Africa Environment Day cum Wangari Mathaai Day. University sources were also mentioned in the study results. When mentioned they were mainly connected to the policy issues revolving around climate change, research findings related to climate change. For instance, *The Standard March 27, 2013* gives findings which show the decline of the monarch butterflies due to the loss of milkweed, a plant which they rely on for food which has been caused by climate change. The individual sources were the least represented source of climate change information. The individual sources mainly pointed out the devastating effects of climate change by adopting a resigned tone. They seem to point out their suffering and helplessness in dealing with climate change. For example, in *The Standard July 29, 2014* one farmer is cited as losing his yields worth sh.1 million and the workers in his farm losing their jobs due to climate change.

The findings from the *Daily Nation* also reflected a higher reliance on scientific sources. The outcomes of the research revealed that most of the articles were attributed to a scientific source. Just like the findings from *The Standard* newspaper, the scientific sources mainly emphasised on the devastating impacts of climate change when nothing is done about it, and the measures that must be implemented to avert the climate change crisis. For example, in the *Daily Nation January 9, 2013* The Stockholm Environment Institute is cited as the source of the statistics – the country stands to lose up to three percent of its GDP about Sh87 billion due to changing weather patterns. Individual and government sources in this newspaper were almost equal. The government sources mostly dwelled on the efforts made by the government and the policy interventions they have instituted to tackle climate change. The individual sources mainly dwelled on the climate change effects on their livelihoods. It pointed out how they were suffering due

to climate change. For example, in the *Daily Nation December 2, 2014* the story of Tiksan- whose house was flooded is depicted as she gives a first person narration of the woes they faced due to the flooding. From the study findings, the academic sources were mentioned but in a negligible way. For example, in the *Daily Nation January 21, 2013,* Dr. Rhoda Birech a lecturer and climate adaptation specialist from Egerton University cites financial challenges and technologies that have not been upscaled as killing the new technologies which can help curb climate change. The *Daily Nation December 2, 2014* points to the story of a young man's (Kennedy Mbeva a Kenyan postgraduate student) quest to deal with the bad weather through research and academia. Articles in the *Daily Nation* which had no specific source mentioned or attributed to were the least in the findings.

The study findings have thus shown that there was a similarity in the sources of climate change information depicted in the two selected newspapers. Both mainly used the scientific sources as compared to other sources. The focus of the messages in the articles was influenced by the source cited. The use of scientific sources pointed more to the focus on problem definition and effects whereas the use of government sources pointed much to the moral judgement, action taken or remedy instituted. The individual sources mainly pointed the impacts of climate change particularly on their sources of income. The source attributed therefore affected the framing of the message that was communicated in the articles.

4.2.4 Key actors and their motives

The study sought to investigate the main individuals/bodies that are mentioned as acting on climate change. In the analysis of the articles, the inverted pyramid was used as a guide. The first actor to appear in the headline or the opening paragraphs of the article

was classified as the key actor. If no actor appeared in the title or the first two paragraphs then it was analysed as an article with no actor.

This study sought to find out who was mentioned as taking action (causing or dealing) with climate change. The action they were taking as well as the motive if any was highlighted. As the reader goes through the articles, the key actors mentioned can spur action or inaction in the reader. For instance, if the reader gets an actor, they can easily identify with they may be motivated to also try and emulate them. It may point to the possibility of them also taking part in the action in dealing with climate change. Conversely, if the actor is depicted as larger than life or a group that the reader cannot identify with, then it can become difficult for them to identify with the actors. They may look at it as them versus us: The haves versus the have-nots. In depicting the government or big corporates as the key actors, it may be seen as such an enormous issue that an individual cannot handle.

The research results from *The Standard* newspaper reveal that the main actors in the articles were the national governments. Their main role was that of putting up policies and laws to counter the matter of climate change. However, the articles also depict the government as being overwhelmed with the mitigation efforts. *The Standard July 29, 2014* cites the government as "…short-staffed and lacking the required resources to develop contemporary approaches of addressing conventional and impeding dangers…". The government is generally depicted to be without funds to support the climate change efforts; they mainly manage the funds given by international bodies. For example, in *The Standard January 9, 2013* Kenya is mentioned as being in the course of integrating resilience and adaptation to climate change to its overall national planning framework. In *The Standard January 21, 2013* the government is given credit of

handling climate change through the climate innovation Centre meant to support the development of relevant technologies. The story focuses on Kenya as a whole. No specific geographical location but points to policies in place for the Kenyan populace. In *The Standard July 16, 2014* Nema is mentioned as the body tasked with implementing adaptation programmes in Kenya. In *The Standard November 20, 2015* Kenya is mentioned to have put in place measures to guard herself against the threat and influence of change in climate by moving on to sustainable energy, effectual use of biomass, ecological land management and achieving at least 10 per cent tree cover of the land area.

The second actor that is mentioned in *The Standard* newspaper is the international bodies. When the international community is mentioned, they are said to mainly be providing funding to facilitate adaptation and mitigation efforts. For example, in *The Standard April, 2014* a fund to tackle the effects of climate change in the continent has been established by the African Development Bank. The chairman, Alex Rugamba, is cited saying that "it is the duty of the institution to assist countries in Africa get global climate finance to aid them transition towards sustainable climate development". This is also evident from the title of the article "Africa gets new fund for climate change projects". In *The Standard May 25, 2014,* the global climate change mitigation fund – handled by a board in Geneva, Switzerland- is seen as the body supporting mitigation efforts by giving financial assistance to Kenya.

The study findings also show that the individual is also presented as an actor in the climate change dialogue albeit in a small scale. The role that an individual plays in dealing with climate change is rarely mentioned, neither is the contribution of the individual to the challenge of climate change highlighted as a major component in most

of the articles. However, the individual is mainly presented as the sufferer amidst the climate change challenge. For example, *The Standard June 14, 2015* depicts the suffering of individuals due to climate change; *The Standard September 9, 2013* depicts how individuals at the coastal city are affected due to climate change; and *The Standard, November 12, 2014* depicts individuals who have had their livelihoods destroyed due to landslides. In instances where the individual is presented as contributing to both climate change remedy and challenge, they are presented as small actions affecting a very small scale. For example, on *The Standard December 10, 2014* a pupil at Ndabibi primary school is depicted as using box water technology in fighting the effects of climate change. Conversely, *The Standard July 16, 2014* depicts the individual as contributing to climate change by planting of eucalyptus along the river banks.

Climate change is therefore projected as an international issue with international partnership; the national government implementing and the international body funding the efforts to mitigate climate change. It is worth mentioning that the role of the individual is relegated to the background. The individual's role in dealing with climate change is depicted albeit in small scales not clearly showing how actions that are personal are connected to the broader theme of climate change.

The study findings from the *Daily Nation* depicted climate change as an issue handled by international bodies. The role of the government is also mentioned though that of the international community receives more emphasis in this newspaper. For example, in the *Daily Nation December 1, 2015*, world leaders meet to talk about climate change in the UN sponsored summit. On the *Daily Nation December 7, 2014*, Unep warns of climate change funding crisis and the *Daily Nation December 31, 2014* point to the Global

Finance as having an instrumental role to play in development and climate safety. The *Daily Nation* depicts the government as lacking the will power to engage in the mitigation efforts. This is seen in the conflicts surrounding the resources that could have been directed to the mitigation efforts. The government is also seen to be at the fore front in policy formulation and implementation. For example, the action plan mentioned by Uhuru Kenyatta in *the Daily Nation January 9, 2013* only mentions what the government is planning to do suggesting that the issue is a government issue rather than an individual issue. It is presented as a corporate issue to be tackled corporately. *The Daily Nation November 17, 2016* also point to the efforts already put by the government in addressing climate change. The individual's role is mention albeit in a few instances and their actions depicted as small actions which are not clearly linked to the bigger climate change context. The Individual as an actor is depicted as suffering due to climate change.

Apart from the three key actors depicted by the two newspapers, the findings from the *Daily Nation* newspaper highlights the role of research and academic work in understanding and dealing with climate change. It highlights its function in comprehending climate change, in coming up with mitigation measures against climate change and in developing policies to deal with climate change. The outcomes of the study from the *Daily Nation*, point to the fact that the effects of climate change that we face can be met with academic solutions. Individuals are generally not seen as offering any major solution or suggestion to deal with the problem. It is only when scholars are introduced that we talk of the viable solutions. For example, *Daily Nation August 15, 2016* depicts a professor (Prof. Sean Maxwell) who has discovered a variety of grapes which are adapted to climate change. Her discovery is seen as a solution that can be used in adapting to climate change. Therefore, beyond the government policies, the

solutions/policies to climate mitigation are an academic endeavour. The solutions are thus pointed out to be from the elite scholars. For example, in *Daily Nation December 2, 2014* the key actors in the article are Tiksan and her family who is presenting her family's woes caused by floods (points out that climate change affects the 'common man', the reader can easily identify with their woes) and Kennedy's quest to deal with the problems of the habitat through research. The writer seems to be suggesting that the effects of climate change that we face can be met with academic solutions. Tiksan is not seen as offering any solution or suggestion to deal with the problem. It is only when Kennedy the post graduate student is introduced that we talk of the viable solutions. The solutions/policies to climate mitigation are thus an academic endeavour.

Academia and research are also used to explain the various causes and effects of climate change. For example, *Daily Nation December 2, 2014* reported that "Researchers reported last month that they had discovered a simple physical relationship that seems to predict lightning strikes…". The place of academia and research in understanding climate change is thus highlighted in the article. Another article *Daily Nation December 7, 2014* gives the financial implications of climate change by citing a report by research institutions "Data collected by institutions of research, premised on a broader and extensive data base revealed that middle income countries may require up to $500 billion per year to adapt to destructive and damaging effects of climate change, far surpassing earlier projections …"

Another similar article in *Daily Nation December 6, 2014* depicts the role of academia in climate change alleviation effort. The key actor is a university Don who is keen to disseminate knowledge on climate change as well as gather indigenous knowledge on ways of dealing with climate change from the farmers in Kilifi County who are his

students. The author in describing the university dons talks of “his big brain on climate change” this seems to depict an individual who is quite knowledgeable on issues of climate. Those in academia are thus seen as more knowledgeable on issues of climate change unlike the farmers.

The study went further to examine the actors arguments to find out whether they denied or ascertained the reality of climate change. The findings in both newspapers showed that the issue of denying or ascertaining the consequences of climate change was not mainly discussed. The narratives presented did not talk of the deniers or supporters of climate change. This variable was thus left out in further analysis.

4.2.5 Focus of the article

4.2.5.1 Local versus global scale (Geographical coverage)

This study sought to establish how climate change was presented in terms of the coverage. This was specifically with an interest of the local versus the global dimension. It sought to find out if climate change was presented as a local issue, a regional issue an international issue or a combination of all. This was done by looking at the causes, consequences, action statement or solutions.

From the research outcomes on *The Standard* newspaper, most of the articles presented climate change from a local rather than global scale. The results revealed that a large number of the articles focused on the national scale meaning on Kenya- this is considered a local scale. This was closely followed by articles which focused on the global scale that is climate change and the international community, whereas articles which did not give the geographical location of climate change were the least represented. For example, in the focus of local scale, *The Standard January 9, 2013* Kenya is discussed to be in the course of integrating resilience and adaptation to climate

change to its overall national planning framework. In *The Standard March 20, 2013*, the focus of the article is the developments in climate technology as Kenya sets up the climate technology centre and network (CTCN) in Nairobi Kenya. In *The Standard July 28, 2014,* the highlight of the article is on internal fights over climate change cash between the ministry of environment and the office of the Deputy President in Kenya. *The Standard March 29, 2016* focuses on the restoration Mau which is a local dimension.

On the other hand, the findings in the *Daily Nation* depicted climate change in an international scale as compared to the local scale. From the study, most of the articles portrayed climate change as a global issue. The depiction of climate change as a national matter and regional issue closely followed the global scale, whereas article that did not give any specific geographical indication were the least in the study findings. In the depiction of the global scale, the *Daily Nation December 1, 2015* depicts the cop21 summit in Paris which depicts various heads of state gathering to discuss issues climate change. In the *Daily Nation November 28, 2015*, the article focuses on global warming and the call by Australian to avert calamity. In the *Daily Nation December 2, 2014*, the article discusses the findings of Daavid M. Romps an atmospheric physicist at the University of California, Berkeley who predicts more lightning due to climate change. In the *Daily Nation December 7, 2014* the United Nations Environmental Programme (UNEP) executive director Acim Steiner is cited as mentioning that there would be a climate funding crisis because of the impacts of climate change that are on the rise.

The study findings between the two newspapers differed on the focus of the articles. *The Standard* newspaper mainly focused on the national scale whereas the *Daily Nation* focused on the global scale. The *Daily Nation* also incorporated the regional scale in the

geographical coverage of the articles an area which was insignificantly presented in *The Standard* newspaper.

The articles present climate change as a worldwide occurrence making it hard for the reader to decipher it as something touching on them. It is presented in a global scale leaving out much of the local dimension. Schäfer and Schlichting (2014) argue that climate change is commonly depicted on far reaching temporal and spatial scales making it an issue that many people cannot immediately comprehend.

4.2.5.2 Message focus

This research sought to investigate the focus of the messages communicated. In this study the focus was categorized into four main categories; the causes, consequences or impacts, Action Statements/moral evaluation, solutions/remedies/mitigation/adaptation and any other focus that existed and did not fall within any of the above categories. The study findings indicated that for both newspapers, the root causes of climate change were the least discussed whereas the effects were the most focused on. The moral evaluation and the solutions were moderately discussed in both newspapers.

The study findings indicated an overlap of the various categories. For example, it could highlight the cause but at the same time give the consequences as well as solutions. The study findings showed that for the articles whose focus overlapped, those that combined both the effects, and solutions (without causes) were the leading whereas those that had the causes, effects, moral evaluation and the solutions were the least. The study findings indicated that in the explanation of climate change the focus mostly eliminated the causes of climate change.

Data from *The Standard* newspaper indicate that many of the articles focused on solutions to climate change. Articles that highlighted the impacts as well as moral

evaluations of climate change were also there whereas those that focused on the causes of climate change were few in the articles. For instance, *The Standard March 20, 2013* gives the remedies taken as 'UN Sets up modern climate warning centre in Nairobi'. *The Standard July 16, 2014* advocates for Climate knowledge as a way of increasing yields and *The Standard March 27, 2013* focus on the fencing of the Eburu forest as a step to conserve the environment.

In the *Daily Nation*, just like *The Standard* newspaper, the study findings showed that a few articles concentrated on the cause of climate change, most focused on the impacts accrued because of climate change whereas those that presented the action being taken and the solutions to handle the issue of climate change were almost equal though less that those focusing on effects. These findings reflect those depicted in *The Standard* newspaper that revealed that the cause of change in climate is rarely captured in the articles on climate change. The effects form the largest component of the message presented in these articles. For instance, an article captured in the *Daily Nation December 4, 2015,* talks of 'two degrees Celsius is all that stands between hope and doom for the continent' and goes further to highlight the effects due to climate change. The *Daily Nation December 20, 2014* discusses how Climate change is hurting the tea industry whereas The *Daily Nation March, 27, 2017* discusses the devastating effects of climate change.

4.2.5.3 Level of solutions

The study purposed to find out the body or actor associated with the solutions to climate change. This analysis was picked from the focus of the articles (see section 4.2.5.2). Those that focused on the solutions were further scrutinized for the specific actors associated with the remedies to climate change. From the study findings, both

newspapers indicated that most of the solutions do not point to what an individual can do but rather point to the corporate level: The function of the central government as well as the international level of government. The individual level is mainly left out of the discourse and when discussed their contributions are presented as very 'small' compared to the large challenge of climate change.

From the results of the research, *The Standard* newspaper articles that focused on solutions were further analysed. The findings indicated the individual, the government, and the international actors as the main actors. Amongst the actors, the study findings presented the government as the main actor providing solutions. Most of the articles depicted the role of the government in coming up with the solutions. For example, *The Standard July 23, 2014* focused on technological advancements suggested by the government to deal with climate change, *The Standard July 16, 2014*, focused on the government encouraging the citizens to embrace new knowledge; *The Standard January 9, 2013*, *The Standard July 23, 2014*, *The Standard March 20, 2013*, focus on policy regulations and laws set by the government to address issues of climate change; *The Standard March 23, 2013* focus on partnership between the government and the private sector as a way of coming up with solutions on policy while *The Standard May 29, 2017* focus on having the political muscle by having a good representation to agitate and negotiate the countries position on climate change issues in relations to other countries.

The international actors were also presented in the study findings as an important component in devising remedies to climate change although not as significant as the government. There were also a significant number of articles that depicted the solutions as accruing from international actors (though less as compared to those pointing to

government interventions). The international bodies are depicted as the ones mainly generating financial remedies to climate change. For instance, *The Standard February 18, 2015* focused on technological solutions that are global in sphere such as geoengineering. *The Standard May 11, 2017*, and *The Standard October 16, 2016* depict the things the global community can do such as cut carbon emission as well as reduce Hydrouflorocarbon (HFC); *The Standard May 29, 2017, The Standard May 14, 2017, The Standard January 21, 2015,* and *The Standard April 22, 2014* focused on policy issues to be ratified by the world countries as a method of curbing climate change.

The study findings do not lay much emphasis on the role the individual can play in providing solutions to climate change. A limited number of articles highlighted the individual's role in creating resolutions to climate change. For example, in *The Standard July 16, 2014* the individual should focus on gaining more knowledge in combating climate change, and *The Standard march 1, 2016* plant more coffee to ensure that the country achieves carbon credit farming. The suggested solutions in *The Standard November 10, 2014 include* "having all drug traffickers reduce the miles they fly… all drugs be packed in biodegradable bags" these suggestions are meant to conserve the environment and mitigate against climate change. In pointing to the solutions accrued from the individual, the study findings depict individual actions which are not clearly linked to the 'bigger picture'.

The findings from the *Daily Nation* depicted a different trend from that of *The Standard* newspaper. Most of the solutions were depicted to be emanating from the international bodies. Although emphasis was laid on the international bodies' contribution to the solutions, the findings also pointed to the efforts and contributions of the government.

For instance, in the *Daily Nation*, articles the *Daily Nation December 1, 2015* and the *Daily Nation December 2, 2014* focus on policy measures that the government has already developed and those also being considered. Kenya is mentioned having voluntarily taken steps and actions for lowering emission and for facilitating adaptation to climate change. Some of the cross-sectoral self-imposed local initiatives and government-initiated activities include enlarging natural energy and other sustainable energy sources. The contributions of the individuals are negligibly discussed. The findings from the *Daily Nation* also point to the researchers/academic community as contributing to the solutions. For example, *Daily Nation December 7, 2014; Daily Nation December 6, 2014;* and *Daily Nation December 2, 2014* all point to the research works and their valuable contribution in dealing or understanding climate change.

Although some articles in the *Daily Nation* have a rallying call for the participation of all people in dealing with climate change, the articles do not specify what each party should do. For example, in the *Daily Nation March 27, 2017* the author points out that everyone is a part of the effort- we a team. She uses an analogy of running a marathon and argues that "Tackling climate change is a marathon team effort." She also concludes by urging the government to "leave nobody behind." The specifics of what should be done are more focused on policies that should/have been put in place internationally and thus the individuals' role is not clearly spelt out.

From these results it is evident that climate change is depicted as a phenomenon which can mainly be dealt with at the national and the global level. The individual's role is not given the emphasis it deserves yet when the message is focusing on the effects; it is the individual who is mainly affected. As depicted in the findings from The *Daily Nation,* the role of academia/research in coming up with solutions is an important one.

4.2.5.4 Attribution of blame

The study sought to establish the agency or body that was blamed for the climate change issues. According to Nisbet (2010, p.63) the public tends to reach decisions on political issues by reducing them down to questions of responsibility and blame. The attribution of blame wields a considerable sway on how the readers will elucidate the article and more so whether they feel they are accountable for the problem of climate change or not. This will then contribute to some extend to whether individuals would feel a need to act or the responsibility to take action. If the article portrays the blame as attributed to a body or individual who seems 'far away' from the reader, it may make the reader feel that they are not responsible and therefore they don't need to take any action.

The research findings from *The Standard* newspaper mainly attributed blame to the developed nations. The findings presented it as an issue caused by more economically advanced nations, and it is the less economically advanced ones that bear the brunt of their negligence. The articles depict this as a situation in which the developing countries are victims of more economically advanced ones. For example, in *The Standard January 7, 2015,* the author attributes the drought experienced to "the pollution in countries located north of the equator, primarily in America and Europe…" This ignores the fact that African countries also contribute to the drought situation by their actions. This attribution seems to lay blame on "them" rather than "us". The reader may therefore adopt this attitude that the problem is not or issue but an external issue that concerns other states and other continents.

The research findings in the *Daily Nation* echo the sentiments voiced in *The Standard* newspaper; they attribute blame to the developed countries. For example, in the *Daily*

Nation December 1, 2015, the developing countries lay blame on the industrialized nations as "they have been contaminating the earth for longer time." The blame is squarely placed on the industrialized nations and therefore, it seems to suggest that the developing nations are not to blame for the climate crisis. This is also depicted in the *Daily Nation December 4, 2015* where the problem is depicted as being caused by the developed countries and only suffered by the less economically advanced nations. The contribution of the problem by the less economically advanced nations is not a major highlight of the study findings. Climate change is therefore depicted as a western caused challenge. This can have an impact when designing ways of curbing the problem as it is seen as a 'them problem' rather than all of us contributing to the problem. This frame can lead to 'their' problem versus our solutions. It may push the reader to look at it as we are not the cause of the problem and therefore, we should not be held responsible for what happens on our earth

4.2.5.5 Temporal distance

The research sought to establish how climate change was depicted in terms of how soon it would happen; will it happen in the future or is it something that is already taking place. The findings from *The Standard* newspaper depicted the impacts of climate change as something happening and being experienced currently. The articles identified mainly showed climate change effects as something being experienced currently. The livelihoods of individuals affected by climate change are depicted as well as other specific effects. For instance, in *The Standard March 20, 2013,* changing weather patterns, drought, and soil erosion are given as the impacts of climate change taking place now. *The Standard July 28, 2014* uses a flooded homestead to depict the effects experienced due to climate change. In *The Standard July 16, 2014* the author cites, annual economic loss to Kenya of sh115 billion as well as respiratory diseases, deadly

cardiovascular disease, lung cancer and stroke as being associated with climate change. *The Standard March 27, 2013* points to the decline of monarch butterflies due to climate change, *The Standard March 29, 2016* point to the effects felt on other conservation areas such as the Mara Serengeti ecosystem, *The Standard May 11, 2017* points to the landslides experienced in Kenya, *The Standard January 7, 2015* points to the increased rainfall, *The Standard May 7, 2013* avers that climate change *is presently* affecting the lives of natives in the Amazon region, *The Standard September 18, 2013* drop in maize production and yields in general, *The Standard April 22, 2014* floods experienced in the country, and *The Standard November 20, 2015* economic losses experienced in sub-Saharan Africa.

The study findings showed a few articles that depicted climate change as something that will take place in the near future pointed to the economic costs that could be incurred in the future or the flooding and droughts that could take place if efforts are not taken to curb climate change. For example; *The Standard January 9, 2013* headline says "*Failure to fight climate change may cost Kenya sh. 87 billion annually*" 'variation in rainfall patterns could negatively affect Kenya's agriculture" shows a future probability but not a current problem. *The Standard March 27, 2013* talks of "climate change may favour goats" "heed the signs of impending disaster"; *The Standard November 16, 2014* Climate change 'will make lightning strike more'; *The Standard April 16, 2014* "increased disease, extreme food shortages and tidal surge that would cost Mombasa sh.90 billion in losses by 2030". These depictions of climate as a future issue or problem whose effects will be felt in the future have an effect on how the reader responds to the article. The sense of urgency is not felt as it is something that will take place in the future.

The findings from the *Daily Nation* were almost a replica of those in *The Standard* newspaper. It mainly depicted climate change as something happening now: affecting people's livelihoods rather than a phenomenon that will occur in the future. For example in *Daily Nation December 1, 2015; Daily Nation December 4, 2015; Daily Nation December 2, 2014*, the authors presents climate change as causing food insecurity forcing communities to migrate from place to place leading to conflict among communities, depletion of fresh water, decline in soil productivity, an increase in the global temperature of 3.8 degrees Celsius, desertification etc which have implications on food security, food crop production, water supplies, and economic growth. Extraordinary humanitarian and physical predicament marked by periods of insufficient rainfall and severe shortage of food, hot spells, flooding from heavier rains in some parts and ocean water elevation are also depicted as the effects happening now.

The study findings from the *Daily Nation* showed an insignificant number of articles pointing to future consequences of climate change. It depicted climate change as something that will take place in future. For example, *Daily Nation 20, 2016* depicts climate change effects as something that could take place in the future. The title "Climate change 'may boost spread' of Zika" suggests a possibility of something happening in the future but not currently.

The study findings in both newspapers mainly emphasise on climate change as something taking place right now. This is in terms of its effects that are felt. This is an indication of the acceptance of the climate change matter and the sensitization in people's thoughts that climate crisis is a present-day reality.

4.2.6 Tone of the article

The choice of words appropriated by the author sets the tone of the article. Use of emotive words sets a desired tone by the speaker. This study adopted Ereaut and Segnit (2006) classification of tone in climate change studies. The two classify tone in three main ways: alarmist, optimistic and pragmatic.

The Standard newspaper study findings showed that majority of the articles adopted the alarmist tone in depicting their stories. This means that in presenting the stories, a highlight of impending disaster was paramount. This mainly instils fear in the reader. This was mainly evident in the choice of words used in the articles. For instance, in *The Standard January 7, 2015*, the author uses emotive words: '*punishing* drought' 'impending *disaster'* '*terrible* food crisis' 'debased by the disaster'. This is also depicted in *The Standard April 16, 2014* "Why our heating Earth is a matter of life and death". This is also evident in *The Standard December 3, 2015* where the author mentions that the conference is dubbed "the last hope for a world engulfed in conflicts…". The title of the article also captures this sentiment: "a make or break". It therefore gives an alarmist stance because it will either make or break. In *The Standard January 21, 2015* it is depicted as a matter of choice "if the world still intends to cling on the little hope of mitigating future global warming…" In *The Standard May 7, 2013* the impact of climate change is portrayed to have already begun "climate change *is having impacts on* the lives of natives around the Amazon basin…" the author seems to have resigned to the fact that the effects have already begun… doesn't propose any solution or measures to deal with it. In *The Standard February 18, 2015* the attitude of the author seems to be apprehensive. The author by presenting the solution and stating its weaknesses seems to be apprehensive of the suggested solutions. When refereeing to

the suggestions by the scientific body, the author refers to them as "unattractive- but potentially necessary- back up plans". This is also reflected in the way the author frames the title of the article: "can science solve climate change?"

The same trend of using an alarmist tone is evident in the *Daily Nation* newspaper. In the *Daily Nation December 1, 2015,* the title used is "Leaders in talks to avert global doom". The focal point of the article is averting the climate change crisis. The authors say that, "The global leaders yesterday met in Paris at the beginning of two weeks of UN sponsored summit to save the earth from severe impacts of climate change". The caption used in the sub-heading 'two degrees Celsius is *all that stands between hope and doom* for the continent' seem to suggest impending tragedy. The choice of words either 'hope' or 'doom' – suggests a bleak reality for Africa. It mentions that the meeting in Paris is '*the final opportunity'* for the international community to forestall increasing temperature beyond 2Celsious- which if it surpasses will result in significant climate harm particularly in less economically advanced countries. The author goes ahead to compare global climate change to the threat of nuclear holocaust and widespread endemic diseases which are among the *most profound risks ever faced by humankind*. The author concludes by mentioning that; '*the unpleasant truth* is that the world is likely to experience a rise in global temperatures by between 3-5 C since politicians at the Paris climate summit will be reluctant or unable to make reductions needed to keep temperatures rise under 2C.

The *Daily Nation December 2, 2014* uses the title "The Danger up our skies" to describe the impacts of climate change. This title points out to some threat. The *Daily Nation December 2, 2014*. "Hop, Skip, Jump: After the inconvenience, more lightning". The *Daily Nation December 7, 2014* UNEP warns of climate change funding crisis. The

sub-title used was: Terrorism: Bigger budget on the way should countries fail to take steps to address global warming. A form of threat seems to be lingering in these titles. On *Daily Nation August 15, 2016* the author avers that "The chances of the rest of the world contributing the emissions reduction commitments that the US is required to undertake, or covering the shortfalls in climate finance are slim. This is scary." The *Daily Nation February 23, 2017*. If climate change does not kill, it will make us stronger. The argument depicts an alarmist tone which focuses on impending disaster.

From the two selected newspapers, it is evident that both mainly employed an alarmist tone almost in equal measure in their communication. The messages transmitted on climate change pointed to the disaster brought about by climate change as well as instilling fear on the reader. The pragmatic optimistic tone was also used in the study findings. This tone highlights the hope of a solution only when something is done about it. This means that with inaction the disaster will still strike. It seems to suggest that disaster can only be averted if some action is taken, if something is done about it.

4.3 Textual Frames adopted

To identify the frames that were adopted in the study, the key ideas that were evident in the study were presented. From these ideas, key themes were identified and the frames were then created. The recurrent patterns on how climate change is presented depict what in this study is called a frame. From the study findings various frames were evident. Some of the key themes overlapped covering more than one frame. These are presented in this section.

4.3.1 Economic frame

The first key aspect that was readily apparent in the results of the study was the financial dimension of climate change. Climate change was structured as having

financial implications- involving monetary issues. Some of the recurrent patterns that were discussed in the selected articles included losses incurred due to climate change, sources of the funds to mitigate climate change issues, managing the funds meant for matters of climate change, the wars around the funds and the deficiencies because of lack of the funds. This was analyzed as the Economic frame. On the selected articles, the economic frame mainly presented the financial loss accrued due to climate change. The theme of loss was identified and incorporated into the economic theme. This is because most of the loss that were discussed in the article focused on financial loss due to climate change rather than any other kind of loss. Even when there was a loss of livelihoods, or any other loss most articles translated that to the monetary value involved.

From the study finding in *The Standard* newspaper, the economic frame was evident. It projected the issue of climate change as touching on monetary issues. This frame was dominant in most of the articles. For instance, in *The Standard April 16, 2014*, the author mentions that this report predicted "increased disease, extreme food shortages and tidal surge that would cost Mombasa sh 90 billion in losses by 2030." The amount that will be lost is depicted in the article. This therefore links the issue of climate change to economic loss. Furthermore, the author mentions that "...their effects such as loss of incomes and widespread poverty…" The monetary dimension is brought to the fore of the discussion. Money matters are involved in climate change. The financial implication of climate change is depicted in the article. From *The Standard January 9, 2013*, whose title is *'Failure to fight climate change may cost Kenya sh 87 billion Annually'* the discourse presented is an economical one. Climate change is directly connected to the economic loss that will be accrued. This is similarly depicted in *The Standard July 16, 2014* which focuses on an annual economic loss to Kenya of sh115 billion.

The economic frame mostly depicts how the issue of climate change is costly for the country and the world. Nevertheless, it is noteworthy to mention that the study findings identified a negligible number of articles which highlighted the financial gains made from climate change. For example, *The Standard March 1, 2016* discusses the amount farmers can earn from the conservation program as well as other beneficiaries of the carbon credit trade. Similarly, *The Standard March 27, 2013* talks of "climate change may favour goats" and thus increases the finances of farmers. This dimension depicts climate change as something good as it brings financial gains.

In the study findings, The *Daily Nation* like its counterpart presented the financial frame as a prominent discourse in the selected articles. The narratives on the economic front are presented in various articles, for instance, *Daily Nation December 1, 2015* talks of rich economies pledging $100billion a year for poor countries from 2020 to deal with climate change. The financial implication is also highlighted in the article *Daily Nation December 1, 2015* as the author says that African countries will need sh.35-50 trillion a year by 2050 to tackle climate change. According to *Daily Nation, December 7, 2014* less economically advanced nations may require up to $500 billion per year to adapt to ravages of climate change. The author goes further to demonstrate the financial implications of managing climate change by citing the amount set aside for mitigation efforts. The author says, "In 2010-13, the amount of international public finance committed to adaptation was about $23-26 billion…". Climate change is linked to issues of financing and how money is spent; specifically, how the global financial system is allocating the worlds savings (*Daily Nation December 31, 2014*). In *Daily Nation September 30, 2014* Climate change is depicted to mainly affect Africa's development. The author says "Africa's development is highly reliant on climatically sensitive departments including agriculture, fishing and tourism. The agricultural sector

alone contributes 30 per cent of Africa's GDP and 50 per cent of its total exports. It is noteworthy mentioning that unlike *The Standard* newspaper, the findings from the *Daily Nation* do not mainly highlight the financial gains due to climate change.

4.3.2 Conflict frame

The second key idea that was identified in the study findings was the conflict linked to climate change. The study findings indicated that due to climate change, communities and individuals were engaged in various conflicts. Some of the conflicts depicted in the study included conflict over the dwindling natural resources such as water and grazing lands. Other conflict pattern depicted were the conflicts over the allocated financial resources. In relation to the conflict frame, various articles discussed elements of politics and the power plays due to funds allocated to climate change. This pattern was classified under the conflict frame as it focus on politics was more insignificant as compared to the area of conflict and power plays. The political frame was thus eliminated from being a major frame in this study. Similarly, the patterns that pointed to the leadership/governance theme were evident but were quite insignificant. These two discourses of politics and leadership/governance were both merged with the conflict frame as most of its focus was on the conflict elicited due to climate change.

Politicians were depicted as fighting over what was allocate to them and how to manage it whereas countries and nations were depicted as fighting over who was to be responsible for compensation over the losses of climate change. This dimension was discussed as the conflict frame in this research. For example, it is depicted that due to the scarce resources occasioned by climate change, individuals will fight to get access to resources. This was depicted in the selected newspapers, for example a fight for grazing lands due to the limited food for livestock. This can be viewed as a food security issue

that needs to be addressed by the government. Other articles depicted the elected leaders as fighting over funds allocated to climate change

The Standard newspaper findings depicted the conflict frame. For example, the power play among the various political leaders through their representatives is evident in managing the resources and funds for climate change. For instance, in *The Standard March 1, 2016* most of the paragraphs are dedicated to exploring the battles over the control of the billions of shillings dedicated to climate change by the UN. On *The Standard July 28, 2014* the fights for power positions is depicted. Internal fights between the ministry of environment and the office of the Deputy President is discussed in the article.

The study findings also depict the conflict frame in *Daily Nation* albeit in a small proportion. In *Daily Nation December 1, 2015,* the leaders of various countries are depicted as coming to discuss climate change issues but each with their political issues at the fore in *Daily Nation December 4, 2015*, the author mentions that previously, Africa 'has been treated unfairly' in the past COP conferences in getting the more economically advanced nations lessen their carbon footprints. Massive industry and international politics have prevailed over science and the destiny of humankind. Africa has the weakest negotiating power. The author thus depicts Africa as a weak player which cannot negotiate for issues of climate change as they are at the mercy of the 'big' players. Lack of expert negotiators to articulate African issues is also depicted as a political problem in handling climate change. In *Daily Nation December 1, 2015,* climate change is also depicted as a food and security issue. The author cites a source who says; "my community migrates to areas to where the resources are available this

leads to conflict with the local inhabitants of the area." The explanation of the author that the community depends on food aid shows this as a food security issue.

4.3.3 Technological frame

Another dimension that was evident in the study was the technological involvement in climate change. This aspect was depicted in articles that portrayed the various technologies that have been adopted to combat climate change, the specific innovations suggested by individuals, the sharing of technological innovations among countries, establishment of technological hubs to cope with change in climate, and the potential that technology portends in coping with climate change. This concept was then presented as the Technological frame. In this frame the climate change issue is presented as linked to technology. Climate change has spurred up progress in the technological arena. It points to the various innovations and advancements occasioned by climate change. This frame was incorporated with the frame of new knowledge. This is where new discoveries in climate change are discussed. New ways of doing things and new innovations are discussed. Because they all point to some level of advancement, they were categorized together under the theme of technology and thus the technology frame.

The research results from *The Standard* newspaper depicted the technological advancement frame. It showed how various technologies have been and can be incorporated in combating climate change. For example, in *The Standard January 9, 2013,* the analysis say that the key was using South-South Global Assets and Technology Exchange (SS-GATE) website an international platform that will be used to facilitate transfer of technology between the South-South Countries. The author goes on to mention that "Kenya has already established a Climate Innovation Centre intended to

encourage the growth and upgrading of regionally appropriate climate solutions and to foster incubation, empowerment and financing to small and mid-size businesses." In *The Standard March 20, 2013*, the focus of the article is the current developments in climate technology. Specifically focuses on the setting up of the climate technology centre and network (CTCN) in Nairobi Kenya. The centre focuses on facilitating adoption of technology to enable developing countries reduce greenhouse emission and bolster perseverance to shifting weather patterns, drought, soil erosion and other impacts of climate change. The source cited in *The Standard March 20, 2013* gives a list of activities related to the climate technologies taking place in 150 countries. He also highlighted the importance of this as it will deliver a larger scale operation on alleviation and adaptation.

The study findings from the *Daily Nation* newspaper differed with those from *The Standard* newspaper. The theme of technology and technological innovations was not depicted as a main theme and thus not explored in the *Daily Nation*. The various innovations and advancements were not presented as major narratives in their articles.

4.3.4 Scientific frame

The study findings also depicted a scientific dimension. This theme was presented as the scientific frame. In this dimension, climate change can be explained by science-climate science can explain the causes, effects and even give the remedies to climate change. The actors involved in climate change were also depicted as scientists and scientific innovators who have solutions to climate change. Within the scientific frame the theme that reflected on the government policies on climate change was included. This was first classified as a theme in policy making thus the policy frame but was later merge with the scientific frame as they both pointed to what scientific

steps/interventions have been taken in terms of policies and the specific scientific explanations to phenomenon. Some of the articles discussed the specific policies that have been drafted and adopted by the various government bodies. These policies were analysed as part of the scientific steps that have been adopted in climate change mitigation.

The results of the research showed that in *The Standard* newspaper, the scientific narrative was present in a number of articles. This was presented as the source that had been cited as well as the data that had been provided. For example, *The Standard January 9, 2013* presents statistical data from the Stockholm Environment Institute - the country stands to lose up to three percent of its GDP about sh87billion due to changing weather patterns. In *The Standard July 16, 2014,* reference is made to The NEMA Air Quality Regulations as used to set the standards of air pollution. On *The Standard March 27, 2013,* findings from Entomologists at Mexico's monarch Butterfly Biosphere Reserve are presented.

The findings from the *Daily Nation* newspaper depicted scientific data in their arguments. Scientific explanations were presented on what was happening and the expectations from the various stakeholders. For instance, *Daily Nation December 1, 2015* the scientists are cited as giving a warning that if the temperatures are unchecked, it will immerse the world into extraordinary humanitarian and physical predicament marked by periods of insufficient rainfall and severe shortage of food, hot spells, flooding from heavier rains in some parts and ocean water elevation. In *Daily Nation December 1, 2014* the Intergovernmental Panel on Climate Change (IPCC) "showed that atmospheric carbon dioxide burdens have escalated to the levels that are unparalleled."

From the study findings, both newspapers depicted the certainty of climate change as caused by activities of humankind. The warning given by scientists point to the fact that if human activity is unchecked then it will end in a catastrophe. Thus, the depiction is that there is a shared scientific view that climate change is caused by humans.

4.3.5 Responsibility frame

The responsibility dimension was also evident in the study. According to this frame, articles were discussed presenting the agents that were causing the various climate change issues as well those responsible for the solutions. The articles presented levels of blame when it came to causing climate change. The blame was looked at a large-scale perspective paying attention to the function of the major state players/countries and bodies. The smaller players were presented as victims but their contributions presented as negligible. This theme was put together with that of moral responsibility or moral judgement. This is because they both presented a level of responsibility on the various agents. This was defined as the responsibility frame.

From *The Standard* newspaper, the findings indicate that the blame is mainly laid on the developed countries and the government. For example, the government is blamed for fighting over climate funds while people's homes are flooding and the government is doing nothing about it (*The Standard July 28, 2014*). *The Standard July 16, 2014* indicates that it is the responsibility of the government to implementing policies that will prevent air pollution if not regulate it. *The standard July 23, 2014* avers that it is the role of the state in collaboration with the county governments to make sure that the citizens have access to clean and safe water. *The Standard March 1 2016* the government is responsible in developing an income sector from selling carbon credits yet their …" efforts have been slow at its best". *The Standard May 29, 2017* the author

says that the government "needs to commit to increased resources on climate change policies to enhance the execution of adaptation and mitigation measures related to climate change".

The articles also point to the developed nations as the root causes of climate change and thus should be responsible in its solving. For example, *The Standard May 11, 2017* the author argues that Africa contributes insignificantly to carbon emissions but still suffers significantly from the effects of climate change. The author adds that the international community should tackle the devastating impacts of climate change. *The Standard January 7 2015* attributes the drought experienced to "the pollution in countries located north of the equator, primarily in America and Europe…". In *The Standard December 15, 2014* many developing nations accuse rich nations of "shrinking their responsibilities to curb climate change and pay for damages it inflicts." The article projects the rich nations as not taking responsibility of the climate change issues they have caused.

The findings from the *Daily Nation* newspaper show that responsibility is squarely in the government and the international community/developed nations. For example, *Daily Nation December 20, 2014,* the author says that "…the government now need (sic) to establish a climate monitoring site to evaluate the consequences of climate change and create future risk management plans." In *Daily Nation December 1, 2015* Kenya is mentioned having voluntarily taken steps and actions for lowering emissions and for fostering adaptation to climate change. This article further indicates that the developing countries lay blame on the industrialized nations as "they have polluted the earth longer". In the *Daily Nation December 4, 2015* climate change is depicted as being caused by the developed countries and only suffered by the developing countries. The

Daily Nation December 7, 2014 "Developing countries most at risk of generated effects of climate change - severe weather occurrences, deluges, extreme dry spells and sea-level increase- are requiring that an affluent nation willingness to adapt and financial assistance be documented in the accord." The *Daily Nation November 17, 2016* the developing nations are said to be contributing "…a mere 0.1 per cent of the entire world-wide greenhouse gas emissions" yet seen to be carrying a heavier burden and suffering more than those who actually contribute to the main problem.

From the study findings both newspapers present the responsibility of mitigation and adaptation to the government and the developed nations. The government is mainly pointed to be dealing with policy issues and ensuring implementation. On the other hand, the developed nations are depicted as the cause of climate change and thus they should take greater responsibility in curbing it. It is noteworthy to mention that the two main bodies discussed present a 'big picture 'perspective. They are both large entities with the muscle to tackle climate change. The individual's role is not a main focus of both newspapers. The individual is depicted, as earlier discussed, as contributing to climate change in small ways which can be interpreted as insignificant if not tied to the big picture. Their responsibility in the mitigation and adaptation efforts is depicted as insignificant to some level.

4.4 Visual Frames

During the examination of photographs, the researcher sought to ascertain if a prominent visual element was employed in the chosen essays, interpret the central message depicted in the selected photographs, ascertain the position and the overall perception of the participants.

4.4.1 Main focus of the visual imagery in the selected articles

This study aimed at establishing the kind of photographs that were used (if any) in the selected articles. It sought to find out the standpoint adopted in the photographs that were used in the selected articles. This was predominantly illustrated from the key idea it portrayed. Adopting Entman's (1993) guideline of issue recognition, causal accountability, treatment recommendation or the moral judgement of climate change, I analyzed the way the photographs were linked to climate change.

From *The Standard* newspaper, the study findings indicated that majority of the articles lacked visualization. Many of these articles were categorized under the section of readers' mail which might influence the creation of visuals because of space constraints (most letters to the editors covered only one page for all the letters published for the day). Amongst the articles with visual imagery, most of them had pictures that were indirectly connected to climate change in their principal idea. In this study Entmas rules were followed to create the link to climate change. The fact that there was no clear link to climate change doesn't negate their use as the use of images associated with leaders or specialists could push up the credibility of an article. These articles were therefore analysed to know the visual representations that they portrayed.

The research outcomes from *The Standard* newspaper revealed that images that were indirectly connected to climate change mainly used depictions of writers, leaders attending conferences or conference activities. From the study findings, most of *The Standard* newspaper articles that had visuals with a link to climate change portrayed the impacts of climate change. Most of the effects revealed declining river water levels, and poor yields and impacts of farm produce. Other effects that were depicted in the visuals included deluging homes, inundated roads, lightning, and the classical melting ice. For

instance; in *The Standard January 9, 2013*, a photograph is included in the article depicting the effects of climate change. The focal point of the image is a man standing in a maize farm that that has maize drying up. The man's despair was oblivious. The heading 'variation in rainfall patterns could negatively affect Kenya's agriculture, which accounts for about 26per cent of its goods and services, and 75per cent of jobs'. *The Standard April 1, 2014* the photo shows a number of cars wading through a flooded street. At the background high-rise buildings are seen to suggest that this could have been taken in a town. The caption of the photograph is "Flood waters hamper motorists on the roads of Nairobi's Central business district after a brief and unexpected downpour".


ABOVE: **Cattle that have been affected by drought in North Eastern Kenya.**
RIGHT: **A failed maize crop.** (PHOTO: FILE)

reasingly getting hotter and evapo-
rating much faster.
It is expected that the impact of
ese calamities would significantly
ncrease conflicts as individuals and
ommunities fight over scarce re-
ources and food.
"The degradation of natural re-
ources as a result of both over-ex-
oitation and climate change will
ontribute to increased conflicts
er the distribution of these re-
urces," the scientist said in their
nclusion.
Any declines in the production of
h maize and beans could stir a
ne food security crisis in Kenya,
where the two commodities are the
most-widely consumed foodstuff.
Rural and poor households are
more exposed to these adverse ef-
fects of climate change because the
bulk of their household budgets are
spent on food.
Coffee and bananas are sensitive
to higher temperatures because of
specific pests that would otherwise
not attack the crops in the current
conditions.
The report by the Intergovern-
mental Panel on Climate Change was
discussed and approved yesterday in
Oklahoma, Japan.

Figure 4.1 Cattle affected by drought due to climate change

Source; Daily Nation (2013)

A resident fetches water from River Sirimon in Laikipia East, Laikipia County. Global warming is causing rivers to dry up. [PHOTO: KIBATA KIHU/ STANDARD]

Figure 4.2 River drying up due to climate change

Source; The Standard (2013)

Residents living near the dying River Nyamasaria in Kisumu County share the water with cattle. [PHOTO: DENISH OCHIENG/STANDARD]

Figure 4.3 Livestock and humans share little water from a drying river

Source; The standard (2014)

Figure 4.4 The classical image of climate change; Glacier

Source; Daily Nation (2015)

The other theme that was emphasized in the visuals was the cause of climate change closely followed by the solutions. In highlighting the cause of climate change the study findings indicated that the visuals used mainly pointed to logging/deforestation as the main cause of climate change. Logging was connected to charcoal burning in the forests. Unlike the *Daily Nation*, the visuals of logging pointed to vast areas with had been cleared. If logs were depicted, many logs were shown to be affected. In terms of charcoal burning, sacks of charcoal were shown. These depictions show the enormity of the issue.

Figure 4.5 Logging leading to climate change

Source; The Standard (2014)

From the study findings, the visuals that highlighted the suggested solutions to climate change mainly pointed to technological innovations, tree planting, right packaging of materials as well as sensitization forums. The visuals that focused on moral evaluation of climate change were negligible.

Figure 4.7 Environment 'conference' caricatures

Source; The Standard (2014)

From the findings in the *Daily Nation*, a large number of the articles depicted photographs that had no distinct connection to climate change. In establishing the clear link, the study used Entmans (1993) four dimension of problem, cause, moral evaluation and the treatment. The visual imagery used at times did not fall under Entmans depictions but still represented the gist of the article. For example, if the story focused on politics, it could for instance depict the visual of political leaders, or conference proceedings or conference attendees. These visual depictions not falling under Entmans dimensions were categorised as those without specific link to climate change however they were further analysed to identify the dominant frame in them.

As revealed in the research results, a considerable number of articles lacked visuals associated with climate change. Most of the articles that had no visual aids were predominantly those expressing personal views and letters to the editor in comparison to

the other categories. All the feature articles which appeared on the DN pull out were illustrated with photos. The visual depictions that had no relationship with climate change were more than those that had a link to climate change. For those that had no particular connection to climate change, many of them portrayed photographs of the articles' authors. Some portrayed events of workshops inclusive of participants, leaders convening /making presentations at conferences, or accommodation plans in conferences. Those two aspects, images of authors and conference components were the focal points of images that were indirectly connected to climate change.

Figure 4.8 Delegates in a climate conference

Source; The standard (2017)

Figure 4.9 Leaders arriving for a conference

Source; Daily Nation (2015)

Figure 4.10 Portrait of an article author

Source; The Standard (2015)

The visual imagery that had a link to climate change majorly highlighted the challenge. It mainly portrayed the consequences of climate change. A considerable number of the depictions of the challenge concentrated on arid regions, overflowing homes, inundated towns with motorists and pedestrians finding difficulty in navigating the roads, withered crops and dead animals (*Daily Nation December 2, 2014*). A small number concentrated

on the classical melting ice imagery. For example, *Daily Nation December 4, 2015* a page-filling photograph has been used - it shows a dry land- with noticeable breaking of the ground revealing the dry spell. A general lack of vegetation is obvious in the portrait. On the second page of the pull out, another photograph has been used. Carcases are displayed and a man gazing dejectedly at the horizon is seen standing by. There are a few vegetations left- high standing shrubs; the undergrowth is not there, it is just soil underneath-no grass. On the third page, there is a photograph of dry tree stalks in what looks like a flooded water body. The water body has risen to where there was dry land now covering more land. The devastation caused by climate change is the key them in all the three photographs depicted. Similar depictions of the devastating impacts of climate change are shown on *Daily Nation December 1, 2015*. On *Daily Nation December 2, 2014* the entire page 1 of the of the pullout is awash with a photograph of what looks like the skies at the set of sun at the background while the fore ground looks like land covered by black ashes- a depiction of the consequences of climate change.

Figure 4.11 Devastating effects of climate change

Source; Daily Nation (2015)

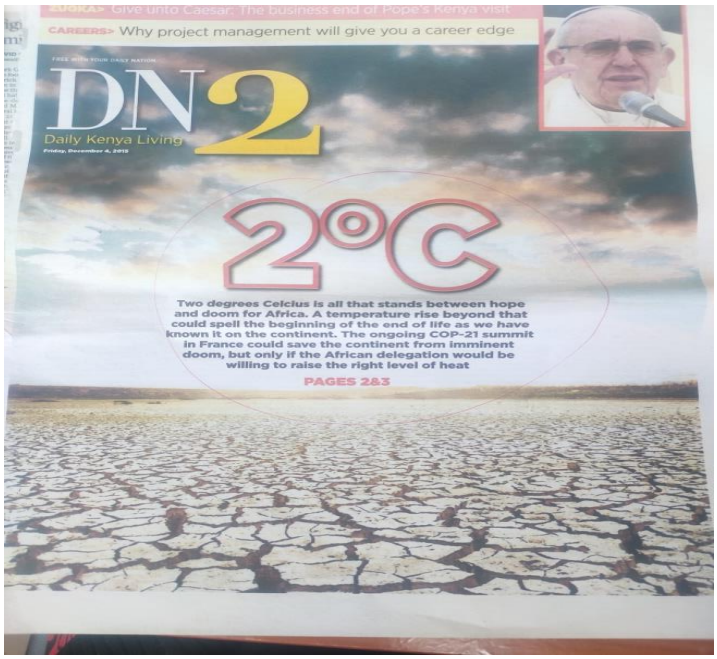

Figure 4.12 Dry Earth showing the effects of climate change

Source; Daily Nation (2014)

Figure 4.13 Flooded roads depicting the effects of climate change

Source: The Standard (2014)

The other visuals which concentrated on treatment/remedies and ethical judgments almost had same features. Most of the remedies portrayed individualization as it revealed the face of an individual engaged in an effort to counter climate change. These people included a child/children engaged in tree planting, people nurturing tree nurseries, energy-saving jikos exhibited by people, adults planting or holding tree seedlings. For instance, in the *Daily Nation December 6, 2014* an image of a man crouching to plant a seedling is portrayed. A similar portrayal is shown on the *Daily Nation August 15, 2016* showing a lady carrying a seedling in readiness for planting.

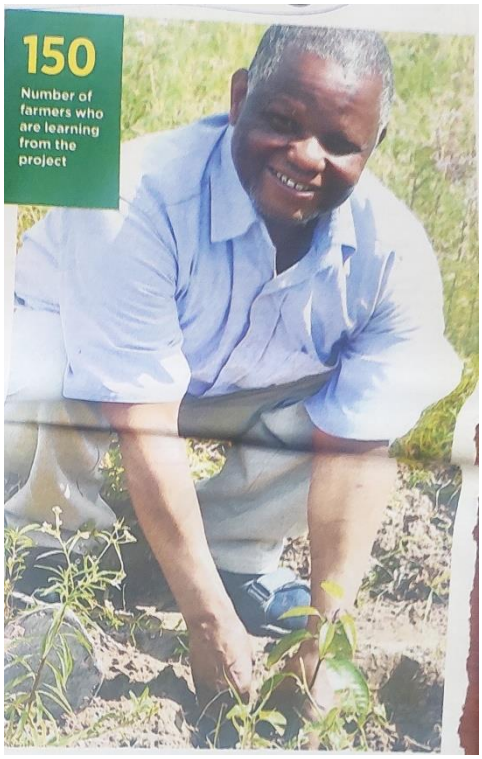

Figure 4.14 Don Planting a seedling as a mitigation effort

Source; Daily Nation (2014)

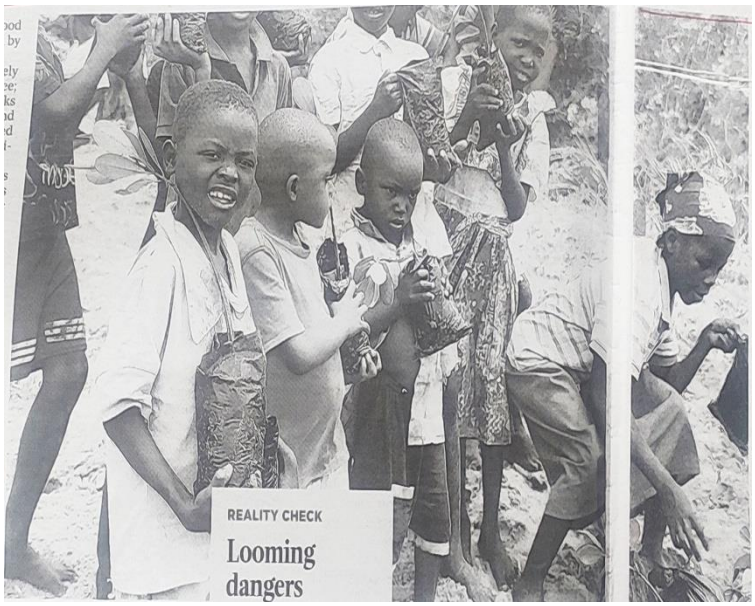

Figure 4.15 Pupils holding seedlings ready to plant

Source ; Daily Nation (2014)

Those that portrayed ethical assessments majorly showed demonstrators or activists engaged in demonstrations in the aftermath of major workshops or key political gatherings. It is worth mentioning that all the imagery that depicted demonstrations none had a regional feature. All of them portrayed dissidents from foreign nations such as Washington DC, Lima, Berline etc and demonstrations happening outside Kenya. For instance, an article appearing in the *Daily Nation August 15, 2016* contains global news alongside an image of demonstrators with posters protesting outside the location of the Marrakech conference. The *Daily Nation January 15, 2015* is accompanied by a photograph showing a woman protesting with a sign. It is labelled "A demonstration against climate change in Berlin, Germany, last year" A similar photograph is used on September 30, 2014 captioned "Protesters during climate change talks in New York, USA" yet it is the same photograph used on *Daily Nation January 15, 2015* the captions are only different.

Figure 4.16 Demonstrations in Berlin during climate conference

Source; Daily Nation (2014)

Figure 4.17 Demonstrations in Paris

Source; Daily Nation (2015)

From the findings of the study the pictorial representations that highlighted the cause of climate change were rarely used. Those that were employed majorly highlighted

deforestation as a cause of climate change. The imagery portrayed stumps of trees, or firewood-carrying women and burning charcoal. A small number showed eucalyptus being planted and a car exhaust emitting fumes to the sky. The individualization of these root causes may not really portray them as main causes of climate change. One stump of a tree may not portray the principal consequence like when many stumps are used in the same way, one car exhaust may faintly show the image unlike when a number of cars are used (See Figure 4.18-20 for example of the causes of climate change).

Figure 4.18 Photo showing causes of climate change- deforestation

Source; Daily nation (2016)

This is similarly manifest in figure 4.19 where a solo tree stump is depicted as a link to the cause of climate change.

Figure 4.19: Photo of a tree stump to show a link to causes of climate change

Source; Daily Nation (2016)

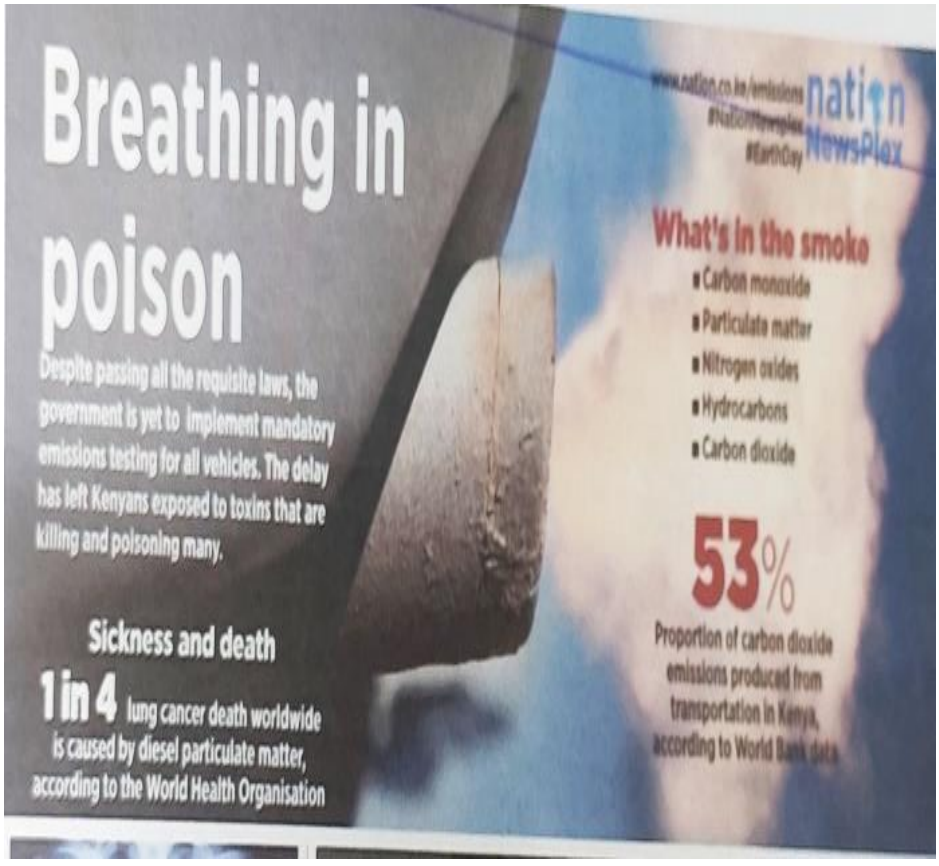

Figure 4.20 photo of car exhaust with fumes out- a link to causes of climate change

Source; Daily Nation (2016)

Some of the photographs used showed the portrait of the author of the article whereas others showed prominent people in meetings or even people attending conferences. For example, in the *Daily Nation November 28, 2015* the photograph of the Queen Elizabeth of England accompanies the article. While in the *Daily Nation December 1, 2015* the article features an image of a representative from Turkana County attending climate change meeting in Paris. The room he is standing in is a conference hall of some sort as in the background individuals are seated and seem to be focusing on a presentation upfront. On *Daily Nation November 17, 2016* depicts a photograph of President Uhuru Kenyatta being received by a high-ranking official of the government of Morocco upon arrival at Marrakech International Airport in Morocco.

From the study findings, a larger number of articles made use of images that had no link with climate change followed by articles that had no visuals. Only a small number used images that had a connection to climate change. It is important to note however that in the *Daily Nation*, the pull-out section *Daily Nation December 4, 2015* employed visuals that had a link with climate change when covering narratives on climate change. Going by their size, these photos were striking. In most instances, they covered the entire page and were conspicuous. This is different from other sections that either utilized images sparingly or used those that had no relationship with climate change.

From these findings, it is clear that many articles did not make use of portraits. Those that did mostly failed to communicate the climate change message on the photos. Majority of the chosen articles featured pictures showing individuals convening at conferences, leader's images and other messages that did not communicate the

impacts/challenge, causes, ethical assessments or even remedies to climate change. In *The Standard* newspaper, study findings indicated a highlight on logging as the main cause of climate change. The focus on only one main factor can obscure other causes of climate change. On the other hand, *Daily Nation* newspaper mainly emphasised the individualization concept when presenting the causes of climate change. For example, when depicting logging a tree stump is presented, when depiction air pollution one car is depicted. Individualization can simplify too much the causes of climate change and mask the bigger picture.

The *Daily Nation* in their depiction of the consequences of climate change depict a 'big' effect caused by climate change. This is in contrast to the solutions suggested which points to 'insignificant' remedies rendered by say and individual don planting a tree. In *The Standard* newspaper, the same is duplicated; that the consequences are disastrous and massive while the remedies are presented by individual efforts.

4.4.2 Actors used in the visual imagery

In analysing the participants in the selected visual imagery, the study sought to pinpoint the central issues or objects of emphasis in the visuals. The actors chosen as participants in the visuals have an impact on the interpretation of that visual.

The study findings from the *Daily Nation* showed that the element of stereotyping grounded on social stratification was manifest. The study results pointed out a portrayal of social structures in the graphics. The impacts of climate change were depicting as impacting actors on the basis of their social class. In demonstrating the outcomes of climate change on people's sources of income, many of the images used portrayed the actors as individuals from modest origins, for instance, the dressing they are wearing suggest their position in the social hierarchy; the background depicted show say remains

of their dead animals or shrivelling crops (see; *Daily Nation December 4, 2015*). Those that portrayed the impacts on the middle-income group portrayed the effects on the infrastructure more than the people's sources of income for instance, when deliberating the consequences of climate change such as flooding, they are shown driving in overflowing roads in metropolitan areas or rivers (see; *Daily Nation December 2, 2014*). They are also portrayed from a worldwide perspective taking part in protests (see; *Daily Nation December 7, 2014; Daily Nation November 28, 2015)* and when working individually to cope with change in climate (*see; Daily Nation December 6, 2014).* Those graphics that portrayed the distinguished people depicted them at workshops or other 'positions of power' where they are attending conferences or speaking in podiums (see; *Daily Nation December 1, 2015* shows President Uhuru Kenyatta in a conference).

According to the research outcomes in *The Standard* newspaper, out of the articles that had supporting visuals that didn't show a direct connection to climate change, most exhibited images and graphics of leaders in meeting, offices or walking together. The elites are presented as powerful people participating and debating issues in main gatherings or committed in their offices. For instance, in *The Standard January 22, 2015* the portrait shows people following deliberations during an assembly for communities reliant on forests in Nakuru. The image in *The Standard December 3, 2015* shows people sited in a conference hall and is marked "President Uhuru Kenyatta and Environment CS Prof. Judi Wakhungu during the conference of parties meeting in Paris, France". *The Standard May 29, 2017* shows a group of leaders seated in a conference hall during the G7 2016 summit and is captioned: "Leaders attend the Group Seven Summit. There was no concrete agreement on global warming". This is similarly captured in *The Standard March 23, 2013* which gives the photographs of individuals

who took part in the three-year negotiations that culminated to the elevation of UNEP to UNEA.

In the depiction of the consequences of climate change on sources of income mostly the impoverished are used (as depicted by their dressing and the location they are portrayed in). For example, *The Standard July 29, 2014* portrays an individual spraying vegetables in a small holder farm. *The standard July 28, 2014* shows the image of a man slugging through an overflowing homestead. The portrayals additionally demonstrate the impacts on infrastructure for the middle class. When the effects of climate change are depicted, it would mainly portray inundated roads and affected infrastructure.

Figure 4.21 Devastated farmer depicting effects on livelihoods

Source; The Standard (2013)

These portrayals can impact our perception of climate change and how it influences people in society. If we cannot relate with the actors, we may brush off the message. If the portrait is not something we can identify with, we may ignore the whole article because of that. For instance, if one saw the impacts of climate change as insufficient forage for the animals, if they don't keep animals and they live in a surrounding without animals the concept may not be appreciated. One cannot identify with the pressing need

the farmers have. The urgency to 'do something' about climate change may not be stimulated as they cannot resonate with the crisis.

4.4.3 Visual framing in the selected articles

This study aimed at identifying the central ideas and the ensuing frames transmitted through images in the selected articles. As revealed in the study findings in *The Standard* newspaper, many of the graphics lacked a direct relation with climate change. The connection was developed with regard to Entman's (1993) components mirroring climate change that cause, problem, moral evaluation and treatment or solution. The bulk of the visuals in *The Standard* newspaper therefore did not display the major components. Most of them presented peoples' pictures, people in conferences, leaders facilitating discussions, actors in conferences, accommodation plans in conferences, protests during conferences. This frame was classified as the politicians/talking heads frame. For example, *the Standard May 25, 2014* displays a photograph of a man highlighting a point in his argument with his hand raised. The photograph is captioned "National Environment Management Authority Director-General Geoffrey Wahungu who was early this year indicted by a Mombasa businessman for attempting to force a sh.3 million bribe." *The Standard December 3, 2015* with the caption "President Uhuru Kenyatta and Environment CS Prof. Judi Wakhungu during the conference of parties meeting in Paris, France", *The Standard December 15, 2014* which shows "Representatives relaxing during a recess of the general session at the UN climate change conference COP 20 in Lima and *The Standard March 23, 2013* all show different leaders in attendance or participating in conferences or being part of delegations.

From the study findings, the politicians frame was similarly depicted in *the Daily Nation*. It was obvious in graphics which depicted leaders leading discussions in varied gatherings or directing representatives, as well as conference organizations. The images which represented this frame were important in the *Daily Nation*. For instance, *Daily Nation December 1, 2015* shows the head of state (Uhuru Kenyatta) and Environment Cabinet Secretary Judy Wakhungu during the COP 21 in Paris.

The other obvious frame in the study findings was the one that highlighted the effects of climate change. It portrayed the catastrophic impacts of climate change. This frame was categorised as effects and risks frame. The impacts frame was manifest in the two newspapers. In the pull out in the *Daily Nation*, which is a section primarily dedicated to features, the effects of climate change when portrayed used long shots portraying the effects as exceptional. It displayed climate change effects in long shots of far-off land. For instance, in *Daily Nation December 4, 2015* a portrait covering the entire page has been used- it displays an arid landscape- with noticeable splits on barren land an indication of how dry it has been. In D*aily Nation December 2, 2014* page 1 of the of the pullout is awash with a photograph of what looks like the skies at the set of sun at the background while the fore ground looks like land covered by black ashes showing the consequences of climate change.

The impacts and threats frame is also manifest in the study findings from *The Standard* newspaper. Contrary to the pull-out section of the *Daily Nation* which presents it as remarkable phenomenon, *The Standard* newspaper conveys these threats in a proportional size (mostly as a portion of the page). For example, *The Standard November 16, 2014* has a brief explanation that goes along with the photo which is: “For every two lightning strikes in 2000, there will be three lightning strikes in 2100,

The Standard July 16, 2014 shows the effect on wildlife with the visual showing a buffalo standing in the midst of a flock of flamingos with retreating waters in the background. *The Standard July 16, 2014* shows a portion of land covered by eucalyptus and a river bed on the brink of drying. All of them portray the consequences of climate change.

Another frame that was manifest in the study outcomes portrayed the statistics in relation to climate change. These visuals showed graphs, charts or any other drawings portraying statistics on issues of climate change. This frame was called the graphs and models frame in this study. It was a frame that entailed information on climate change. It presented a synopsis of the data mirroring the occurrences in the climate change sector. Both newspapers portrayed this frame. For example, in *The Standard* newspaper:

Figure 4.22 Info graphic on global warming

Source; Daily Nation (2017)

In the *Daily Nation* April 22, 2017 infographics are also used to show how emissions are causing illnesses and also affecting the climate. The same is also depicted in *Daily Nation* May 25, 2015 DN2 where statistics on the public knowledge on climate change are depicted. Daily Nation September 4, 2015 DN2 also depicts the use of inforraphics on the drought crisis in Horn of Africa.

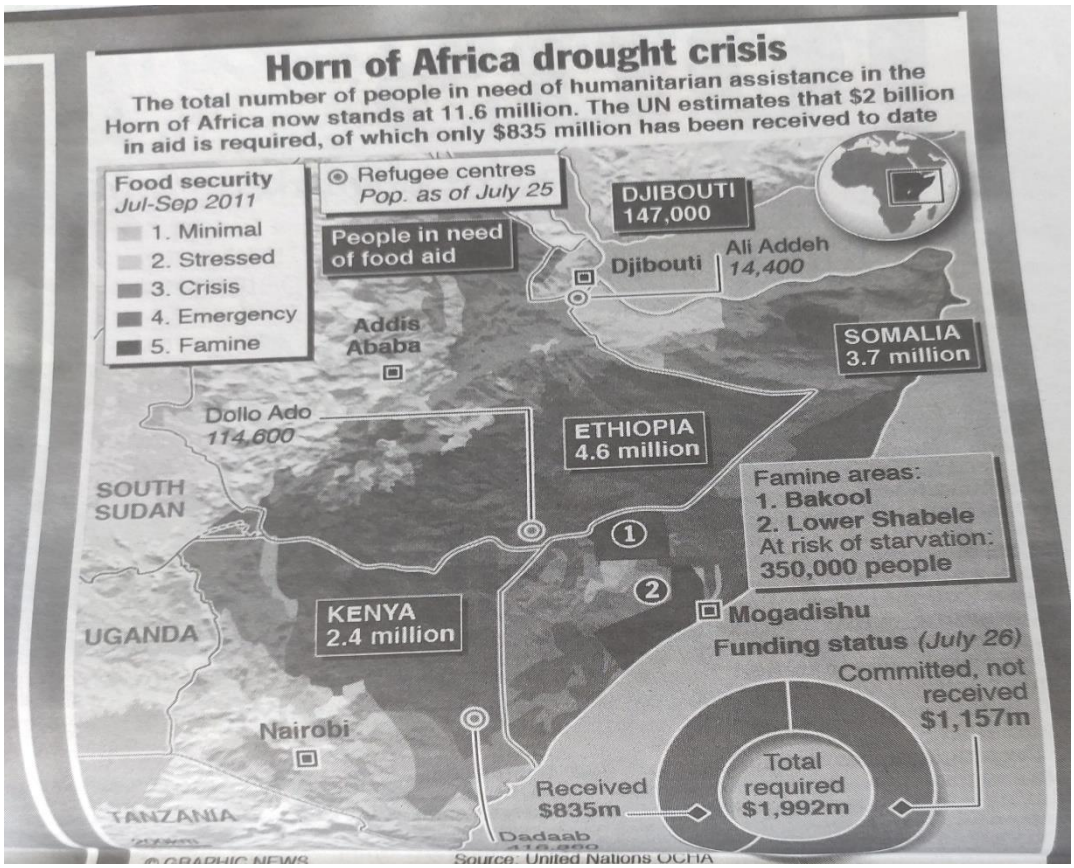

Figure 4.23 Statistics of famine

Source; Daily Nation (2015)

From the research results the two newspapers used info graphics though they were seldom used in both newspapers. When used, they portrayed the varied statistics in the chosen newspapers in regards to climate change. The graphs and models frame although not a very significant theme was investigated as it emerged in both newspapers as a component of the frames in the study.

The framework for sustainability in this study was taken to refer to visuals that depicted the remedies and attempts used to mitigate climate change. They portrayed climate change alleviation and adaptation efforts. The images depicted individuals participating in an endeavour to tackle climate change this could be in terms of optional energy use, travelling means with decreased pollution, or tree planting.

From the study outcomes, this central idea was depicted in *The Standard* newspaper. The climate change remedies were seen to be 'small' actions by the citizens. The study results reveal that the solution that is majorly portrayed visually is the planting of trees by individuals. This shows an individualized point of view to the remedy of climate change. For instance, it portrayed people engaged in tree planting as a remedy to climate change. For example, in *The Standard March 27, 2013* the visuals show men construct a fence; *The Standard July 13, 2014* showing a small patch of maize emphasising on green economy model. The caption is "you don't need a large piece of land to cultivate as the maize outside the Wells Fargo offices in Nyeri attest" and *The Standard December 10, 2014* shows a visual of students using box technology to nurture seedlings. Most of these solutions are small actions by individuals. The research results from *The Standard* newspaper reveal that the visuals fail to depict corporate large-scale remedies to climate change.

From the study findings in the *Daily Nation* the sustainability frame was found. The findings of the study showed that the images portrayed revealed insignificant actions performed by people in their quest to combat climate change. The article in *Daily Nation August 15, 2016* for example, features the portrait of a woman holding a plant. It is labelled, "Prof Sean Maxwell. (Right is a grape varieties (sic) adapted to climate change)." In comparison to the images showing exceptional impacts, the framework for sustainability shows remedies which are negligible in comparison to the impacts portrayed in the graphics.

The civil society demands frame was another frame that was manifest in the findings of the study. This frame was primarily focused on photographs which depicted the work of the civil societies as they push for alleviation efforts in compliance with climate change.

From the study findings, this frame was only manifest in the *Daily Nation*. The visual representations in the *Daily Nation* that portrayed this frame predominantly highlighted the protests on the streets to encourage leaders arrive at some decisions or enact some policies. For example, *Daily Nation January 15, 2015* has a portrait marked "A demonstration against climate change in Berlin, Germany, last year" showing demonstrators on the streets with placards. Another article *Daily Nation August 15, 2016* portrays protestors holding protest signs outside the location of the Marrakech conference.

This study initiated a fresh perspective known as the humour imagery. This is a frame that came up from the research findings from *The Standard* newspaper. This structure demonstrates the use of gags, amusement and comicalities as well as caricature and cartoons in the depiction of narratives on climate change. These articles are superficial in relation to newspaper articles. *The Standard* newspaper had an extra view when conveying climate change narratives. Amusement was used to express issues of climate change. The authors exhibited narratives that contributed to 'fun' instead of the ordinary emergent or opinion pieces. An article appearing in *The Standard November 10, 2014* under the section of Crazy Monday for instance, uses caricature to induce hilarity but pinpointing the remedies of climate change. The perspective adopted by the writer in reporting this article is that of 'jokes'. From the caricature to the story line its meant to entertain the reader who consumes this information. The focus of the article is how substance abusers can contribute in the conservation of the environment- to mitigate against global warming. It mentions issues of climate change but with a light touch. The suggested solutions include "having all drug traffickers reduce the miles they fly… all drugs be packed in biodegradable bags". These suggestions are meant to conserve the environment and mitigate against global warming. The people depicted as working to

conserve the environment in this article are the drug and substance abusers. They had convened a conference to deliberate on methods of alleviating the impacts of global warming. The people used in this article are members of the society who are often looked at as failures and therefore by introducing them into the dialogue, the author seems to set the stage for interaction by other members of the society. If the 'outcasts' of the society can convene a meeting to deliberate on mitigation efforts, what about the elite crop of the society? The author therefore introduces a discourse of inclusivity in the efforts to mitigate climate change through humour.

4.5 Chapter summary

In this chapter, the study findings presented have shown the general trends evident in the study. The coverage of climate change in both newspapers has depicted that climate change is not a major beat in the selected media and thus not placed prominently in the newspapers. The understanding of climate change message by the readers may be affected by the framing of climate change which fails to highlight the causes of climate change while dwelling majorly on the effects. The textual frames analysed have presented climate change as in a manner that alienates the individual from the climate change issue. For instance the economic and the responsibility frames have emphasized on the corporate bodies rather than individual roles in climate change. The visual frames on the other hand have also minimised the individual's role and contribution in dealing with climate change by emphasizing on the enormity of the climate change issue and the negligibility of the persons contribution to it. These findings points to an opportunity for improvement of communication strategies from both journalists and climate change policy makers.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

"In the specific area of climate science, the way the public receive, and react to, the information is in part a product of the way it is framed…" (Painter, 2013, p.8).

5.1 Chapter Overview

As earlier mentioned in this Thesis (see chapter 2.4), the print media is a significant source of climate change information to the citizens. This is mainly because they have space for an in-depth coverage of scientific issues giving room for the issues to be extensively explained or discussed. This study uncovered several issues and trends with respect to the framing of climate change in the selected print media. This section presents a summary of these findings, the discussion as well as the conclusion and recommendations.

5.2 Summary of Key Findings

This section gives a synopsis of the principal outcomes of the study. These findings stem from the research and are established on each of the research question.

The first research question attempted to pinpoint the key trends in print media reportage of climate change in selected newspapers. From the findings of the study, there were no consistent authors in the selected articles and most of the articles were opinion pieces. Most articles were triggered by world events and politics with very few stories pointing to human interest events. Climate change was projected as a matter taking place now with the emphasis on the impacts of climate change. The sources attributed to in the stories affected the message focus.

The second research question sought to identify the textual frames that were evident in the selected articles. From the study finding climate change was framed using an alarmist tone focusing on the impending disaster with the responsibility of causing and finding solutions to climate change being laid on developed countries. Climate change was presented using the financial model pointing to the financial losses accrued as a result of climate change, conflict frame pointing to the politics and power plays due to climate change management, technological model pointing to the new knowledge and technological innovations surrounding climate change, the scientific frame pointing to the policies and interventions in place and the responsibility frame which pointed to the moral judgment on who was responsible for climate change.

The third question of research attempted to identify the visual models that were used in the selected articles. The study findings indicated that most of the articles were not accompanied by any visual imagery and those that did mainly focused on the impacts of change in climate. The few that concentrated on the causes highlighted individualized causes to climate change and those on remedies focusing on individualized solutions. These two categories were unlike the effects which were magnified. The actors in the visual imagery were depicted based on their social class. Climate change was depicted using the impacts and threats frame which depicted remarkable effects using long shots, the framework for sustainability that depicted insignificant individual efforts in dealing with climate change, civil society frame which depicted campaigns and demonstrations on the global rather than local front and the graphs and models frame which depicted climate change as a scientific issue with presentation of statistics. A new frame humour and imagery frame was used depicting climate change as an issue that one can have fun with.

5.3 Discussion of findings

This section conveys an examination of the key outcomes in connection with the literature already reviewed and the theories used in the study. The discussions are in line with the research questions of this research which attempted to establish the trends in media reportage of change in climate in the selected newspapers in Kenya; how the visual imagery had been framed in the selected newspapers in Kenya and the agenda the selected newspapers set in framing of climate change.

5.3.1 Trends in media coverage of climate change in selected articles

The study began with collecting the basic information from the articles selected. By so doing, the researcher sought to understand the broader themes involved in the articles such as the authors of the articles and where these articles appeared in the newspapers (placement). In line with the agenda setting theory, it is the media that will highlight what is important by how it is setting up issues and the issues to be discussed. From the study findings the authors who wrote the articles were not consistent in both newspapers. The quantity of articles written by one author was negligible in both newspapers. There was lack of consistency in writing articles on climate change. This depiction could point to climate change not being a main beat in the selected newspapers and thus no specific journalist is assigned to it. With regard to the framing theory, the media house policy can have an impact on the framing of issues. If the media house doesn't consider climate change a major issue it may not make it a major beat and thus mat not assign journalists to it.

In trying to understand the trends in the covering of climate change in the selected articles, this research attempted to classify the articles based on the section which they appeared in the newspapers. The study findings indicated that the opinion piece section

was the most used in the selected articles. Most of the articles examined in the study were opinion pieces for both newspapers. Most of the previous studies (for example, Obonyo, n.d; Bell, 1994; Schäfer *et al.,* 2013) have focused on news item yet from this study the amount of opinion pieces is significant enough to warrant a focus by researchers. This was an important finding from the study. Opinion pieces are significant in number meaning they can be a good avenue in communicating climate change messages. This could also signal that the editors have a significant impact in the framing of climate change message as they seem to 'allow' a significant quantity of opinion pieces on climate change. According to the agenda setting theory, it is the media that highlights salient issues by giving it a voice and space in the media. The significant number of opinion pieces on climate change could point to the media 'allowing' the climate discourse as an important issue in society.

This study intended to establish the priming of articles by identifying their placement on the chosen newspapers. According to the agenda setting theory, the placement of articles determines to some extend the perception it will get from the audience. From the research results, *The Standard* newspaper showed that majority of the articles appeared beyond page 10 of its publications. Most of the selected articles which emerged on the cover pages in *The Standard* newspaper mainly covered events with a political undertone or involving prominent leaders. These findings were almost similar to those found in the *Daily Nation* which also depicted that most of the articles appeared beyond page 5. The placement of articles in a newspaper may be seen more as an editorial issue rather than a framing issue. It is mainly determined by the editors based on the newsworthiness of the article.

From the study findings, the placement of climate change articles can easily be attributed to media house policy (editorial policy) and organization. As mentioned earlier, most of the articles were opinion pieces which would appear on specific pages of the newspaper based on the organization of the newspaper. This is in agreement with Hulmes (2007) who avers that the placement of articles often reflects the precise account for positioning news (e.g. national before global, political before environmental) of each newspaper (p.7).

This study intended to find out the main triggers of climate change stories focusing mainly on news items. In doing this the researcher was guided by the inverted pyramid. By looking for these the study was able to identify the triggers of the events covered in the articles. From the study findings, both newspapers depicted a similar trend. For both of them reporting on climate change was mainly prompted by global happenings. Most of the articles analysed in both newspapers were articles that covered stories that had a link with major world events. The findings echoed those of Schäfer et al. (2013) who in their study found out that the principal drivers of news coverage on climate change were international climate summits. This is also in agreement with the argument postulated by Fernández-Reyes, Piñuel-Raigada, and Águila Coghlan (2017, p.1171) who carried out their study in Spain. They found out that "The media agenda is exceptionally accelerated by global political occurrences". This is in line with the journalistic norm which guide editing and publication of articles. The guideline for choice of articles to publish is dependent on its news worthiness. According to the agenda setting theory, the media tells us what to ponder about by the stories they set. The study findings show that the main catalyst for what the media will propagate is the political events. This means that the framing will be highly affected by the catalyst. The prominence of the individuals involved makes the article newsworthy and thus this could explain the

trigger of climate change articles being international events attended by world leaders. This trend, according to Fernández-Reyes, Piñuel-Raigada, and Águila Coghlan (2017, p.1177), has two effects. The first one it reflects the fact that climate change is a universal happening; this is a good thing "because climate change is shared universal action; conversely, it can be raised: is the challenge of climate change being derived and assigned to the global scope, losing local or immediate protagonism (p.1177)" If it presented that the problem is only handled at an international scale it decreases the local efforts which would have been put forth in the local sphere. According to the framing theory, how an article is framed has an implication on engagement, action and perception. Therefore, the trigger of coverage pointing to the international space blurs the action of the local sphere and what can be done locally (Carvalho, 2010). The reader thus may view the event (climate change) as a distant concept disconnected with their felt need for local action.

This research also intended to understand the framing of climate change message in reference to the temporal distance depicted in the articles. From the research results, most of the articles in *The Standard* newspaper mainly depicted climate change as an issue happening now. The effects are being experienced now. The findings depicted in *The Standard* newspaper were also similar with those of the *Daily Nation* newspaper which had articles depicting climate change as an issue being felt now being the most. These findings differed with those of previous scholars such as O'Neill and Nicholson-Cole (2009), Nicholson-Cole (2005) and Doyle (2007) who found out that media regularly separates us from communication on climate change and reinforces feelings of emotional, temporal and/or spatial detachment. According to the framing theory, the manner of presentation of an issue affects its interpretation. The current study findings shows that climate change is a matter that has been presented as happening now and

therefore urgent and needs to be addressed now. The framing of an issue can spur action amongst the audience. The presentation of climate change in the selected articles can therefore spur action on climate change amongst the audience.

The study of sources of news and their connection with news agencies is key to comprehending the framing of climate change by the media and how representations evolve with time (Anderson, 2011, p.535). Berkowitz (2009) has argued that the aura of factuality is borne by the source which in turn affects the overall perception of the article by the consumers of the information. This study was interested in identifying the sources that have been used in the articles. This is because "One method that the media uses to develop frames is through the use of sources, who are usually stakeholders competing to frame a matter in a particular manner (Hedding, 2017, p.373)". Hedding goes on to assert that "It is not only the sources that are used, but also the assertions of those sources, that can help frame an environmental policy issue". Previous studies (Takahashi, 2011; Dotson, 2009) have pointed to the reliance on government sources and political sources (Anderson, 2007; Trumbo, 1996) in climate change stories. Despite this observation, this study found out that in both newspapers, the source that was mainly cited was the scientific source. The study findings agree with the findings of Albaek et al. (2003) who reported that the number of specialists quoted as sources of news has been on the rise over the past few decades. A position held also by Anderson (2007) who argued that the media favours the realm of science due to their impartial assessment. A focus on scientific sources meant that the reliance on scientific sources could boost the reliability of the articles which were published.

Beyond the identification of sources, it is important to also analyze the assertions that they make. This study went further to analyze the kind of assertion attributed to each of

the source that was used in the study. Berkowitz, (2009) and Cissel (2012) have argued that the way news is portrayed depends on the source cited. This is in agreement with the tenets of the framing and the agenda setting theories which emphasize the importance of sources in the final presentation (the way the issue will be framed) of issues. The source will in most cases share a message that portrays them in a positive light and thus may not highlight issues that shows them as inefficient. The trends evident in terms of the assertions made were replicated in the two newspapers. Both depicted similar assertions based on the sources. The research outcomes revealed that numerous scientific sources dwelled on the impacts of change in climate, solutions to the challenges attributable to climate change and the contributions of different sectors to climate change. The assertions made by the government sources mainly pointed to the efforts made by the government to handle climate change. For example, the establishment of climate innovation centre, policy implementation, funding and many more. The individual sources (which were the least cited source) mainly pointed out the catastrophic effects of climate change on their sources of income. They seem to point out their helplessness in tackling climate change.

Interestingly, the geographical presentation of climate change differed between the two newspapers. *The Standard* newspaper focused on the national scale whereas the *Daily Nation* focused on the global scale. The choice by the *Daily Nation* newspaper to present climate change using the global dimension can affect how the readers make sense of it. It can make the issue seem distant and thus nothing they should worry about. The findings from the *Daily Nation* reflect those from previous scholars (Schäfer & Schlichting, 2014) who have argued that climate change is normally described on massive temporal and spatial scales making it a matter that many people are unable to directly comprehend.

Studies (Das, 2020; Garcia & Proffitt, 2021) have shown that there is a continued dominance of state and expert actors over others in climate change literature. The study results are in agreement with this literature as it found out that the main actor depicted in *The Standard* newspaper was the government (state actors). As an actor in climate change it was depicted as managing the climate funds, putting up policies, and laws on issues climate change. It was also depicted as lacking the personnel and financial resources to handle climate change. The international community (includes developed countries) was mentioned as another actor in the climate change endeavour. The international community is depicted as facilitating policy formations, and providing funding to facilitate adaptation and mitigation. The other actor that is presented is the individual. The citizen as an individual is presented as a face of suffering due to climate change. Das (2020) avers that that the citizen is always presents as a victim of climate change and cannot actively engage as a climate agent with dignity. The individual is also presented as coming up with localised solutions. The individual led solutions are small range impacting on small regions or individuals.

From the *Daily Nation* newspaper, the main actor depicted is the global community. The universal society is depicted as the main contributor in causing climate change, contributing funds to cope with climate change and facilitating policy issues on climate change. The government is also depicted as an actor in climate change. The *Daily Nation* depicts the government as lacking the will power to engage in the mitigation efforts. This is depicted in the conflicts surrounding appropriation of funds. The government is also depicted as planning on ways to manage climate change this is through policy implementation. The individual is also mentioned as an actor albeit in a negligible way. The individual is depicted as mainly impacted by climate change. The academic community is in addition presented as an actor in climate change. When

depicted in the *Daily Nation* whether as individuals or as a community, they are shown as coming up with remedies to climate change. This is regarding technological advancements, offering trainings or taking part in conferences to discuss adaptation and mitigation ways. Their research data is presented as providing great insights in the adaptation and alleviation of climate change. The academic community as an actor is not a significant theme in *The Standard* newspaper. Unlike previous studies (Quigley, 2008; Ballantyne, 2018) that pointed to politicians as principal players in narratives on climate change, this study found out that the government and the international bodies/community were the key actors in climate change narratives.

Newspapers are in all likelihood to discuss about issues on climate change with an interest on the challenges linked to climate change than emphasizing on the remedies — active or possible (Dotson, 2009). Similar findings were evident in this study which indicated that for both newspapers, the causes of climate change were the least discussed whereas the effects were the most focused on. The moral evaluation and the solutions were moderately discussed in both newspapers. If the reader doesn't understand the cause of a problem, they may view it as something that does not involve them. Bord et al. (2000) have argued that "knowing what is attributable to climate change and what does not is the most influential factor of both articulated intentions to take initiative and to vote on speculative referenda to establish new government regulations to lower carbon emissions (p.205)."From these findings it is seen that most readers may not be able to link the four elements; causes, consequences, moral evaluations and solutions as most articles did not present all the four components of the message. This is in agreement with the assertion made by Bord et al. (2000) that "several people are unaware of particular activities undertaken by humans that lead to massive carbon dioxide emission. This makes them doubtful of the techniques that will

be productive in lowering these emissions (p.216)". The minimal discussion of the causes of climate change can have an implication on the reader's engagement with climate change issues as they do not have sufficient information.

In analysing the messages that presented solutions, this study attempted to analyse the level of solutions. Which body or actor was presented as giving the solutions? From *The Standard* newspaper, the solutions were seen to be mainly provided by the government followed closely by the international actors. The role of an individual is presented as minimal. These findings were replicated in the *Daily Nation* although for them the international actors were given more prominence as compared to the government. The role of the individual is seen as very minimal. The presentation of climate solutions as coming from 'big' bodies can put off individual efforts towards mitigation. It thus makes climate change mitigation efforts a 'hopeless case' as the individual can do nothing about it (Oxford Research Encyclopaedia, 2016). This is also in line with the assertions of Léon and Erviti's (2015) who aver that articles consistently feature (global) political or innovation-driven causes and remedies, detached from the individual (domestic) realm, in which the audience might feel devoted to the climate challenge and capable of reacting. The individual is thus presented as too 'little' to handle the matter on climate change.

Interesting to note in this study was the fact that when the selected articles appeared in the feature section or in the pull out section (especially the *Daily Nation* Pull out), the effects of climate change were magnified. This was through aerial photographs of the problem depicting the affected areas as vast, or magnifying the issue say on a page to depict how enormous the issue is. This is in agreement with Eraut and Segnit (2006) who found out that climate change was always presented as an enormous challenge.

These visual images helped fuel the alarmist agenda although this depiction was used to show how bad the problem is, it could also have negative effects on the audience. When an issue is presented as too enormous, one can feel helpless in addressing it. This is in agreement with O'Neill's (2013) assertion that spectacular images of climate extremes may elevate feelings of conspicuousness of a matter or significance among the audience, but weaken feelings of self-confidence or accountability. When an audience has a low sense of self efficacy, it can cause inaction and thus lack of any effort towards doing anything to combat climate change. In their study, Lorenzoni and Pidgeon (2006) concluded that there is a lack of drive to take action among citizens universally in regards to climate change matters due to a diminishing sense of self belief. A low sense of self belief may lead citizens to feel that because the pro blem is beyond them 'others' are obligated to deal with the problem. This is in agreement with Kellstedt, Zahran and Vedlitz, (2008) who argue that people with low sense of self confidence assign responsibility to national and global politics and institutions, which are able to trigger the needed extensive policies and activities. This is in agreement with the argument by Stoll-Kleemann, O'Riordan and Jaeger (2001) who argue that people feel that their little, individual actions do not really make any change considering such a wide-reaching and serious danger like climate change. They are therefore more disposed to hold responsible politicians and institutions, as they are (required to be) able to trigger the needed extensive changes.

Thaker et al. (2017) in their study blame the industrialized western countries for causing the climate change problem. Similar assertions were found in the current study. Findings from both newspapers framed climate change issue as a matter attributed to the developed nations (a western issue). It is attributable to the more economically advanced nations, and it is the less economically advanced nations that endure the brunt

of their negligence. The articles depicted this as a situation in which the developing countries are victims of the developed countries. This is similar to the arguments given by Olausson and Berglez (2014) citing a study carried out by Shrestha, Burningham, and Grant which found out that "Nepalese radio defines the localized effects of climate change as consequences of Western actions, positioning Nepal and other less economically advanced countries as victims of both climate change and the West (p.140)". According to Nisbet (2010) the public tends to arrive at decisions on matters by cutting them back to questions of accountability and blame. The attribution of blame has a significant impact on how the readers will give an interpretation of the article and more so whether they feel they are responsible for the problem of climate change or not. This will then contribute to some extend to whether individuals would feel a need to act or the responsibility to take action. If the article portrays the blame as attributed to a body or individual who seems 'far away' from the reader, it may make the reader feel that they are not responsible and therefore they don't need to take any action.

The outcomes of the study revealed that both newspapers mainly used alarmist language when discussing climate change. Hulmes (2007) found out that most reports that he analysed employed alarmist language when reporting climate change; according to him, "the language of calamity, dread, tragedy and loss of life dominated almost all of these items" (p.9). The study results reiterate the findings of Hulmes which show great use of alarmist language in climate change communication. Hulmes (2007) avers that the use of alarmist language "has the impact of exhibiting climate change through terrifying, and almost pre-determined, grim situations consumed by the language of terror and catastrophe, as opposed to a contingent phenomenon with an adaptable result which can be greatly influenced by policy choices" (p. 12). The use of alarmist language does not always lead to behaviour change. Scholars such as Nicholson-Cole, (2005) have argued

that fear-based communication strategies can be counter-productive; failing to achieve its intended behavioural outcome. This means that framing messages using the alarmist tone could be counterproductive in communicating the climate change message.

From the study findings in both newspapers, the individual role in climate change is depicted as negligible. The climate change issue is such an enormous task and thus an individual cannot manage to do much about it. It can only be done by the government or corporates. This is in agreement with Eraut and Segnit (2006) who found out that climate change was always presented as an enormous challenge. This bigger than life depiction creates a 'monster' out of climate change and thus its insatiable appetite can demean 'small' actions by individuals. As the reader conceptualizes this depiction, it can create a sense of despair because of it being painted as bigger than life challenge and therefore 'there is nothing we can do as individuals. This depiction seems to negate any solutions that are attributed to individuals because they are 'too small' for it to cause any impact. Small individual action such as the water box solution, scholars educating a group of individuals in a county, individual planting of trees which are some of the actions depicted in the study findings can be seen as small actions compared to the devastations brought about by climate change. This is in agreement with the argument by Stoll-Kleemann, O'Riordan and Jaeger (2001) who argue that individuals feel that their insignificant, individual activities do not really make any change considering such a wide-reaching and serious danger like climate change. They are therefore more disposed to hold responsible politicians and institutions, as they are (required to be) capable of triggering the needed extensive transformations.

From the study findings the west is responsible for the climate change effects and thus they should play a main role in mitigation efforts. The agenda set thus is the west versus

'us'. The climate change problem is thus looked as 'their problem; it is generally 'othered'. Other nations and continents are responsible for the greenhouse emissions and therefore they (developed nations) should do something to cut these emissions- it is 'their' responsibility. The developing nations- Kenya included- are suffering the impacts of climate change which is caused by the developed countries. These findings are similar to those of Olausson and Berglez (2014) which aver that the developing nations are victims of the west. The blame on others rather than acknowledging one's small contributions to the problem can easily lead the individuals to be negligent. When one feels that he/she is not contributing to the problem they may not see the need to look for a solution.

5.3.2 How is the visual imagery framed in the selected articles?

Photograph use evokes emotions in the audience and influences their evaluation of the article's value (Joffes, 2008; Wanta, 1988; Lester, 2003). O'Neill (2013) avers that representation of visuals moderate public commitment to climate change by influencing viewpoints of prominent issues and self-belief. As Nurmis (2017) has argued "the pick of images, in respect to both form and content, is critical to the manner the public views the event – it tells the public how to ponder the event, and cultivates collective remembrance of it (p.ii)". The significance of graphics in the communication of climate change message cannot be down played. It has a huge influence in 'drawing' the attention of the reader and engaging them with the message.

From the findings of the study, several chosen articles in *The Standard* newspaper had no accompanying visual imagery. Those that had visual imagery that did not have direct/visible relation with climate change were the second highest in number, out of which most of them depicted portraits of mostly renowned individuals. This result is in

agreement with the claim by Thaker et al. (2017) who found out that "the local media emphasized narratives on conference attendants shopping, security measures for the conference, and beautification of the city. Few accounts reported on the significance and outcomes of the conference (p.355)." For articles that had some link with climate change, most of them presented the 'problem' of climate change by presenting its devastating effects.

From the *Daily Nation*, most of the articles selected did not have accompanying photographs. For those that did, most of them had no direct link to climate change; just like its counterpart, *The Standard* newspaper, it depicted the faces of individuals and thus no main link to climate change. Similarly, the photographs that had a link to climate change mostly highlighted the impacts of climate change. The exception is on the DN2 which is a pull-out from the *Daily Nation.* When stories touching on climate change were captured in this section, most of them would use eye catching photographs in terms of their size and look.

In further analysing the photographs that were used in the selected articles, an interesting discovery was made in this study. The choice of photographs seemed to depict the social economic level of individuals and classifying them as active climate agents or victims of climate change. For example, in conveying the effects of climate change on peoples' sources of income, majority of the portraits employed portrayed the actors as individuals from modest origins, for instance, the dressing they are wearing suggest their position in the social hierarchy; the background depicted show remains of their dead livestock. Those that portrayed the impacts on the middle-income group portrayed the impacts on the infrastructure more than the peoples' sources of income for instance, when deliberating the consequences of climate change such as flooding, they

are portrayed driving in overflowing roads in metropolitan areas or rivers. Those visuals that portrayed the influential individuals depicted them at conferences or other 'positions of power' where they attending conferences or meeting world leaders. When this is further analysed, it seems to suggest that climate change only affects the livelihoods of those in the lower social scale while the prominent and elites are the policy makers as they are rarely depicted to be affected by climate change. It becomes an 'us' versus 'them' scenario. These results are comparable to those of Rebich-Hespanha et al. (2015) who discovered that in the use of climate change images "Common" people, when in focus, are generally facing adversities of the state of the surrounding …p.512." Okoliko (2021) avers that this skewed depiction can effortlessly misguide the public to presume that climate matters and activities are challenges to be handled by the political or professional organizations alone (p.100). The public at the lower social class can then tend to feel that they are the victims who cannot initiate any action in combating climate change as they are not authorised agents (Carvalho, 2007). Das (2020) says that they public are excluded from being active climate agents and depicted as victims of climate change and thus degrade or sectionalize their opinions and viewpoints as people who do not play an active role (Rebich-Hespanha et al., 2015).

The other important element was the placement of actors in the chosen articles. The research outcomes indicated that the placement of actors in the photographs varied depending on the focus of the photographs. In the analysis of DN2 a pull out that was in the *Daily Nation*, most of the photographs used presented a close-up view of the climate change effects. The consequences were thus magnified. On the feature articles, most of the photographs depicted a closed-up view of individuals affected by climate change.

5.3.3 What are the textual frames employed by the selected articles?

This study presented various frames which depicted how issues were presented in the selected articles. The first category that was evident was that which dealt with economic matters. This was presented as the financial frame. This frame presented climate change as a matter that causes financial loss to individuals, communities and governments. From the study findings this frame was evident in both newspapers. They both depicted financial losses because of the impacts of climate change. Under this frame, *The Standard* newspaper also depicted the positive financial implication accrued as a result of climate change. It depicted climate change as favouring the rearing of some animals and also depicted the gains from carbon credit trade. This positive dimension (financial gain) was not captured by the *Daily Nation* newspaper. The financial frame is similarly depicted in previous studies such as that by Nisbet (2010) who calls it the economic development /loss frame and de Vreese (2005) who describes it as the consequence frame. The theme which discusses the financial gain which can be made from climate change are referred to as opportunity frame by Painter though in this study they are all grouped together under the financial frame as they still pointed to the financial implications of climate change. From this frame, the reader associating climate change to climate loss may present a sense of uncertainty amongst the readers. Financial loss is something to be avoided, not embraced. This creates a negative link between the understanding of climate change and the people's efforts. This frame can be restructured to promote engagement with the audience by emphasizing the financial opportunities accrued from climate change (Nisbet, 2009). If climate change is presented as a chance for financial gains, it may spur interest as audience explore ways of profiting from climate change. Thus, the economic frame can capture some of the opportunities such as

those in clean energy and job opportunities from ‘green jobs.’ This can thus push audience into action- acting to gain financial advantage through climate change.

The second category that was presented in the study findings depicted the various conflicts that accrue due to climate change. These were conflicts depicted as occurring between individuals, communities or even nations. Climate change causes a lack of sufficient resources and thus a fight for the same amongst individuals. The other component of this theme focused on the politics surrounding climate change as well as leadership and governance issues. Although other scholars have identified these themes as independent frames, this study put these themes together and presented them as one frame. This is because most of the leadership/political/governance issues presented dwelled on the conflict surrounding them. Climate change is thus presented as a conflict frame. From the study findings, this frame was evident in both newspapers although it was more prominent in *The Standard* newspaper than in the *Daily Nation*. Earlier studies have demonstrated that climate change is frequently associated with conflict. The theme of conflict is also discussed by de Vreese (2005) and Entman (1991). Climate change funding is seen as an area ripe for conflict as individuals fight for control of resources. The study findings have thus depicted that climate change is a conflict issue inciting conflict among various people and groups. Conflict has a negative connotation and thus if climate change is linked to conflict, individuals may want to do all they can to prevent conflict. The conflict frame can be ‘twisted’ to incorporate morality or ethics frame and thus turn it from having negative connotation. This can be done by presenting climate change as a collective ethical predicament in which the stakeholders have a duty to perform in promoting its management. Instead of presenting it as a fight over resources by two parties, the roles and responsibilities of the two parties in curbing climate change can be reemphasised.

The other theme that was presented in the study findings was the link between technology and climate change. Climate change was presented as a technological issue. The various technologies adopted to combat climate change were depicted. The various innovations and advancements by different private, as well as government bodies are presented. Technological advancements are presented as helping deal with climate change. This theme was presented as the technological frame. From the study findings, the technological frame was only found in *The Standard* newspaper. This is an emergent frame that this study explored. Previous studies (Nisbet, 2010) have placed this frame under the technical/policy frame. However, this study classified it as technology frame as it was seen to be independent of the technical element and was geared more toward advancement. Boykoff (2008) calls this frame the science and technology frame. This frame was not mainly explored in the *Daily Nation*. It did not emerge as a major theme in the articles and thus it was a theme that was missing in the *Daily Nation.* The use of the technology frame can present a challenge to the audience; this is because they may look at it something that is geared towards the learned and those with technological know-how. Asplund (2014) argues and say that when climate change issues are framed largely in technological terms, they end up being defined as matters for experts. This can then affect self-efficacy as the audience may diminish their role as non-expert and thus not able to act on climate change.

The scientific theme was also presented in the study findings. This highlighted the scientific facts surrounding climate change. This theme was analysed as the scientific frame. From the study findings, both newspapers depicted climate change as a scientific factor. This is in agreement with the findings of Olausson (2009) who classify it as a science certainty theme. Other previous studies (Shanahan, 2007; Painter, 2013; Thaker et al., 2017) have classified it as the scientific uncertainty theme.

The responsibility frame was also explored. According to this frame, articles were discussed presenting the agents that were causing the various climate change issues as well those responsible for the solutions. The articles presented levels of blame when it came to causing and giving solutions to climate change. This frame was found in newspapers as well as in the study findings. These results exhibit a parallel to that of de Vreese (2005) who found out that the responsibility frame was a dominant frame in climate change articles. Entman (1991) in his study also argues that the responsibility frame is a dominant frame in climate change articles. This frame distances climate change from the audience by pointing climate change as the responsibility of other countries, other bodies or other institutions to solve climate change. The responsibility frame can be enhanced by depicting the individual contribution to change in climate and the individual accountability in curbing it. This will in turn make the matter of climate change relatable to an individual and thus promote self-efficacy.

The study findings depicted a number of climate change frames used to construct the climate change narrative. There is a great opportunity that can be harnessed from these frames to bring diverse audiences together while promoting self-efficacy and thus action. Some frames can be intertwined with other novel frames (for example conflict frame and morality frame) to enhance a specific narrative in regards to climate change. Novel frames that can promote interest in the message can also be explored. For example, frames that link climate change to specific health implications on the individual which will make the audience want to ‘care’ for the message. At the heart of any message are the frames used to create it and thus a deliberate choice should be made while choosing and using specific frames in climate change.

5.4 Conclusion

This study intended to analyse the framing of climate change issues in selected print media in Kenya. This was an exploratory study that aimed at comprehending how the media has previously structured issues on climate change. The comprehension of past presentation of climate change issue is of utmost importance in the future steps on what can be changed and what can be improved to advance more commitment to climate change issues. According to theories of classical communication, audience responses (engagement with the media message) is often a result of how a message is constructed (framing of the message) and the source of the message (societal actors that are at play in the structuring of the message) (McGuire et al., 2000).

From this study finding, both newspapers mainly have climate change articles appearing in the opinion page section. This is an important insight for communication specialist who can take advantage and utilize this avenue more. Though climate change stories are mostly deemed not to 'sell' and thus not mainly included as news items, the study findings pointed to an opportunity through the opinion piece section to get the narratives on climate change in the newspapers. This could also point to an audience that is interested in climate change messages. The audience has an opportunity to write articles on various issues but the fact that they choose to write articles on climate change shows that they are aware, concerned or has an interest in the issue.

From the study findings, both newspapers have succeeded in framing climate change as an issue taking place right now. It is not something that will take place in future generations but something with us now as a community. This is a perspective that can be furthered by stakeholders in collaboration with the media to help promote engagement as individuals can easily relate to what is happening in their environments.

The study findings showed visual imagery that mainly pointed to individualized small scale solutions to climate change issues depicted in both newspapers. Individualization can oversimplify climate change issues and cloud the bigger picture. This is a frame that can be improved on. Solutions can also be visually framed as corporate involving all partners. This can then boost the self-efficacy of individuals as they engage in the mitigation efforts without clouding the bigger picture of climate change.

The projection of the climate change challenge in larger-than-life visuals as well as the projection of the problem as caused by and the responsibility of others (developed countries) rather than us might be inhibiting a greater potential from currently addressing the issue. The visual structuring of climate change impacts based on individuals' social class can affect engagement with climate change issues. The individual contribution towards mitigating climate change presented as too 'little' to cope with the climate change issue leads to low self-efficacy. Individual low sense of self efficacy removes from the possibility of individual responsibility and action towards climate change. Consequently, the spatial and temporal proximity is an assignment that challenges the journalistic exercise and which must be addressed in the Kenyan print media.

The study findings have emphasised the role of academia and research in climate change. The academic community is a stakeholder that needs to be embraced in the adaptation and mitigation efforts. This is a frame that has not been exhaustively examined by earlier studies. The use of humour to communicate climate change issue is also a critical finding in this study. Most of the previous studies have not included it as part of the climate change conversation. From the study findings this is a discourse that can be used to interact with matters on climate change and thus should be promoted.

Visual imagery use has been shown to be insignificant in the articles on climate change in spite of their major role in ‘drawing’ the attention of the audience to the page. The importance of climate change graphics needs to be highlighted in climate change articles. This is an opportunity for both the media and other stakeholders to partner and promote use of visuals in their climate change articles.

The use of the civil society demand frame in the study only presented an international angle. It is not ‘us the locals’ who take part in demonstrating or agitating for issues climate change. The lack of a local angle to this frame may promote inaction as it is seen as something to be agitated for by others and not the locals. Thus, incorporating a local angle to the civil society demands frame can promote action among local civil societies.

The use of the technological frame may be seen to exclude others without technological knowledge in the conversation on climate change. However, with the current technological advancements, the technological frame can be used in the narratives on climate change but with a simplified connection to the individual. This is a frame that was used in *The Standard* newspaper but rarely used in the *Daily Nation* newspaper. The use of this frame can present a point of engagement for the readers and the climate change matter albeit explained in layman terms.

The use of the conflict frame in the texts may be seen to minimize the gravity of the matter of change in climate issue as it can be interpreted as a fight over money. This frame can thus further be modified to incorporate how the climate change issue can be viewed as a conflict issue for the individual and the nation without minimizing it only as an issue of money. Doing so can easily draw the attention of the individual to the

climate change matter as it is projected as an issue touching on them and impacting on their lives.

The economic frame which was presented in the study findings can be modified to also emphasize on the opportunities also available to revitalize the economy not only focus on economic losses. This can be done by emphasizing on some of the economic opportunities through investment in clean energy technology or even creating green jobs. Thus, the focus on the economic frame should not only be the aspect of loss but also present a chance for action through the opportunities available.

The study findings have shown that framing of climate change in the chosen newspapers still faces a myriad of challenges. The framing of climate change effects as enormous, devastating communities, without depicting how the same communities can deal with this challenge can deter action. This is compounded by the depiction of solution as provided by state and international actors alienating the individual and local community.

It can be concluded that the print media alone (which was the highlight of this study) cannot be the only solution to the environmental issues. However, it can be a part of the solution. By consciously engaging the readers with specific frames, the issues on climate change can be brought to the fore promoting engagement amongst the readers.

5.5 My Thesis and Recommendations

My thesis is that the framing of climate change information as seen in the selected newspapers alienates the individual and communities from active action and engagement on matters of climate change.

It has been depicted in this study that opinion pieces were the principal contributors of climate change articles. This is an indication of an audience that is interested in climate change issues. The media can thus promote more educative pieces on climate change to promote the interest and knowledge of the audience.

The study findings showed that authors who wrote articles on climate change were inconsistent in both newspapers. This could point to climate change not being a main beat with assigned journalists. This study recommends that the media promotes climate change as a major beat in its coverage.

The study showed that the main players in the discourse on climate change were the government and international bodies. The media can promote the role of the individual as an actor in the climate change discourse by framing them as part of the solution in dealing with climate change.

The frames used in the study showed no clear link between the frame and the everyday life of the individual citizens. The media can promote a link between the frames used with everyday encounters of the individuals- show how it directly impacts on them. This can be done by using frames that are relatable.

5.6 Implications for practice and policy

The identification of the existing frames as used in the selected articles can offer new insights in the reportage of matters on climate change. It can thus be used to convince journalists and editors to be more cautious while using frames in the communication of climate change message. The frames used can look innocent but it is a result of the choices they make and thus this study brings into consciousness the frames often used

and the need to embrace others to ensure effective involvement with climate change matter.

The identification of the visual frames is also an opportunity for communication specialist to rethink about the frames used to conceptualize climate change issues and therefore rethink the agenda they are setting. The choice of climate change visuals then becomes an effort of ensuring the message is communicated and engagement boosted amongst the public. The selection of frames can provide an alternative for the lay people to better engage with climate change matter.

5.7 Suggestions for further Research

The study recommends that a comparative study can be done to analyse how climate change is presented in the East African Region. This comparison will aid in understanding the regional view of climate change framing.

An audience analysis study can be carried out to understand the framing of issues from the audience perspective. What do they make of the way the journalists frame issues on climate change?

A study on the language used in the framing of climate change message can be carried out. This will help in understanding the semantics whether the terms used are reasonable as descriptors of the key climate change issues and whether they are consistent with the science or whether they are exaggerated.

Studies which encompass a measure connecting reportage with levels of public opinion can be carried out.

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APPENDICES

APPENDIX 1: CONTENT ANALYSIS GUIDE

In identifying the frames in this study, I borrowed from D'Angelos and Kuypers's (2009) idea that frames can be detected by looking at the key words, metaphors, concepts, visual images and ideas within the news.

1. Name of the newspaper- specify the name of the newspaper
2. Author – Give the name of the author, wire service, or unknown (mention it).
3. Publication date- indicate the date it was published
4. Section name- give the section the article is appearing in if it is indicated.
5. Article type (This determines whether the article is subjective [written by one person presenting the author's opinion] or objective[present different views and facts]

    a) News story- factual news report of events of what happened (when, where, who what why?)

    b) Column/ Commentary i) Column- distinct from regular coverage most likely always at the same place within newspapers, can be written in personal style. ii)Commentary- often not written by a journalist but by an external source such as an expert, politician etc often the official position of the author is given; often explicitly marked as 'commentary'

    c) Editorial- typically marked as editorial, opinion piece- and appears mostly on the same page of the newspaper. Expresses the stand point of the author/editor who speaks for the newspaper

    d) Portrait/ picture/graph/map/cartoon- often with a caption

    e) Bullets- mostly on the title page or first page of a section; headline and a short summary at least one sentence which announces a substantial article that can be found inside the newspaper. Often refers to a more in-depth article inside a newspaper

    f) Headline only

    g) Documentation- original text e.g treaty, contract, constitution, speech, report etc

h) Letter to the editor- including responses to the editor (code each letter independently)

i) Others- any other that does not fall under the above categories

6. Which is the main frame appearing in the selected text? (Adapted from Nisbet 2010; de Vreese (2005); Boykoff, (2008) and modified to suit this study)

   Economic development/ loss—focused on the economic consequences (costs and benefits) of climate change such as jobs created, loss of money etc

   Conflict—focused on conflict and disagreement among parties and who is "winning" or "losing" the debate, or a battle of personalities or groups.

   Responsibility - attributes responsibility for the cause or solution to the climate change problem to an entity e.g an individual, the government etc.

   Human-interest - considers the personal, emotional side of a problem. According to Semetko and Valkenburg, (2000) It "brings a human face or an emotional angle to the presentation of an event, issue or problem" (p. 95)

   Morality - Prescribes moral judgment to climate change issues usually by quoting others giving a moral perspective or looking at religious tenets

   Technical/ Policy—focused on how bills or regulations are being administered, focused on the history of climate change policies.

   Science/technology and innovation- focuses on innovations/discoveries

   Politics- focuses on power struggles mainly among the elites

   Uncertainty-rational, scientific (consensus) view is rejected

7. Which sources appear in the article (Sources were defined as those people to whom the article quotes or attributes directly in the article). News sources in this study refer to individuals, media or non-mediated platforms that provide information for the large, scattered and heterogeneous news audience. Foreign sources may include newspapers, news portals and/or international news

agencies but may also include global organizations like the United Nations or Intergovernmental Panel on Climate Change (IPCC).

a) Scientific Organization: refers to those within environmental, wildlife, climate change, or any other scientifically-related organizations, including government organizations

b) University-Affiliated Scientist or Educator: Any source that is listed as being affiliated with a university or educational institution

c) Individuals (non-government, non-scientist, non-business): This refers to "person on street" sources, or anyone not affiliated with a scientific, business, government, or university organization

d) Government Organization or person (non-scientific): can be state, local, national, or international.

e) any other source

8. With what frequency does the newspaper use the source? Do the sources differ based on the story author? i.e wire service, staff member, AP, Opinion writer etc? Do sources differ based on the frequency of articles written by an author?

9. What is the focus of the article?

   Describe the main focus of the article for example if entertainment , business, people science, problem, solution etc

10. What are the main triggers of the story- form the first paragraph (based on the inverted pyramid structure) what has caused the coverage of the story. is it an international event, is it a calamity, is it the presence of conflict, is it new research findings or any other?

11. Who are the key actors in the article, what are their interests and their motives? An actor is the person/institution depicted as engaging in any action or a news maker in regards to climate change. Actors are mainly given an opportunity to communicate their points of view through speech, action or inaction. (The first actor to appear in the title or the first 2 paragraphs of the article. If no actor in

title and first 2 paragraphs then coded as no actor). Actors could be Politicians, organizations, government/ government authorities, international bodies, activists, ordinary citizens, or any other that is identified not falling in these categories.

12. Do the actors deny or ascertain the existence of climate change? In their speech or action are they ascertaining that climate change exists, doesn't exist or they do not mention in at all.

13. What level of government is involved in the story? Is it Local, Regional National, International, None

14. What is the authority/prominence given to different sources of information? who is depicted as the main actor.

15. What perspectives are used? (The perspectives were analysed based on the initial impression of the researcher from the headline, or the first few lines of the article)

    a) Define problems- : These stories deal with what will happen as a consequence of this phenomenon. Impacts may be negative (homes flooding), positive (improved agricultural production), or debated

    b) Diagnose causes - evidence as to reality of climate change as a problem. These are typically presentations of scientific findings that support the idea that there is a problem (evidence of rising sea level), refute the idea that there is a problem (evidence that changes are within limits of natural variance), or present the argument that the nature of the problem is unknown

    c) Make moral judgments - These stories present general statements calling for action or reporting action taken (Kenya should sign a treaty, did sign a treaty), arguing against action or reporting action blocked (emission standards not needed, scientific testimony altered), or present the argument that a course of action is not clear.

d) Suggest remedies- provide specific information about how solutions should be implemented. These stories report specific solutions that have been proposed or implemented (tougher emission standards), solutions that have been rejected or deemed inadequate (voluntary programs), or present a debate about a specific solution or solutions. Note that the specificity of the solution—a statement of exactly how the solution should be carried out—is an important distinction between an action statement and a solution statement. (Trumbo, 1996, p. 272-273).

e) Any other

16. Which page does the story appears – (if it runs into the next page note the page it begins with)

17. What is the extend of the discussion of the topic relative to the total length of the story?

18. What is the density of relevant information given in the story regarding climate change relative to the extent of the total discussion of climate change?

19. Does the article contain an evaluation of whether climate change has become more or less of a problem over the past years? (Indicate whether it has become more, less or not mentioned)

20. What other discourse has been integrated in the climate change message? (Note if it includes, political discourse, economic, popular culture, lifestyle or any other that is evident)

21. Does the story indicate whether the national government has had a positive or negative impact on climate change? (Indicate how the national government is depicted in terms of impact if positive, negative, neutral or not indicated)

22. Who is said or depicted to be mainly handling, working on or caring for climate change? (Mention the body depicted if the national government, individuals, foreign nations, regional governments, private bodies or nay other that is mentioned)

23. Where is the main location of the story?

24. Which geographical entity mentioned in the article is most affected by climate change? (Mention the geographical entity mentioned is it animals, livelihoods etc),

25. What treatment is climate change given? (is it a domestic issue(points to it affecting Kenya and its people), international issue (affects the global spehere-countries beyond Africa), regional issue (viewed as affecting Africa and within) etc)

26. Are any emotions triggering words used in reference to climate change in the selected article? (for example; victim, danger, dread, blame, sympathy, chaos, anxiety, fear, casualty, etc)

27. Has alarmism been used to engage the audience?
    This study classified alarmism as articles that employed apocalyptic vocabulary, strong truth modality ('will' or 'is' versus 'may' or 'could'), short time frames ('Apocalypse now') or no sense of time scale at all, feedback loops which do not allow for human intervention, analogical references (e.g. to the fate of the dinosaurs)

28. Which tone has been adopted by the writers?

This study classified tone according to that given by Ereaut and Segnit (2006). Alarmist tone (uses language of acceleration or irreversibility, aspects of despair, urgency, doom or death), optimistic tone (it will be alright) and pragmatic tone (action has to be taken however small it is and all will be well-ray of hope through action).

29. What are the attitudes of the persons in the article in relation to action of government on climate change? The attitude was discussed based on how the persons viewed action taken. It was classified as etiher positive, negative eor neutral.

30. Does the story mention attitude of the general public with issues of climate change? (The attitude was discussed and classified as positive, negative or neutral)

31. Does the article mention any conflicts/ disagreements/ divergent point of views over proposed policy measures between countries/ states etc?

32. Does the story say the group, person, institution or organization in the article (the characters in the article) reproaches/ blames/ criticizes another?

33. Visual analysis

    i) What type of visual is used in the articles? ('Ordinary' people or situations ('like us') in an 'ordinary' setting –or the classical visuals)

    ii) Which Visual choices have been employed in the articles (e.g. facial expression, gesture, pose, clothing, hairstyle, age, gender, race, props, size)

    iii) How is the visual choice presented in the article in relation to climate change? (mention if the subjects are presented as taking action, being in a power position/making decisions, suffering, or causing climate change

    iii) Does the visual demonstrate the element of individualization (separation of subjects and photos taken up close) or generalization (Juxtaposition of several elements and a wide angle taken)?

    iv) what kind of background is used in the selected visuals? (localised background with familiar recognizable places; or global places with unrecognizable features)

i) What is the focus of the visual? Based on Entmans guidelines of cause, impact, moral say and solutions. mention the focus and identify the specific e.g cause- tree cutting or impact- livestock death

ii) Which are the visual frames that have been adopted in the selected visuals? (identify any existing frame guided by table 2.2 and identify any new ones)

APPENDIXII: RESEARCH PERMIT

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