

**Environmental
Journalism in Nigeria: Representation of Climate
Change in Nigeria**

Ifiokobong Isong Ukpong

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Approval of the Institute of Graduate Studies and Research

Prof. Dr. Ali Hakan Ulusoy
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Arts in Communication and Media Studies.

Prof. Dr. Senih Çavuşođlu
Chair, Department of Communication
and Media Studies

We certify that we have read this thesis and that in our opinion it is fully adequate in scope and quality as a thesis for the degree of Master of Arts in Communication and Media Studies.

Asst. Prof. Dr. Nilüfer Türksoy
Supervisor

Examining Committee

1. Assoc. Prof. Dr. Metin Ersoy

2. Asst. Prof. Dr. Bahar Taseli

3. Asst. Prof. Dr. Nilüfer Türksoy

ABSTRACT

Climate change, which can be described as a change in the average weather condition over a period of time, has become a serious problem in the 21st century. The result and impacts of climate change are reported to be severe and harsh, this includes flood, famine, drought, etc. It is regarded as one of the most serious environmental issues, thus there is a need to create maximum awareness about it. The media as an important source of information has a part to play in creating the needed awareness for the public. Through media coverage of climate change, the public learns and understands the phenomenon and how to mitigate its effects. How the media frame climate change issue is important to how the citizens will react to the situation.

Hence, this study examines how the Nigerian newspapers frame and present the climate change issue. Adopting a quantitative content analysis, this study analyzed n=303 news articles published between January 1, 2015, and December 31, 2019, in four newspapers; Punch, Vanguard, Guardian, and ThisDay Newspaper. The findings of this study suggest that there are two most commonly used themes by the newspapers to present climate change issues. These two themes were the “effects” and “mitigation” themes. The study also found that as regards the use of tone in the newspapers’ presentation, a negative tone was most used. This is as a result of the dominant frame “effect frame” used in the reports. Similarly, this study found that the majority of the climate change issue was reported as straight news and the source of the news is largely the reporters themselves.

The study concluded that climate change is not given enough attention by the Nigerian media which is at the detriment of the country and its citizens. This study recommended that Nigerian media should bestow equal attention given to political issues in the country should also be attached to the climate change issue. Lastly, the media should employ the use of adaptation frame more, this is due to the economic conditions of the country.

Keywords: climate change, environmental journalism, media analysis, news content, Nigerian press

ÖZ

Son yıllarda hava koşullarında meydana gelen değişiklik olarak tanımlanabilecek iklim değişikliği, 21. yüzyılda ciddi bir sorun haline gelmiştir. İklim değişikliğinin sonuçlarının ve etkilerinin şiddetli ve sert olduğu bildirilmektedir. Buna sel, kıtlık, ve kuraklık da dahildir. Bu en ciddi çevre sorunlarından biri olarak kabul edilir, bu nedenle bu konuda maksimum farkındalık yaratmaya ihtiyaç vardır. Önemli bir bilgi kaynağı olarak medya, halk için gerekli farkındalığı yaratmada önemli bir rol oynamaktadır. İklim değişikliğinin medyada yer alması aracılığı ile halk, olguyu ve etkilerini nasıl hafifleteceğini öğrenir ve anlar. Medyanın iklim değişikliği konusunu topluma nasıl servis ettiği, toplumun duruma nasıl tepki vereceği açısından önem arz etmektedir.

Bu çalışma Nijeryalı gazetelerin iklim değişikliği konusunu basında nasıl çerçevelediğini ve sunduğunu inceliyor. Nicel bir içerik analizi benimseyen çalışma, 1 Ocak 2015 ile 31 Aralık 2019 tarihleri arasında çevre ile ilgili yayınlanan 303 haber makalesini dört gazetede analiz etti; Punch, Vanguard, Guardian ve ThisDay gazeteleri. Bu çalışmanın bulguları, gazetelerde iklim değişikliği konularını sunmak için en sık kullanılan iki çerçeve olduğunu göstermektedir. Bu iki çerçeve “etkiler” ve “hafifletme” çerçeveleridir. Çalışma esnasında aynı zamanda gazetelerin sunumunda ton kullanımıyla ilgili olarak en çok olumsuz tonun kullanıldığını tespit edildi. Bu, raporlarda kullanılan baskın çerçeve “etki çerçevesi”nin bir sonucudur. Benzer şekilde, bu çalışma iklim değişikliği sorununun çoğunun sıradan haber olarak bildirildiğini ve haber kaynağının büyük oranda gazetecilerin kendileri olduğunu bulmuştur.

Bu alıřma, lkenin ve vatandařlarının zararına olan iklim deęiřiklięinin Nijerya medyası tarafından yeterince dikkate alınmadığı sonucuna vardı. Bu alıřma, Nijerya medyasının lkedeki siyasi meseleler kadar iklim deęiřiklięine de eřit miktarda dikkat gstermesi gerektięinin eklenmesini nerdi. alıřma, basının bu meseleyi lkenin ekonomik kořulları erevesinde daha fazla odaklanarak kullanması gerektięi nerisi ile sonlandırılmıřtır.

Anahtar kelimeler: iklim deęiřiklięi, evre gazetecilięi, medya analizi, ierięi, Nijerya basını

DEDICATION

To my Parents and Family

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My Special appreciation goes to God for making this possible, my father Dr. Elder Isong Samuel Ukpong (AmBp), my precious mother Mrs. Anietie Isong Ukpong (Jp) Alias Eka Udoh, who sacrificed a lot to see my dreams come through, my two dear aunties aunty UT and Aunty Vic, my supervisor Asst. Prof. Dr. Nilüfer Türksöy for her guidance, supervision, and advice through the course of writing this thesis. I am grateful to have been supervised by a teacher who was deeply involved in my study and always creating time to provide answers to my questions. To my siblings, friends, and colleagues I thank you all for your love, care, and support. May God bless you all.

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Chapter 1

INTRODUCTION

In this modern era, we live in, people get much of their information about current events, politics, economics, and even the weather from the mass media, and the news industry. This is primarily because a large portion of the information required by people, which includes news on politics, economy, climate change and other popular or entertainment issues, exists outside of their own personal or collective experiences, and the media (both online or offline) is the primary source of information (Curran, 2012; Bolsen & Shapiro, 2018). However, a majority of the information people get from the media channels is either second-hand or ideologically and socially constructed, hence they are subjected to subjective or biased themes created by private media channels that have different ideological standpoints (Stuart-Smith, 2007; Bolsen & Shapiro, 2018; Nevalsky, 2015). Recently, the discourse about climate change has become one of the mainstream issues that is threatening the world and deserving attention. The issue of climate change is one of the vital problems of the 21st century. Evidence from the last 50 years has shown that the activities of humans are causing major damage to the climate (Giddens & Sutton, 2017). The effect of these human activities has created a greater certainty across the scientific community about the reality of recent climate change (IPCC, 2007). More change is expected to the climate based on these scientific evidences in the future if left without proper plans to combat the issue. Evidence provided by scientists has shown that human activities are changing the configuration of our ecosystem (Mathez & Smerdon, 2018). This

problem, therefore, is anthropogenic, in other words originating in human activity. Humans have meddled with the climate and with these continuous activities, more climate change – such as global warming – will occur at an ever-increasing rate (Rich, 2019). Since, it is agreed that climate change is accompanied by global causes and consequences, to extenuate this global problem, it is important to reach a global consensus on it (Jang & Hart, 2015).

Government officials, as well as citizens, are confronted with the issue of climate change and the consequences attached to it as a major threat of the 21st century, which makes it an important political discourse (Carvalho & Peterson, 2009). Like other news items, the information sought about climate change is largely viewed through mass media outlets. Thus, information on climate change is subject to the themes constructed by the media or media sources. The media serves as a watchdog which provides individuals and policymakers about the urgency of handling environmental issues. Boykoff and Boykoff (2007) argued that coverage of climatic change by the mass media is not just an accidental fusion of newspaper articles and television segment but rather it is a social relationship between all actors that is mediated by such news item. While the media is important in mitigating the effects of climate change, certain factors affect media coverage of climate change. The important factors in terms of climate change coverage are those determining the focus of textual matter, or contents of whatever is reported as causes or solutions to climate change in news, feature, and opinion. Among the factors are the interests, intersection, and dynamics of climate science, climate skepticism, policy, and carbon-based industries. The second set of factors is expertise, and journalistic norms and ethics (Boykoff & Rajan, 2007; Antilla, 2005).

1.1 Background of the Study

The ripple effect of climate change is a major global issue which affects not only Nigerians or the rest of the world's population, but the world's ecosystem. These effects include the spread of disease, animal species extinction, erosion, and damage to water resources (IPCC, 2007). However, according to the Intergovernmental Panel on Climate Change (IPCC) report, some of the expected reports are positive such as some evidence predicts increases in crop productivity (IPCC, 2007).

Global warming, one of the ripple effects of climate change is a rise of the world's temperature in the atmosphere and oceans which ultimately occurs changes affecting rainfall patterns, intensity of storms and droughts, growing seasons, humidity, and sea level. The global average surface temperature is rising, and the Northern Hemisphere snow is declining. These changes and others have led the IPCC to conclude that the "world is warming" (IPCC, 2007). This warming effect is most likely caused by human activities, as the report stated that it is "extremely unlikely that global climate change of the past 50 years can be explained without external forcing and very likely that it is not due to known natural causes alone" (IPCC, 2007, p.39). The term, external forcing, means any kind of activity that causes a change in the climate not due to a natural shift (IPCC, 2007). One example of such external force would be the release of greenhouse gas, such as carbon dioxide. It is predicted that global warming will continue and would cause many changes to the world's climate system, even more changes than observed in the previous century (IPCC, 2007). More predictions from IPCC show that between 75 and 250 million people living in Africa by 2020 are envisaged to become susceptible to water stress as a result of climate change (IPCC, 2007). Furthermore, it is projected that some African countries rain-fed agriculture yields could be reduced

by up to 30 per-cent. This is due to the fact that so many systems are tied to climate; a change in climate can affect many related aspects of where and how people, plants, and animals live, such as food production, availability and use of water, and health risks. The impact of climate change would be grave on some of the poverty- stricken regions of the world such as the African region. According to the IPCC report, per head emission of carbon dioxide for all Africans stood at one ton (1tC02) when compared to the United States with an average figure of 19.9 1tC02.

These figures clearly show that Africa needs to create more awareness on the issue of climate change. Tagbo (2010) find out that although African continent does not play a major role on the issue carbon or greenhouses gases emission, the continent is, however, likely to be the worst-hit region in the world due to enlightenment on the causes and effects of climate change which is important for the public to commence adaptation process in earnest. One of the important actors in the fight against climate change is the media. This is because most of our knowledge about climate change has come from the media industry (Schoenfeld & Griffin, 1979; Spector & Kitsuse, 1977; Boykoff, 2011). This notion is supported by the media by making knowledge public, actually changes the position of knowledge, and allows people to act on that knowledge in distinct and significant ways (Schudson, 1995). When citizens depend majorly on the media for their knowledge about the world's news, there are changes in the ways they approach issues. These changes are seen by some critical analysts as a deformation of rational citizenship. Increasingly, we have to deal with a society composed of a majority of what Schudson (1995) calls "informational citizens," those who are "saturated with bits and bytes of information" abundantly and chaotically provided by the media, and a minority of "informed citizens," who have "not only information but a point of view and preferences to make sense of it" (p. 27) and who

appear “in a society in which being informed makes good sense, and that is a function not of the individual character or news media performance, but political culture” (p. 169).

The media through its coverage of climate change has created a political and expert voice which is most time significantly acceptable by its audience (McManus, 2000). It is evident from previous studies that the public learn majorly about the science of the world through media content, such as news (Nwabueze & Egbra, 2016). With issues like climate change, the media can shape how the general public understands the politics, impact, and the necessary actions to be taken. Similarly, Ayittey (2010) suggested that the development and consequences of climate change must be properly highlighted to the public, the nature, effects, how to mitigate and adapt to the phenomenon. The media have the power to inform the public on the subject.

One of the ways the media shape issues and events is framing and agenda-setting (Matthes, 2009). According to Goffman (1974), the concept of framing means culturally driven definitions of reality which enables people to make sense of objects and events. Entman (1993) asserted that “to frame is to select some aspect of a perceived reality and make them more salient in a communication text in a way that can promote a certain definition, interpretation, moral evaluation or treatment recommendation for the item described” (p. 52). This explains how media creates a new meaning via communication by focusing on distinct issues and events within a specific period. Both frames and agenda control how the media shapes reality for the society. The concept of agenda-setting highlights the power of the media. Cohen (1963), for instance, describes “the press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what

to think about.” (p. 13). Hence, how climate change issue has been interpreted and framed is important to the way the people and policymakers will take steps that will improve the climate (Nwabueze & Egbra, 2016). Lack of information on the part of the public will lead to some level of difficulties in demanding proper action from the government. It is against this backdrop that this study is aimed at understanding the extent to which Nigeria newspapers have covered and framed climate change issues in recent years. Nigeria is a case par excellence since Nigeria flares more gas than any other country according to the United Nations Food and Agriculture Organization (UNFAO) 2005 report (Batta, Ashong & Bashir, 2013). The methane generated from gas flaring is believed to be 64 times as active a greenhouse gas as carbon dioxide. Similarly, Nigeria also has one of the highest rates of forest loss (3.5%) in the world. The country has lost about 6 million hectares (35.7%) of its forest cover since 1990 (Batta et al., 2013). These highlighted statistics show how paramount it is for Nigerian stakeholders, which is not limited to the government and the media to improve actions focused on reducing the effects of climate change in Nigeria.

1.2 Motivation for the Study

The coverage and framing of climate change by the media have been of major concern, especially in the United States and Western European countries. With few exceptions (Batta et al., 2013; Amu & Agwu, 2012), no scientific inquiry has been made to examine media coverage of climate change issues in developing and underdeveloped countries especially in Africa, particularly Nigeria. The continent of Africa has not taken a decisive step towards influencing the climate change debate around the world. As Tagbo (2010) suggested, the media in African countries have not been able to bring climate change issues from the press agenda to the public agenda. Hence, the motivation for this study is to ascertain the level of coverage about climate change in

Nigeria news media. Similarly, this study was carried out to increase the limited research on media coverage of climate change in Nigeria.

1.3 Aims and Objective of the Research

The research aims to find out how Nigerian newspapers, covered and framed climate change issues in Nigeria within 5 years between 2015 and 2020. The following objectives guided this study:

1. To determine the volume of coverage of climate change issues by Nigerian newspapers,
2. To determine the prominence given to climate change issues by Nigerian newspapers,
3. To determine the story type used in covering climate change issues by the Nigerian newspapers,
4. To determine the themes used by Nigerian newspapers in covering climate change issues in Nigeria.

1.4 Research Questions

Nwabueze (2007) asserts that Nigeria media are presumed to be silent about the issue of climate change. Also, Tagbo (2010) suggests that regardless of the prospective problems' climate change can cause, Nigerian news media seem to be behind hence leaving the spread of information to individual effort, which exposes the country to the risk of getting hit from the projected consequences of climate change. In line with the aforementioned objectives, the study will attempt to provide answers to the following research questions:

1. What are the dominant themes used to cover climate change issues in major Nigerian newspapers?

2. What is the volume of coverage of climate change issues by major Nigerian newspapers?

3. What story types and tone were used in covering climate change issues by Nigerian newspapers?

1.5 Significance of the Study

This study explored the themes that were presented in the coverage of climate change in major Nigerian newspapers. A study of the framing of climate change is significant to gain further understanding of how science news is reported in mainstream media both because of its complex nature and the dependency of human existence upon modern scientific innovations (Carvalho & Peterson, 2009). Previous studies such as (Zamith, Pinto & Villar, 2012; Boykoff & Boykoff, 2007; Jang & Hart, 2015) have researched climate change issue in different countries of the world (Milstein et al., 2019; Zamith et al., 2012; Metag et al., 2018; Giannoulis et al., 2010). However, in Nigeria, only a few studies have been done on media coverage of climate change (Batta, Ashong, and Bashir, 2013). For example, Batta et al. (2013) studied press coverage of climate change issues in Nigeria and its implications for public participation opportunities in four national newspapers between 2007 and 2009. The study found that coverage and framing restrain opportunities for popular participation in climate change discourse because the coverage and framing are dominated by climate politics/economics issues, foreign sourcing of reports, straight news formatting of reports, and the issue of mitigation. All of which limits the involvement of ordinary citizens in such discourse. Hence it is important to conduct this research, to access if coverage and framing are citizen-centered or class centered. Overall, the study will access and understand the impact of media on climate change issues in Nigeria.

1.6 Limitations of the Study

In Nigeria, there are scores of national and local/regional newspapers. Newspapers are classified based on their level of circulation (Dauda, 2010). As the name implied, national newspapers are circulated all over the country and have a strong online presence. Local or regional newspapers are produced circulated within a smaller region such as state or geopolitical zones usually due to language of production. All state governments own a local or regional newspaper company however, the majority of the national newspapers are privately owned (Dauda, 2010). As it is elsewhere in the world, ownership, and control is a major factor in the political orientation of newspapers in Nigeria as well (Oliha & Arthur, 2014).

This study is limited in scope to coverage of climate change issues in only four Nigerian most read newspapers with national circulation: The Punch newspaper, the Vanguard newspaper, the Guardian newspaper, and the Thisday newspaper. All other newspapers are excluded from this study. These newspapers were purposively chosen because they are considered among topmost newspapers in terms of website visit and readership based on February 28th, 2020 Alexa ranking (URL 1) of newspapers in Nigeria. Similarly, the study is limited to news articles related to climate change issues published in the last five years, between January 2015 and January 2020.

Chapter 2

LITERATURE REVIEW

2.1 Climate Change

Climate change becomes a concern for the world starting from the early 19th century, given the technological and economic growth and its significance ascends in the eye of the world gradually (Boykoff & Boykoff, 2011). Allan and Thorsen (2009) asserted that climate change has become a global crisis alongside crises like terror and financial meltdowns amongst others. Authors further argue that how such global crises become signaled and defined, staged, and elaborated in the world's media proves critical to the wider processes of recognition and response. Climate change has always been controversial because many individuals have never been convinced that it exists. The evidence of climate change is compelling: sea levels are rising, glaciers are retreating, precipitation patterns are changing, and the world is getting warmer (Giddens & Sutton, 2017). According to the Intergovernmental Panel on Climate Change (IPCC), the current rate of greenhouse gas emissions is likely to cause average temperatures to rise by 0.2 degrees Celcius per decade, reaching by 2050 the threshold of 2 degrees Celcius above pre-industrial levels. Recent evidence suggests even more rapid change, which will greatly, and in some cases irreversibly, affect not just people, but also species and ecosystems (Adedeji, Okocha & Olatoye, 2014). Weather is the state of the atmosphere at a specific time in a specific place. Temperature, cloudiness, humidity, precipitation, and winds are examples of weather elements. Thunderstorms, tornadoes, and monsoons are also part of the weather of some places during some

seasons. Climate is defined as long-term weather patterns that describe a region. For example, the New York metropolitan region's climate is temperate, with rain evenly distributed throughout the year, cold winters, and hot summers.

Climate change refers to the change in the state of the climate that can be identified by changes in mean or variability of its properties and that persists for extended periods, typically decades or longer (Füssel & Klein, 2006). Climate change occurs when the amount of energy stored by the climate system is varied (Füssel & Klein, 2006). The variation occurs when the balance, for example between energy received from the sun and the radiated energy is disturbed. This disturbance can be caused by several natural mechanisms such as variation in the earth's orbit, variation in ocean circulation, and changes in the earth's composition. In recent times the disturbance is caused by anthropogenic activities (Boykoff & Boykoff, 2011). Climate change lacks a unifying definition in the African context. It is usually defined according to its different impacts. Local farmers define climate change as when the rain is too little or too much. For instance, fishermen understand it as increasing high stormy weather and rough seas that disrupt fishing activities. The short history of the climate change starts with the early 19th century in which world experiences industrial and demographic booms. Industrialization and the rise of coal as an energy source coincides with the fact that the world population reaches one billion (Gupta, 2010). As a consequence of these substantial events, scientists of the time commence to question whether climate changes over time or not. Fleming (1999) suggested that one of the most notable arguments about this idea is raised by Joseph Fourier in 1824 which is the possibility of a regular circular change of climate from ice age to global warming during centuries. Fourier recognizes that we are in a warming period and finds out the "greenhouse effect" without naming it:

The temperature [of the Earth] can be augmented by the interposition of the atmosphere, because heat in the state of light finds less resistance in penetrating the air, than in re-passing into the air when converted into non-luminous heat” (Fourier 1824 as cited in Fleming, 1999, p. 73).

The 1930s become an important decade for the world in terms of awareness of the climate change since carbon emissions from fossil fuel burning and industry reach and exceeds one billion tonnes per year, human population of the world reaches two billion and what is more to the point is that a British engineer called Guy Callender proves to the whole world that temperature of Earth has risen compared to the previous century, given records of 147 weather stations across the world (Alley, 2007). Although first environmental movements took place in industrialized countries in the 1960s, scientific findings that point out the hints of “how increase of CO₂ would affect the climate” date back to 1896. Svante Arrhenius (1896), who was a Nobel winning Chemist, mentioned in his articles that the presence of heat-absorbing gases can cause alterations on temperature changes for the land surface. Moreover, the connection that he made between the fossil fuel consumption by industries and global warming was important (as cited in Crawford, 1997, p. 6). In the 1930s, it was confirmed that the overall temperature increase is related to the increase in GHGs and this finding was supported with Arrhenius’ report. Two decades later the United States Department of Defense allocated a fund for research activities related to climate change at the demand of Pentagon (Duygu, 2007, pp. 590-591). Concern over the negative impact of climate change has strengthened fears that environmental degradation and demographic pressures will displace millions of people in Africa and create serious social upheaval. Most scientists, studying the potential impact of climate change, have predicted that Africa is likely to experience higher temperatures, rising sea levels, changing rainfall patterns, and increased climate variability, all of which could affect much of its

population. It is important to recognize that the risks are not just of a humanitarian nature; they also include political and security risks that directly affect African governments in particular and the global community in general.

Nigeria, like other countries of the world, has its own experience of climate change disasters, such as the North-Eastern region, presently comprising Borno and Yobe states, the southern part of Lake Chad, the section of the lake that lies inside Nigerian territory dried up. Climate change has negatively affected the Nigerian economy with various observable impacts ranging from a significant reduction in agricultural productivity to increase in illness, morbidity, and mortality rate. About four decades ago, the lake covered an area of over 40,000 square kilometers, whereas it now encompasses a mere 1,300 square kilometers. While the negative trend continues unabated, the land is laid to waste by rising temperatures, leading to the rapid southward expansion of the Sahara Desert which now serves as a habitat for terrorists and homes for Insurgence (Aaron, 2011).

High temperatures have hindered livestock (e.g., sheep and goat, cattle, and poultry) production through retarded reproductive cycles, reduced meat, egg, and milk outputs, as well as their grazing lands (Ekanem & Nwagbara, 2010). Livestock mortalities (stock losses) have increased in poultry production systems to the level of at least 15% per annum. Farmlands and surrounding villages have become barren because they were swallowed up by advancing desertification, which led to massive migration of people in search of more fertile terrain from the northeast towards the greener plateau and middle belt regions (Ekanem & Nwagbara, 2010). Growing desertification forced thousands of Fulani herdsmen to move to the south and middle belt, leading to clashes with crop farmers that culminated in the death of hundreds, according to the reports of

residents and activists, like in the recent killings in Benue State (Ekanem & Nwagbara, 2010).

Energy services are necessary inputs for every nation's development and growth. Also, the fuel driving the engine of growth and sustainability development is a nation's access to reliable and adequate energy (Minville, Brissette, Krau & Leconte, 2009). No economy can sufficiently thrive without adequate access to clean and reliable energy. Building Nigeria's Response to Climate Change (BNRCC, 2011) report asserted that hydropower generation is the energy source most likely to be affected by climate change as it is sensitive to the amount of, timing and geographical pattern of precipitation as well as temperature. The report also stated that a reduced flow in the river and higher temperature reduces the capability of thermal electric generation as higher temperature also reduces transmission capacity. Also, excessive drought will lead to higher evapotranspiration that adversely affects water volume thereby reducing hydroelectricity capacity.

The BNRCC report is aimed at building informed responses to climate change in Nigeria by enhancing capacity from the community, state, and national levels and to implement effective adaptation strategies, policies, and actions. The ability of the Kanji Dam hydropower project to perform as designed has been greatly hampered by the drought which has ravaged most of the West African countries bordering on Sahara for the past three years. The effect of this drought on the power plants has led to a drastic reduction in the expected power supply from Kanji Dam (BNRCC, 2011). Negligence and a failure to tackle the issue of climate change by successive governments have also contributed to the rise of insurgency across the country. Against this backdrop, if appropriate preventive action is not taken and adaptation

measures are not implemented in time, the results could be catastrophic. No doubt, the need to preserve, protect, and promote the environment constitutes a headache to many nations and dominate discussions and activities of government and non-government organizations across the globe. This is because the nature and prospects of the future are determined by the safety of the environment and this fact has increased the need for a healthy and functional plan to preserve and protect the environment (Sodangi, Usman & Maina, 2012).

Given that the impacts of climate change are projected to increase over the next century, certain existing health threats will intensify and new health threats may emerge. Connecting our understanding of how climate is changing with an understanding of how those changes may affect human health can inform decisions about mitigating (reducing) the amount of future climate change, suggest priorities for protecting public health, and help identify research needs (IPCC, 2007). It is common in Africa to link the changing climate to related weather events and blame the causes on activities that take place within the confines of the local environment like pollution or deforestation by tree felling for domestic fuel.

2.1.1 Global Warming

Many issues are affecting our environment; one of them is global warming (Giddens & Sutton, 2017). Global warming is the rise in temperature in the last century. Each year scientists have more information about how global warming is affecting the planet and many of them agree that it is probable that certain consequences will occur if current trends continue (Mooney, 2016). The industrial revolution began in the 1700s, the worldwide spread of the industrial revolution brought with it threats to our environment. The use of factories and mass production has led to a permanent damage call global warming (Mgbemene, Nnaji & Nwozor, 2016). Global warming is an

increase in temperature in the earth's surface, oceans, and atmosphere generally attributed to the greenhouse effect caused by increased levels of carbon dioxide and other pollutants (Sivakumaran, 2015). Global warming has caused climate change causing the planet to become hotter and increasing weather disasters and hurting our health, communities, and economy (Adedeji et al., 2014). There are solutions to reduce carbon pollution and increasing the use of clean renewable energy but that would mean that manufactures would have to close down factories that run on these polluted gasses (Darkwah et al., 2018).

Global warming begins with the greenhouse effect, which is caused by the interaction between the earth's atmosphere and incoming radiation from the sun. Solar radiation passes through the atmosphere to the surface of the earth, where it is absorbed and then radiated upward as heat. The greenhouse effect is caused by greenhouse gasses depleting the ozone layer. These greenhouse gasses are water vapor, carbon dioxide, methane, and nitrous oxide. Water vapor is produced by evaporation or boiling water. Carbon dioxide is produced by burning carbon, organic compounds, and respiration. Methane is a flammable gas and Nitrous oxide produces exhilaration or anesthesia when inhaled. These gases trap heat in the atmosphere causing the climate to constantly change (Darkwah et al., 2018). The first cause of global warming is the greenhouse effect; this is the heating that occurs when certain gases in the earth's atmosphere trap heat. These gases let in light but keep the heat like the glass walls of a greenhouse in the atmosphere (Sivakumaran, 2015). The more greenhouse gases the more heat is retained. Humans increase the greenhouse effect by producing carbon dioxide that means that we are producing more gases, having as a consequence more heat retained in the atmosphere (Adedeji et al., 2014). Another cause is that humans with deforestation, exploitation of the soil, and the burning of fossil fuels releases large

amounts of carbon dioxide which significantly increases its concentration in the atmosphere (Sivakumaran, 2015).

One of the consequences of global warming is the melting of the glaciers; early snowmelt and severe droughts will cause more water shortages. Another consequence is that the rising sea levels will produce coastal flooding. Then the forests, farms, and cities will face troublesome new pests and more mosquito-borne diseases. Finally, the condition of habitats such as coral reefs and alpine meadows could lead to the extinction of many plant and animal species (Adedeji et al., 2014). Climate change has been impacting our water resources, energy supply, transportation, agriculture, and ecosystem. Climate change brings challenges to human's health such as a significant increase in the risk of illness and death related to extreme heat and heatwaves, some diseases transmitted by food, water and insects are likely to increase, certain groups, including children, the elderly, and the poor, are most vulnerable to a range of climate-related health effects, all these impacts mentioned and much more will affect our families and economy in the near future (Adedeji et al., 2014).

Global warming is one of the problems that affront the human race at this time. Temperatures are rising several years ago, and the main scientific explanation has generated division between scientists. Studies show that majority of scientists accept global warming, the percentage who do not accept the main explanation for this phenomenon is much greater, in addition to the explanation about the global warming by the scientific community is so exotic, that some of those who had doubts about the global warming has begun to reject it. And others, who express doubts on the assumption of a greenhouse effect, are rejected, originating from this way not a better understanding of the problem, but a shortage of new scenarios for climate problems

(Chakrabarti, 2009). The scientific hypothesis is based on the fact that the man is the main cause of global warming, for the production of certain greenhouse gases, as do call certain gases, being one of the main carbon dioxide, but this hypothesis goes against the same nature, because we have all seen how it works a greenhouse, greenhouses are created by solid materials primarily as the glass. The scientific experiment on as the carbon dioxide works to cause the greenhouse effect is done with a greenhouse made of glass or plastic. This causes the greatest doubts about global warming by a greenhouse effect caused by gases (Adedeji et al., 2014).

The science and anthropogenic association of global warming has existed for a long time. In 1896, Svante Arrhenius, who received one of the first noble prizes in chemistry argued that the earth's climate could be alternating between ice-age and warming period based on the introduction or depletion of carbon dioxide in the atmosphere (Islam, Islam, Zatzman, Rahman & Mughal, 2015). Arrhenius (1896) also added that human activities add a large quantity of CO₂ to the air causing warming. In 1938, G. S. Callendar read a paper to the Royal Meteorological Society arguing that carbon dioxide from fossil fuel consumption had caused a modest but measurable increase in the Earth's temperature of about one-quarter of a degree in the previous fifty years (Callendar, 1938). These discussions continued among other environmental arguments and became hard to ignore and this lead to the first international conference in 1972 in Stockholm, which principal purpose was to serve as a practical means to encourage and provide guidelines to protect and improve the human environment and to remedy and prevent its impairment. Though much of the declaration in this conference was to create a harmony between environment and development, there was no clear declaration on global warming and climate change.

The next conference was the Earth Summit in Rio in 1992. This summit was to build upon the Stockholm conference. This conference was the first international conference to make a strong case for environmental protection. In the end, they announced the Rio Declaration on Environment and Development. Principle 4 of the declaration talked about environmental protection constituting an integral part of development and should not be considered in isolation. Principle 10 and 11 both also talk about the environment with 11 specifically calling for legislation to safeguard the environment. In section 2 of the declaration, governments were charged to develop more precise ways of predicting levels of atmospheric pollutants to curtail the amount of greenhouse gasses released in the atmosphere. This conference is seen as the most important root of the environment and climate change discourse and policy because it was during this conference that the United Nations Forum for Conference Climate Change (UNFCCC) was set up. With the setting up of this forum, it met annually beginning 1994 till date to deliberate on issues about the environment. These meetings are what have come to be known as the Conference of Parties (COP) (UNFCCC, 2014). This paved way for the Kyoto conference which was the 3rd session of the UNFCCC which lead to what popular became known as the Kyoto protocol. The objective of this protocol was to fight global warming by reducing greenhouse gas concentration in the atmosphere to a level that will prevent dangerous anthropogenic interference with the climate system. The UNFCCC, in article 4.2 of the protocol, commits industrial countries to take the lead in reducing emissions. Though the protocol also mandated developing countries to reduce emissions, they were not to bear the cost of the reduction. The Kyoto protocol was binding to all members unlike the declarations of the Stockholm and Rio (UNFCCC, 2014). The next major conference was the Paris agreement. But before the Paris conference was one of the most important COP which was held in Lima, Peru,

in December 2014-COP (20). Under the Lima Call to Action, Parties to the UNFCCC were urged to submit their “intended nationally determined contributions” (INDCs) (UNFCCC, 2014), which outlined their commitments towards global agreement to tackle climate change (Ahmad, Hamid & Kazmi, 2017). This was the first-time individual countries were challenged to come out with their INDCs.

The following year was the famous Paris agreement. Building upon COP (20) it aimed to respond to the global climate change threats by keeping a global temperature rise this century well below 2 degrees Celsius and further to 1.5 degrees Celsius. In the Paris agreement each country determines, plans, and regularly reports its contribution it should make to mitigate global warming (UNFCCC, 2014). Although the UNFCCC meets annually to discuss the ways of combating the incidence of global climate change, no significant and concrete policy has been very successful because of the UNFCCC not having the mandate to enforce every country follow the guideline to the later. Bearing above conceptualizations in mind, this research tries to understand how media is covering climate issues, especially in Nigeria. It is important to understand the role of media in spreading issues on climate change, global warming, and environmental degradations or pollution because media has enough capacity and power to control and set the daily agenda of the public. The media can give us information but sometimes fake information. The news press, for example, does not always reflect reality; they filter, tailor, and change it (Rogers & Dearing, 1988).

Media influence has become so powerful today that it can influence people positively and/or negatively in a certain direction. Especially, news media sets the daily agenda and has "ability (of the news media) to influence the importance placed on the topics of the public agenda" (McCombs & Reynolds, 2002, p. 1). The agenda-setting theory,

for instance, highlights that media has a great influence on their audience by instilling what they should think about (McCombs and Reynolds, 2002). Eugene Shaw summarized the most important fact about the media by saying, “the mass media are all pervasive but not particularly persuasive” (Shaw, 1979, p. 96). Although researchers in the field of agenda-setting have argued about the persuasive nature of mass media, Shaw (1979) suggests that the media are only persuasive in fixating the public focus on particular issues and events, hence, the media influences the perception of the public on what is important.

2.2 Environmental Journalism

The environment is unavoidably crucial to human survival. Humans cannot survive outside the environment because this constitutes the totality of the physical space within which humans subsist (Agba, 2003; Lewis, 2009). Consequently, knowing about and understanding the environment ought to be a primary occupation of humankind. Journalism, especially environmental journalism, constitutes a key means of achieving this objective. Through environmental journalism, the society becomes informed and enlightened on those environmental phenomena that affect her survival. These phenomena include climate change, ecological balance, erosion, flooding, drought, earthquake, landslide, among other numerous ones. Incidentally, some of these phenomena arise from human activities that affect the environment. Humans are in constant interaction with the environment and the manner of this interaction is always critical to how conducive the environment becomes to human survival “A starting point for many discussions about media roles about public awareness and concern about the environment is the observation that the mass media ...serve as a primary source of information,” (Hansen, 1991, p. 445). The level of awareness of the public is hinged on what the media reports. The field of environmental communication

teaches that how we communicate about our environment shapes not only what we think about it, but most importantly, what we do about it (Carvalho & Peterson, 2009) “Scholars who study environmental communication are particularly concerned with the ways people communicate about the natural world because they believe that such communication has far-reaching effects at a time of largely human-caused environmental crises” (Milstein, 2009, p. 345).

The press responsibility is not only to disseminate news but to do so accurately. In the UNDP, Human Development Report of 2007, Boykoff and Roberts (2007) admitted that mass media coverage has proven to be a key contributor that has shaped and affected science and policy discourse as well as public understanding and action. Environmental journalism covers a wide spectrum of topics, ranging from pollution, waste management, urban decay, climate change, health issues, desertification, or deforestation (Rubin & Sachs, 1973). Boykoff and Roberts (2007) further assert that within climate change, two more terms need quick review and clarification: climate change mitigation and adaptation. Mitigation of emissions is the reduction of greenhouse gases released to the atmosphere. Adaptation to climate change adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects which moderates harm or exploits beneficial activities (IPCC, 2007).

In the 1930s, this was the first-time climate science and mass media came together in coverage of climate change. Although, media coverage of humans’ contributions to climate change became more visible in the 1950s. However, in the subsequent three decades, there was inadequate mass media coverage of climate change. International and domestic climate policy began to take shape in the mid-1980s, primarily through

the activities of the International Council of Scientific Unions (ICSU), The United Nations Environmental Programme (UNEP) and the World Meteorological Organization (WMO). Boykoff and Roberts (2007) that increase in media coverage could be noted in Western Europe and North America during the times of the releases of the IPCC Assessment Reports in 1990, 1995, and 2001. There were also increases in the coverage during the 1992 UN Framework Convention on Climate Change (UNFCCC) and the 1997 Kyoto Protocol. It was also noted that a large increase in coverage was evident in Australia, New Zealand, the Middle East, Asia, Eastern Europe, and South Africa during the 1997 Kyoto protocol.

The Intergovernmental Panel on Climate Change (IPCC) plays an important role in conceptualizing the scientific research on climate change and also the way information regarding the discourse is communicated and consumed among policymakers and society at large. The quantity of climate change coverage in African media is disproportionate to the level of threat it poses to the continent. African citizens are at humanity's climate change frontline, yet they are also among the least informed about human-induced global climate change, its causes, and its consequences. Brussel (2010) argued that the press is a dispenser of knowledge to the public, the public gathers information ranging from politics to the environment. Science communicators understand the importance of the news media. Of particular interest has been how climate change is framed in public discourse. Communicators have a choice of which considerations to emphasize and which to downplay on any given political issue and they make such decisions strategically. The choices they make are the issue themes that proliferate in political discourse. This is even truer with a complex topic like climate change. It is an issue that involves multiple complex domains, like science, economics, and value considerations, trade-offs, unequal impacts within society and

across nations, and future projections about somewhat uncertain consequences (Stecula & Merkley, 2020). This complexity provides journalists, parties, and interest groups tremendous latitude in framing the issue to serve their interests and beliefs. The news media play a seminal role in this process because they are often the primary source of information on complex political issues for the average citizen (Lahsen, Couto, & Lorenzoni, 2020). They are therefore the primary mode of delivery of issue frames to the public.

An environmental journalist must compare and analyze issues about the environment, the knowledge of the press should be wide and not limited to a particular scope or field. Most journalists admit that the environmental beat is hard to cover (Bruggers, 2012). Walsh (2009) suggested that the environmental beat is not an easy beat to cover by any means. This is why this premise of the reporting field can prompt questions on the efficiency of the environment reporter. Following this, Sachsman, Simon, and Valenti (2002) in their interview with the environment reporters of New England found that nine factors might be present in environment stories. These factors range from a political or government angle to a human-interest angle. The respondents from Sachsman and his colleagues (2002) study ranked the human-interest angle as being always present in writing their environment stories. While the factor that was the least considered in their reportage of the environment was risk assessment. The findings downplay the notion of environment stories being purely a conservation story or a science story. Instead, environment reporters appear to include overlapping factors in their reporting and writing (Sachsman et al., 2002). The media should report news by considering its newsworthiness, timeliness, oddity, social relevance, exclusivity, and conflict. This applies to all types of media reporting which also includes environment reporting. In covering the environment, one must consider that an environment story

is not just trees or water. It's also about policy, economics, politics, a lot of science involved (Severino, 2010). This means that the environment is a very complex field in journalism and has a political value. It touches not only the condition of the environment but also covers various sectors in the political, social, and economic domain. Thus, a journalist needs to be knowledgeable not only in science but also in other disciplines. However, many studies relate that reporters often find it difficult to cover the environment unlike covering crime stories and the government among others. While some beats are already structuralized, the environment beat and environment reporter is somewhat unique. Environmental news items in the 1960s was not given priority and space in the newspaper. It seems that the environment is a very distinct field that often puzzles reporters especially those who do not have specialized knowledge on the matter.

Sachs and Rubin (1971, p. 57) suggest that “the environment story is not, in a news sense, a visible one”. Both researchers also enumerated at least five reasons why the environment is a difficult subject to cover. First, the dependency of the news media for revenues on the industries guilty of much of the pollution is one. Second, private businesses do not feel obliged to make public their activities and decisions that the government does. Third, decisions with environmental consequences often involve political, social, and economic factors that the public and the media cannot grasp. Fourth, there are rarely specific news pegs on which to hang environment stories with significant news items evolving for a long period. Finally, most environment stories are simply not sexy enough which implies that it does not sell very well (Sachs & Rubin, 1971). Environment reporting is a complicated matter to report on, these complications tend to affect the quality of news that reporters produce. News outlets tend to depend heavily on scientists and government organizations for their news

stories on the environment (Royandoyan, 2012). News outlets still do not have the necessary reporters to send to cover an environmental issue. Reporters have been accused of treating environment news as a simple reflection of communities and governments. Frome (2001) asserts that reporters not only see environmental news as mere news reports rather a way of looking at the world and oneself. He further suggested that an environmental journalist must understand the basics of mass communication to be able to duly and meticulously investigate issues to achieve accuracy and comprehensiveness. The journalist is not simply a reporter; he must be a combination of all the good traits the roles of a disseminator, interpreter, investigator, mobilizer, and adversary possess.

2.2.1 Media Coverage of Environmental Issues

Traditional media theory has quite a bit to say about the role of media in reporting issues. The basic and primary function of the media is the watchdog of the society; it's also referred to as the fourth estate of the realm. It was this role of the media that researchers have come to consider studying the relationship between the press and the environment (Baran & Davis, 2012). An environmental journalist serves primarily as a mediator and also an interpreter of environmental issues. As such, the journalist is tasked to balance the role of scrutinizing the activities, policies, and impacts of industry and government. Journalists perceive their role as disseminator, interpreter/investigator, populist mobilizer, or adversary (Giannoulis, Botetzagias & Skanavis, 2010). As a disseminator, journalists are charged with the responsibility of getting facts and transmitting it to the public quickly (Giannoulis et al., 2010). It is the responsibility of the journalists to report environmental news accurately and fairly. Disseminators report events as it is without getting attached to the issue. Journalists can't let their attachment to the environment slant their news report. Environmental

journalists must always observe the principle of objectivity which includes reporting more than one side of a story.

Another set of journalists perceive themselves as interpreters, their main duty is to investigate and dig deep for facts (Giannoulis et al., 2010). The journalist's duty is to interpret claims with independent research and dismissing information and sometimes misleading information. Journalists tend to side with scientific findings rather than industry reports as these reports might have been tweaked. The class of journalists who believe that a journalist's responsibility is not only to disseminate information, a journalist can muster the public towards participating in environmental debates. These class of journalists are referred to as popular mobilizers; they enthuse that views of non-experts are also important and such views can help build support and credibility to environmental issues (Stocking & Holstein, 2009). In simpler terms, this type of reporters encourages lay people to voice out their views and opinion and opens environment discourse to the public. Finally, environmental reporters can also be cynical these journalists are adversaries. These journalists are cynical of public officials and special interests. S/he is cynical of all projections including those of journalists, these reporters enhance the credibility of industry claims (Giannoulis et al., 2010).

The study of Giannoulis et al. (2010) encourages journalists to spice news stories to get the attention of their audience. However, it is important not to manipulate the credibility and originality of the news. Environmental journalists should examine every aspect of life ranging from ethics, religion, economy, history, politics to religion (Giannoulis et al., 2010). Environmental issues are complex as they touch the political, economic, legal, and other aspects of society. The specialized beats may also be a

constraint to including reports from other fields to provide an in-depth environmental story. Journalists are encouraged to have sources they can call to verify information (Machin & Niblock, 2006). And with the latest information and communication technologies (e.g., the Internet), besides the time constraints, the beats produce simplistic and predictable stories. These studies help explain the phenomena of little coverage of the environment and how they are framed. Popoola (2014) argues that “There has been a growing concern about the environment and the need to engage sustainable environmental behavior in Nigeria. It is irrefutable that since the mass media provide much of the relevant knowledge for public knowledge, the media determine to a large extent the kind, and amount of, as well as the frequency of environmental information that reaches the public” (p. 137). In Nigeria environmental stories seems to be dominated by climate change issues. Perhaps that was why Ibimilua (2014) had to come up with a typology of environmental issues that include both natural and anthropogenic calamities of different types to draw attention to the fact that it is not just climate change that is destroying the environment in Nigeria. These studies have shown that, regardless of being a global scientific phenomenon, climate change is presented in highly various manners at the national level. Different mass media, and different groups within those media, communicate climate science through a set of culturally specific frames, which have a major influence on public perception and, by extension in a voting democracy, on subsequent public policy (Trumbo & Shanahan, 2000).

2.3 Factors Influencing Environmental Reportage

The role of the media in safeguarding the environment cannot be overemphasized. Their responsibility involves informing and educating the public about what is currently happening but also the cause of that occurrence and its present and future

implications. However, the media faces some challenges in reporting and presenting environmental issues such as climate change. The challenges that appear to militate against media coverage of the environment are, therefore, discussed below.

2.3.1 Reporting Tradition: Issue of Objectivity

The way an organization reports a news story affects its perception of environmental reportage. Studies show that balanced and fair reporting which is expected from a reporter is not necessary in environmental reporting. The principle of objective enjoins journalists to report the news accurately and fairly, journalists are not permitted to mix their views and opinions with what they report. Opinion formation should be left to the public, journalists are not opinion molders. In reality, however, the principle of objectivity is difficult to adhere to. Hasan (2007) stated that objectivity in journalism is a utopia, news processes are influenced by factors that prevent journalists from being impartial. At the personal level, a journalist's objectivity can be limited by his religion, belief, culture, and even his education attainment in his writings of environment stories. Manning (2001) reinforced that the processes a news item goes through makes objectivity unattainable. Processes like organizational pressures, editorial processes, and sources strategies concerning the production of news. As such, objectivity can only be conceived as a guiding principle for reporters but not an act in itself. Techniques that will guide journalists from competing pressures have been set aside, a journalist is expected to meet deadlines and produce excellent news stories at the same time (Tuchman, 1972). Similarly, Boykoff and Boykoff (2004) suggested that the journalist's ability to follow the principle of balanced reporting is limited.

2.3.2 Specialized Knowledge: Issue of Education

Environmental coverage is heavily reliant on the agenda-setting theory, the theory posited that the more coverage an issue gets, the more importance gets attached to it.

Sachs and Rubin (1971) noted that many environmental journalists are sometimes not environmental specialist, they noted news organizations hired environmental journalists once it dawned on them that environmental issues are becoming apparent crises, he also referenced that environmental reports are mostly done by already employed in-house journalists. Apart from external factors, journalists face lots of challenges. For example, the study of Willis (2010) highlights that journalistic training affects a journalist's decision of what constitutes news, he also claimed most journalists view their roles as that of a mere watchdog. Extant studies have shown that journalists' lack of background knowledge on scientific and environmental issues are factors that affect their reportage. Palmore (2002) conducted a media analysis of environmental issues and reports in three Hawaii newspapers between 1993 and 2001. Results showed that there were inconsistencies in the reporter's assignment, articles lack substance and basic background knowledge. The analysis scrutinized the scientific and environmental fictions used in reporting the issues. The analysis further highlighted that this lack of substance and background in the articles resulted in the unclear goals of the public, focus on controversy, and the oversimplification of issues (Palmore, 2002).

Environmental journalist critics have always placed high importance on a reporter's educational background. Brussel (2010) proposed that environmental education should be introduced into the curriculum for journalist's training. He enthused on the need for a journalist to have sufficient knowledge so that they can cover news stories accurately. Walsh (2009) believed sufficient knowledge will prevent the press from misreporting about the environment. Over the years, environmental reporting has grown more complex. Impliedly, journalists are enjoined to acquire specialized knowledge about so that the information they churn out can be accurate and comprehensive. Cramer

(2008) interviewed journalists to explore how climate change issue is framed. Cramer (2008) noted the importance of understanding, accuracy of issue, and jargon is important for reporters as they are fulfilling the educator/informer function. One of the journalists interviewed enthused the need for environmental journalists to be properly educated that there is a need to educate environmental journalists (Cramer, 2008). However, the study did not go further to provide an empirical basis to support this.

2.3.3 Organizational Routines

Another significant indication in environmental reporting is the organizational routines. Reporters lack of knowledge in science could impede their reportage of environmental issues. However, the role of editorial bondage is a greater threat to the objectivity of a news report compared to a reporter's educational attainment. An editor has absolute control over what is to be published and what not to be published, this control affects the credibility of a news report. Hasan (2007) claimed that environmental news competes for spaces in newspapers, this decision lies solely with the editor in cases it gets published limited spaces are given to it thus limiting the depth of the book. Sachsman et al. (2002) noted that editors inhibit the coverage of environmental news. In their study, journalists were asked to rank seventeen barriers they think poses more threat to their job. They identified time constraints and the size of the news hole as major barriers; editors were ranked as the eighth biggest challenge out of the seventeen factors. Researchers have pinpointed that the race and greed for profit is one of the root causes of the problems affecting the quality of reports a newspaper churns out (Hasan, 2007).

Controversies and conflicts sell a news story, editors, therefore, find it difficult to allot spaces for issues that barely attract readers and considered boring, while it is said most editors tend to constraint the work of their journalists and as environmental stories are

kept for times that they are no breaking news (Wilding, Fray, Molitorisz, & McKewon, 2018). However, stories on environmental disasters like floods, tsunamis tend to get more attention from editors (de Goyet, Marti, & Osorio, 2006). Researches such as Nitz and West (2004), and Djerf-Pierre (2012) have shown that stories concerning the environment that makes the news are mostly negative. Environmental issues are difficult to relate to an individual's personal life, the mainstream media is more concerned with profit so sensational headlines are given more preference compared to covering unobtrusive issues (Nik Hasan, 2007). Since environmental news stories gather little interest, journalists tend to focus their stories on conflict and emotions rather than the issue per se, this is done to meet the standards set for news value by the news organization (Schoenfeld et al., 1979). News like other commodities is driven by demand, the quality of journalism being churned out is as a result of the public demand. The news outlet needs to pay workers and settle bills, however, this does not mean a journalist's function should be reduced to mere business: profit-driven news outlet negates the media's main objective of helping the society understand issues (McManus, 1994). McManus (1994) identifies three main influences in a newsroom: (i) the technological, (ii) cultural, and, (iii) the legal regulations that guide news. McManus (1994) identified time constraints as a big issue in environmental journalism. News organizations tend to follow the transactional theory and cost-benefit analysis in running their day to day economics, editors tend to protect the interests of editors and as well search for a market with the largest audience for the advertisers good (Wilding et al., 2018). Organizational theory was used in studying the reportage of news, they identified occupational routines and constraints, these barriers are external to the journalists and their perception (Leask, Hooker, & King, 2010). The organizational theory posited that once a journalist is well socialized within the

organizational setting, individual preferences and values tend to matter less. The organization has its values and objectives which subsumed the values of the journalists (Adanowski, 2016).

2.3.4 Newspaper's Agenda

News outlet does tend to have an ideology or agenda which guides the day to day activities of the outlet, Hasan (2007) noted that journalists believe that this ideology is the main constraint in environmental reporting. These agendas range from political to economic, the political ideology refers to the political standings of the newspaper while the economic agenda deals with profits. It's not news that politics heavily influences news contents such as environmental news. Hasan (2007) argues that the news about the environment covers issues following their political agenda; the news media chooses from the mass of information available those they deem important to themselves. Self-censorship is difficult to attain; journalists have noted that editors are mostly wary of contents on the environment they produce to protect authorities. Many newspapers are affected by the influence of their advertisers who they might anger if a certain environment story is published (Porlezza, 2017). For example, the study of An and Bergen (2007) examines how and to what extent advertising sales executives deal with advertiser influences on news content. Their study found that small newspapers or chain-owned newspapers will likely succumb to compromise in order to favor their advertiser.

2.3.5 Sources

One of the important factors that affect the reportage of news is the reporters' source. Hansen (1991) suggested that environment information is multifaceted, getting a correct and reliable source of environmental information can be difficult. Journalists go to great lengths to find sources that are reliable and widely accepted by the public.

It is, therefore, important for environmental journalists to establish a good rapport with their sources. The news source provides the journalist with the ability to define and maintain what's true and what's not. Hasan (2007) note that the feasibility of this relationship is based on the values of the press and their source. A journalist should be well informed about the bureaucratic structure of the society, such knowledge will make sourcing for news content easy for him/her. Fishman (1980) demonstrated this with his example of a journalist whose duty is to cover a landslide, for example, a well-informed environmental journalist should have his go-to people in the authorities to verify the facts of the disaster. Public relation sources play an important role in the writing of news stories on the environment. Journalists have been criticized for their depending greatly on these sources in writing their news reportage. Hasan (2007) suggested that the over-dependence of journalists on public relations sources could be as a result of the reporter's lack of knowledge on certain environmental issues thus lack of substance. Publicity resources can be conceived in the form of the number of press releases or the quantity of media bombardment (Hansen, 2010). It can also be referred to as the ability of organizations and companies to package and reframe information to create a mutual understanding with the public.

Sachsman et al. (2002) highlighted that journalists tend to get over half of their environmental news reports from press releases and public relations efforts, most times the articles are barely re-written and have minimal editing, these news sources tend to frame news stories in ways that suit their agenda. Royandoyan (2012) corroborated this claim, he explained that these organizational sources exercise social and political power by framing stories towards their self-serving bias. Hasan (2007) stated that scientists are the most difficult news sources to get information from, scientists' expectations that their stories be written as complete as science journals have frustrated

many journalists and media people, this clash of understanding of each other's work can be solved with greater discussion and tolerance. Willis (2010) highlighted how journalists use symbolic interactions and social constructivism to construct the audience reality. The interpretation of a news story can be affected by how a journalist interprets the news events. The framing of a news story affects the public understanding of such issues, the sources thus play an important role. The expertise of a source affects the credibility of the story; journalists tend to accept or decline a source contribution based on their perceived exposure in the field of discussion. McQuail (2010) suggests that the values, cultures, and ideology of a reporter affects the presentation of a story. Political and cultural factors play an important role in news selection, these factors shape journalists' bias and way of thinking. Researchers (Reich, 2006) have found a symbiotic relationship between a journalist and his/her sources, thus the impact of sources should not be underestimated.

2.4 Framing Theory

Scholars such as Entman (1993) and Scheufele (1999) have argued that the concept of framing is devoid of methodological and theoretical precision and they have made numerous attempts to make more coherent theoretically. However, Reese (2001) uncovers that the significance of framing is not only about its potential as a unified research approach rather, the major importance of framing is that it supplies a model that, for reasons of theoretical diversity, has developed a comprehensive understanding of frame processes. How we frame our communication matters. Framing is positioning messages in ways that draw on audiences' mental models to favor specific perspectives on an issue (Takach, 2019). Based on these arguments, the importance of framing and framing analysis cannot be overemphasized. The framing as a concept has used several fields of study, such as social movements (Benford & Snow, 2000), public policy (Rein

& Schön, 1991), and media studies (Entman & Pellicano, 2009; Gamson & Modigliani, 1987).

Chong and Druckman (2007, p. 104) define the term, framing as “the process by which people develop a particular conceptualization of an issue or reorient their thinking about an issue”. Framing and frames have been used repeatedly in academics especially constructivist to refer to the presentation of issues or events from a specific point of view. The concept of framing is a culturally backed definitions of reality that allows people to make sense of issues and events (Goffman, 1974). As asserted by scholars, framing refers to an imminent process of making sense to create structure and meaning to the world outside (Iyengar, 1990; Borah, 2011; Semetko & Valkenburg, 2000). On the other hand, Frames refer to those particular constructing fundamentals that give structure and meaning to the world outside (Gitlin, 1980; Reese, 2001). Reese (2001) further stated that “Frames are organizing principles that are socially shared and persistent over time, that work symbolically to meaningfully structure the social world” (p.11). Frames allows various aspects and point of view of reality with an understanding of specific issues or events; hence frames give meaning and clarity regarding a particular issue because frames shape knowledge into symbolic categories (Reese, 2001). Frame can alter the way issues and events are seen and perceived. Nisbet (2009, p. 15) states that “framing is an unavoidable reality of the communication process, especially as applied to public affairs and policy.

There is no such thing as unframed information, and most successful communicators are adept at framing, whether using frames intentionally or intuitively”. Frames tell why an issue is a problem, the causes, and the solutions. Framing is the process while frames are the outcome of such a process. Asplund (2014, p. 24) asserts that “framing

can be synonymous with assigning meaning and refers to the sense-making processes of understanding an issue, while a frame can be seen as an outcome of these processes”. Framing is an important aspect of the public understanding of issues or events regarding how information obtained by people. Information about issues and events are framed in ways that it creates social realities for the understanding of existing values and norms related to an issue (Boenker, 2012). The use of frames is influenced by the subjectivities which are related to the experience packed in individual memory (Slovic, Finucane, Peters & MacGregor, 2002). This type of approach majorly influences how people portray the issues or events, who or what the people perceive “as being responsible for the problem, and what they feel should be done to address the problem” (Swain, 2012, p.165).

The concept of framing has made journalism and news production to agree with constructivism: “the act of making news is the act of constructing reality itself rather than a picture of reality” (Tuchman, 1978, p. 12). This indicates the active role of the media in the construction of reality. The media does not imitate reality rather media content is influenced by numerous factors which include media ideology, journalist reality, social institutions, and forces (Shoemaker & Reese, 1996). The media approach to frame analysis portrays media as active constructors who use frames as tools in the communication processes. Hence, journalistic practice includes making ideas more salient in a communicating text, “in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (Entman, 1993, p. 52). This explains how media construct meaning using communication by focusing on specific issues and event, Gamson (1992) highlighted that, while each issue or event has a set of ideas and symbols used to construct meaning about it, journalists contribute their frames and

invent their catch-phrases and metaphors. The media approach to frame analysis is applied in examining how climate change is covered and framed in Nigerian newspapers.

Nisbet (2009) asserted that the public depends on frames to understand and discuss issues, similarly journalists adopt frames to present absorbing and fascinating news reports. Also, policymakers such as government officials employ frames to construe various options regarding policies and their implementation. Lastly, experts use frames to elucidate the technical aspect of issues and make them compelling. In environmental communication, Nisbet (2009) suggest that frames are important to engage the public. In his study, he identified eight typology of frames which are applicable to climate change: a) social progress, b) economic development and competitiveness, c) morality and ethics, d) scientific and technical uncertainty, f) pandora's box/Frankenstein's monster/runaway science, g) public accountability and governance, i) middle way/alternative path, and lastly j) conflict and strategy. Moreover, Shehata and Hopmann (2012) asserted that the climate change frame is the central organizing idea that gives structures the discourse on global warming. A frame analysis approach has two major benefits. First, it allows scholars to understand the often implicit, ideational drivers of policy change. Béland (2009) argues that to understand policymaking in international institutions, it is necessary to examine the framing strategies of key actors to understand how they convince other groups to support their policy alternatives. Failing to analyze the changing assumptions of actors as they affect the formulation and diffusion of new policy proposals makes it harder for scholars to understand the potential content and direction of policy change. A second advantage of a framing approach is that it recognizes the intersubjectivity of norms. This approach explicitly acknowledges that the meanings of norms are neither given nor understood similarly

by all actors, but rather are subject to interpretation (Towns, 2012). The process of resolving the conflicts over interpretation or of allowing parties to interpret a frame in their way can help explain how an issue is placed on the agenda and ultimately recognized in international law.

Frames related to climate change can emphasize economic costs or benefits, heighten partisan or ideological conflict, emphasize or downplay scientific uncertainty, among other things. There are likely implications for the public's support for climate action and willingness to act on these attitudes in a variety of ways, from voting for environmentally friendly candidates to engaging in personal action to reduce one's carbon footprint or even engaging in political activism. If the frames citizens encounter lead citizens to think of climate science as uncertain or mitigation as being costly or see climate change as an ideological battleground, there might be a propensity to support and engage in climate action to vary accordingly. Framing is unavoidable. All human knowledge makes use of frames, and every word is defined in relation to the frames it neutrally activates (Almiron & Xifra, 2019). Moreover, since frames always come in systems, a single word can have the potential to activate not only its defining frame but also much of the system its defining frame is in. Every issue, including climate change, can be viewed from a variety of different perspectives and understood as having consequences for multiple values or considerations. For those doing the communicating, the skillful use of framing can help them effectively convey their argument, frequently by emphasizing specific a specific set of considerations related to the issue at hand. The varying weights placed on these considerations often play a decisive role in determining overall attitudes and preferences. The information environment, such as the news media, play an important role in this process as they

frequently carry the specific messages from the elites to the mass public (Maibach, Kotcher, Stenhouse & Cook, 2020).

A growing body of experimental research has explored how different frames in climate communication can affect attitudes and behavior. Alongside this important work has been research that examines the prevalence of frames in political discourse. These works have shed light on the nature of climate change coverage in the United States and other countries (Boykoff & Rajan, 2007; Boykoff & Roberts, 2007; Ekanem & Nwagbara, 2010; Swain, 2012; Batta et al., 2013). Billett (2009) suggests that studies have theorized on and now incorporated the role of mass media in framing and conceptualizing climate change issues, either it is scientific or political. Furthermore, Trumbo (1996) and Pellechia (1997) in their respective studies emphasized that there has been a lot of climate skepticism in Western media. This collaborates with the findings of a study by Boykoff and Boykoff (2004) which found that close to half of the articles on climate change question either its existence or human-induced origin. The study by Billett (2009) further found that most climate change research focused on Western social contexts and norms, with low consideration on how it is being framed in other countries where the macro-scale normalizing values in the public sphere are different.

Chapter 3

RESEARCH METHODOLOGY

Using a quantitative methodology, this study investigates how four Nigerian newspapers, the Punch Newspaper, the Vanguard Newspaper, the Guardian Newspaper, and the ThisDay Newspaper covered climate change issues in Nigeria between 2015 and 2020. This chapter covers the research methodology, research design, population and sample, data collection instrument, research procedures, and reliability and validity of the research.

3.1 Research Methodology

The study aims to examine how Nigerian media covered and framed climate change in the country, hence, this study adopts a quantitative research methodology to analyze the selected Nigerian newspaper. Quantitative research involves the collection of data so that information can be quantified and subjected to statistical treatment in order to support or refute “alternate knowledge claims” (Creswell, 2003, p. 153). Quantitative research method is "an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, to determine whether the predictive generalizations of the theory hold true" (Creswell, 1994, p. 1). In simple terms, it is quantitative research present data in numerical forms that is in numbers. Gay and Airasian (2000) collaborate this by explaining the quantitative research method to be “the collection of numerical data to explain, predict, and/or control phenomena of interest”. Quantitative research involves quantity in terms of numbers by focusing on numerical data and theorizing it to

describe a specific phenomenon. Quantitative research can be used to measure numerous variables results such as opinions and behavioral patterns which can be generalized from a larger population same. It evaluates data such as frequencies, amounts, values, or degrees to establish facts and reveal patterns in research. It involves the utilization and analysis of numerical data using specific statistical techniques to answer questions like who, how much, what, where, when, how many, and how (Apuke, 2017). Quantitative research data can help establish correlations between given variables and outcomes. Such data should allow others to validate original findings by independently replicating the analysis (Dudwick, Kuehnast, Jones & Woolcock, 2006). Besides, the quantitative research method is very useful in analyzing a large set of data, hence, this makes it easy to make comparisons over time and in different categories. This method also helps produce an unbiased and accurate study devoid of the researcher's individual subjective bias.

There are different types of quantitative research method and for this study a quantitative content analysis is adopted. Content analysis is a popularly used method in quantitative research and is particularly in communication studies. Content analysis is a systematic, quantitative approach to analyzing the content or meaning of communicative messages. Also, quantitative content analysis is a descriptive approach to communication research, and as such is used to describe communicative phenomenon. This type of research analysis is distinct from other types of research method as it does not require the collection of data from people. Like documentary research, content analysis is the study of recorded information, or information which has been recorded in texts, media, or physical items (Coe & Scacco, 2017).

3.2 Research Design

Quantitative content analysis was used in collecting and analyzing data to examine the framing of climate change in the Nigerian newspaper. Berelson (1952) sees quantitative content analysis as “a research technique for the systematic, objective, and quantitative description of the manifest content of communication” (p. 18). It is the quantitative investigation of message characteristics (Neuendorf & Skalski, 2009, p. 203). Quantitative content analysis utilizes a variety of tools and methods to study media content. The use of quantitative content analysis is important for case studies such as examining the content analysis of climate change in Nigerian print media (White & Marsh, 2006). This is a method of studying and analyzing communication in a systematic, objective, and quantitative manner for the purpose of measuring variables. Quantitative analysis is suitable for closed inquiries as it is objective, systematic and can be generalized (White & Marsh, 2006).

Content analysis allow for replication, the findings, therefore, do not rely solely on the bias of the researchers doing the content analysis for their acceptability. The findings can be subjected to independent tests and techniques for judging their validity and reliability. Indeed, the extent to which validity and reliability can be judged are significant issues in evaluating a research methodology (White & Marsh, 2006). The procedure used in analyzing the contents in the study included;

- a. Identifying the study data (Four Nigerian newspapers)
- b. Determining the study sampling method and sampling unit
- c. Create data collection unit and unit of analysis
- d. Create a coding scheme suitable for the data
- e. Code data

- f. Access the reliability and validity of coding
- g. Analyze coded data using SPSS.

The case study of this study is climate change in Nigeria. A case study is used in research design to analyze a phenomenon, to generate hypotheses, and to validate a method. Case study as a research design enhances research and helps in simplifying observation of any naturally occurring phenomenon that exists in a set of data (Yin, 1984). A case study allows a specific issue of interest to be analyzed in detail. In the light of the above, this study analyzed 303 news articles from the four selected Nigerian newspapers to examine the framing of climate change by Nigerian media.

3.3 Population and Sample

To examine how Nigerian media framed climate change in Nigeria, this study adopted newspapers as a data source. The selection as a primary source of data is not far-fetched as newspapers are very useful in conducting quantitative and qualitative researches (Iyengar, 1990). Newspaper articles can serve as a useful source of information, hence serves as a primary source of information about historical and current events. Also, newspapers have archives that can be easily accessible, therefore making data readily available to researchers interested in validating findings of studies such as this. Wimmer and Dominick (2011) suggest that population is a group variable or phenomena while the study sample is a subset of the population that serves a representative of the entire population. Using the qualitative content analysis method, the population of this study are four Nigerian newspapers, the Punch Newspaper, the Vanguard Newspaper, the Guardian Newspaper, and the ThisDay Newspaper. The rationale behind the selection of these newspapers is based on Alexa's ranking of

newspapers, all four newspapers are the most visited in Nigeria. Similarly, the newspapers have nationwide coverage in Nigeria.

Adopting a purposive sampling technique, a sampling technique in which researcher relies on his or her judgment when choosing members of a population to participate in the study, the study sample includes all Nigeria climate change-related articles published in 5 years (January 1st, 2015 and December 31st, 2019) in the four selected newspaper. The time period was selected based on researchers' discretion and because issues concerning climate change intensified from this period onward across the world. Such issues include the 2015 Paris Climate Change Conference, 2016 Marrakech Climate Change Conference, 2017 UN climate change conference (COP23), COP 24 and 25 in 2018 and 2019 among other events where climate change issues were discussed. This period also experienced an increase the climatic condition of the world most importantly the effect of climate change in the northern Hemisphere. To collect the newspaper articles for analysis, a search was conducted using the keyword "climate change" and "global warming" on the web page of the four newspapers. The search yielded a result of n=85 for the Punch newspaper, n= 73 for Vanguard newspaper, n=78 for Guardian newspaper, and n=67 for Thisday newspaper. Hence, a total of 303 newspaper articles were analyzed as a sample in the study.

3.4 Data Collection Instrument and Collection Procedures

The objective of this study is to examine how Nigerian media framed climate change discourse by analyzing newspaper articles from four leading newspapers in Nigeria, the Punch Newspaper, the Vanguard Newspaper, the Guardian Newspaper, and the ThisDay Newspaper. Hence, samples were obtained from the website page of the

newspapers: Punch (URL 2), Vanguard (URL 3), Guardian (URL 4), and ThisDay (URL 5).

A content analysis coding scheme was designed by the research as a coding instrument to analyze the collected data in categories. The data was collected through the coding scheme and first tested through 20 randomly selected newspapers. For this study, the newspaper article includes- news articles, editorials, commentary, features, and opinion. After this, the analyzed data was inputted in the statistical package for social science (SPSS) tool to get statistical results.

3.5 Validity and Reliability of Research

Validity and reliability are the two most paramount and basic features to evaluate any measurement instrument for good research. Altheide and Johnson (1994) suggest that validity represents the truthfulness of findings while reliability refers to the constancy of the findings. Research must be valid to be able to answer the research questions and also be reliable to produce consistent results. This is why Singh (2014) suggests that validity and reliability increase transparency, and decrease opportunities to insert researcher bias into research. Therefore, it is important to conduct research that is both reliable and valid. The validity and reliability of this study were conducted by two independent coders using the coding sheet as a guide. A pilot test using approximately 10% (n=30) of the total sample (N=303) was done. Jacob Cohen's Kappa formula for testing validity and reliability was used to test for the inter-coder coefficient, which is a statistic measurement for inter-coder agreement for qualitative i.e. categorical items (Cohen, 1960).

$$K = \frac{P_o - P_e}{1 - P_e}$$

10% of the total sample $n = 30$, the $(P_o)^1$ is 26 news stories, and $(P_e)^2$ is 4 news stories. The $K^3 = (26 - 4) / (30 - 4) = 0.846$. Cohen (1960) asserts that a Kappa result \geq of 0.81 is reliable and valid. The research questions and the coding sheet were approved by the supervisor before the study was conducted and collected data was analyzed using SPSS.

¹ P_o is the proportion of units in which the judges agreed

² P_e is the proportion of units for which agreement is expected by chance

³ K is Cohen's Kappa coefficient formula

Chapter 4

ANALYSIS AND FINDINGS

4.1 Introduction

The study's objective was to examine the framing and coverage of climate change issues in four Nigerian newspapers. This study analyzed a total of 303 new articles on climate change issues during the selected period of study with the news stories from the Punch (n=85), Vanguard (n=73), Guardian (n=78), and ThisDay (n=67). News stories were defined as those dealing with any fresh information on climate change issues locally. Such stories followed the inverted pyramid structure and answered such questions as who, what, where, when, and why.

This chapter is therefore divided into sections focusing on specific areas based on the research questions. The data was analyzed using SPSS software to arrive at descriptive statistics. Hence, this chapter evaluates the analysis and findings of the study.

4.2 Dominant Themes

This study discovered a different type of themes used by the selected newspapers to report climate change-related issues. After going through a close reading of all the news item, six themes became most visible in the analysis: (1) effect theme, (2) adaptation themes, (3) mitigation theme, (4) solution theme, (5) conflict theme, and (6) blame theme. These themes prevalent in the news item analyzed are hereby briefly explained:

- a. Effect themes: These are news items portraying the effects of climate change on society such as floods, famine, etc. The keywords used in selecting new items under this frame included: effects, climate change effect, flood, destroyed, etc. This was the most used frame.
- b. Adaptation themes: This depicts any news item describing how individuals are adapting to climate change such as planting trees to reduce the effects of climate change. Some keywords used in such news items include invent, create, adapt, etc.
- c. Mitigation themes: These are news items describing the use of eco-friendly implements to mitigate the effects of climate change. The keyword used in selection is 'mitigate' or mitigation.
- d. Solution themes: These are news items depicting a deliberate effort by the climate change players such as government agencies to proffer solutions to climate change challenges. Keywords considered included, provide, solve, policies, etc.
- e. Conflict themes: These are news items describing any form of conflict among individuals, communities, or animals over some resource imperiled by climate change. Keywords included fight, violence, kill, destroyed, etc.
- f. Blame themes: These are news items in which climate change players such as government agencies and NGO trade blames on others for not mitigating against climate change. Keywords included blame, fault, etc.

Table 1: Themes used by selected newspapers

Themes	Frequency (f)	Percentage (%)
Effects	77	25.4%
Mitigation	69	22.8%
Solution	61	20.1%
Blame	52	17.2%
Conflict	32	10.6%
Adaptation	12	4.0%
Total	303	100%

As Table 1 indicates, the newspapers analyzed in the study, that is, the Punch, the Vanguard, the Guardian, and ThisDay had news articles that predominantly used the ‘effects’ and ‘mitigation’ themes in disseminating information on climate change. Out of the 303 news articles under study, 25.4% (n=77) employed the use of effect frame which describes the consequences of climate change such as floods and drought. Similarly, 22.8% (n=69) of the news articles employed the mitigation frame, which means, these articles emphasized the use of environmentally friendly innovations which can mitigate against the adverse effects of climate change. This contrasts with Kanini’s (2010) study which asserts that there is a lack of adequate information on mitigation news in Kenya newspapers. This is followed closely by the solution theme which was adopted in 20.1% (n=61) of the analyzed news articles. Articles using the solution frame emphasize an intentional effort put in place to proffer solutions to climate change challenges. It is not surprising that mitigation and solution theme are one of the dominants theme used by Nigerian newspapers to present climate change news, this collaborates Shanahan, Shubert, Scherer and Corcoran (2013) assertion for fewer disaster narratives and more success stories that should highlight how people are adapting, developing solutions and using new technologies that can limit climate

change. The blame theme is the fourth most used theme in climate change report in selected Nigerian newspaper with 17.2% (n=52), the conflict theme was employed in 10.6% (n=32) of the news articles while the least used theme is the adaptation theme with 4.0% (n=12).

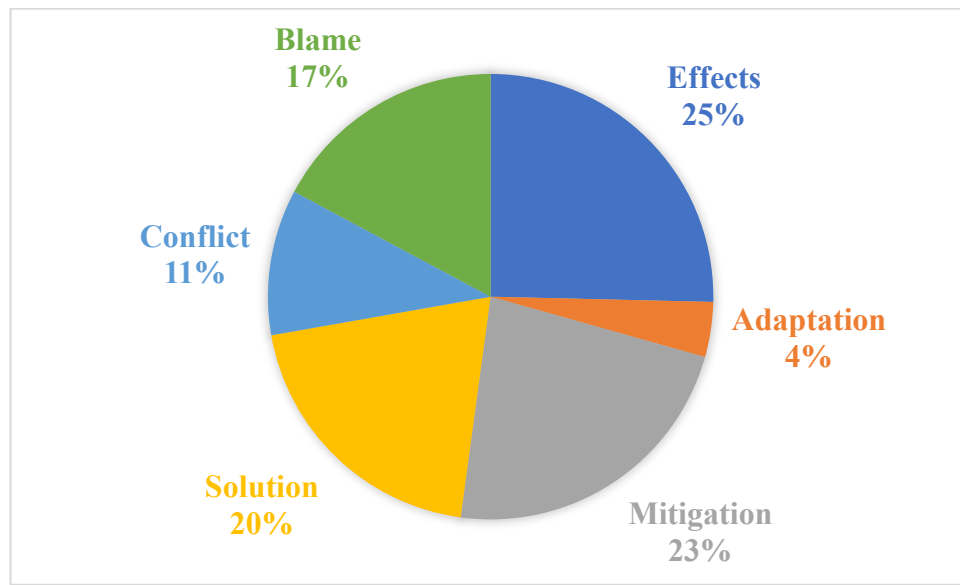


Figure 1: Chart showing the dominant themes used by all newspapers

Figure 1, above, shows the newspaper's frequent use of the dominant six themes. Figure 2, below, reveals that the Punch newspapers mostly used the effect theme in 26% (n=22) of their news article. Thisday newspaper used the less effect theme in just 9% (n=6) of its news article. However, ThisDay newspaper used the highest number of conflict theme in 30% (n=20) of its coverage while the Punch used the lowest in 4% (n=3) of its news articles. Vanguard newspaper favored the mitigation frame in 29% (n=21) of its climate change reports while Guardian produced the least news articles using a mitigation theme at 5% (n=3). In another interesting finding, the Guardian newspaper favored the use of Solution theme in 20% (n=15) of its news coverage on climate change while ThisDay used the solution theme the least at 8% (n=5). ThisDay newspaper alongside the use of the Conflict theme, the media outfit also employed the

use of blame theme at 32% (n=21) compared to the Vanguard which stands at 4% (n=3).

Nigeria, a country subject to poor infrastructures and high rate of poverty, it is no surprise that adaptation theme is the least used theme where a lot of people live on less than \$2 a day. Only 4% (n=12) of the total news articles analyzed used the adaptation theme with both Punch and Guardian producing 21% (n=5) and 20% (n=4) respectively while Vanguard and ThisDay produced 18% (n=2) and 9% (n=1) respectively. The results highlighting the percentage of news articles in each category for the private newspaper are shown in Figure 2, Figure 3, and Figure 4 below for Punch, Vanguard, Guardian, and ThisDay newspapers respectively.

To better understand how each newspaper used the selected theme in their news content, the study analyzed theme used individual newspaper as shown below.

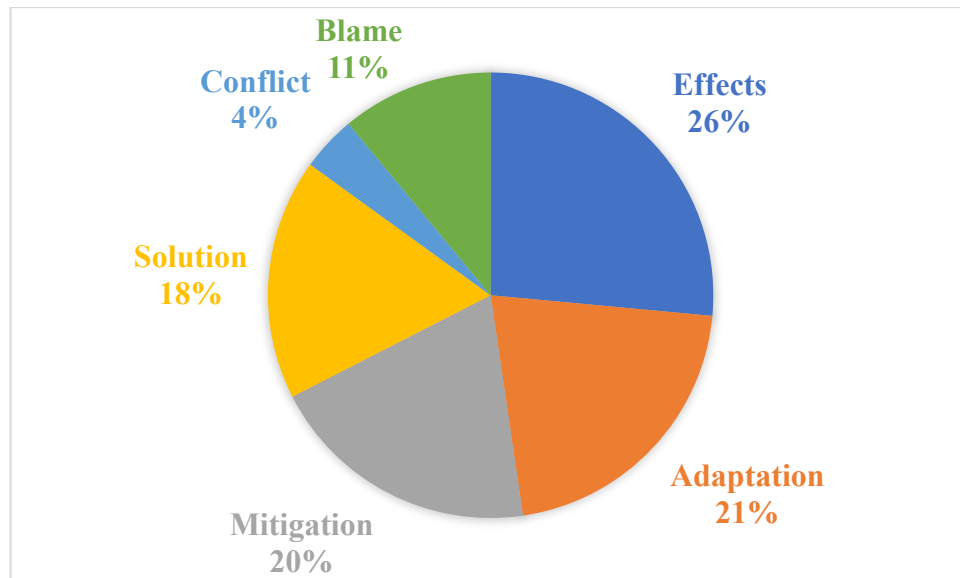


Figure 2: Chart showing the theme used by the Punch newspaper to cover climate change news.

The Figure 2 shows the frequency of themes used by Punch newspaper, the effect theme makes up about 26% of the total news content published by Punch, followed closely by adaptation theme which takes 21%, mitigation theme takes 20% while solution, blame and conflict theme takes 18%, 11% and 4% respectively.

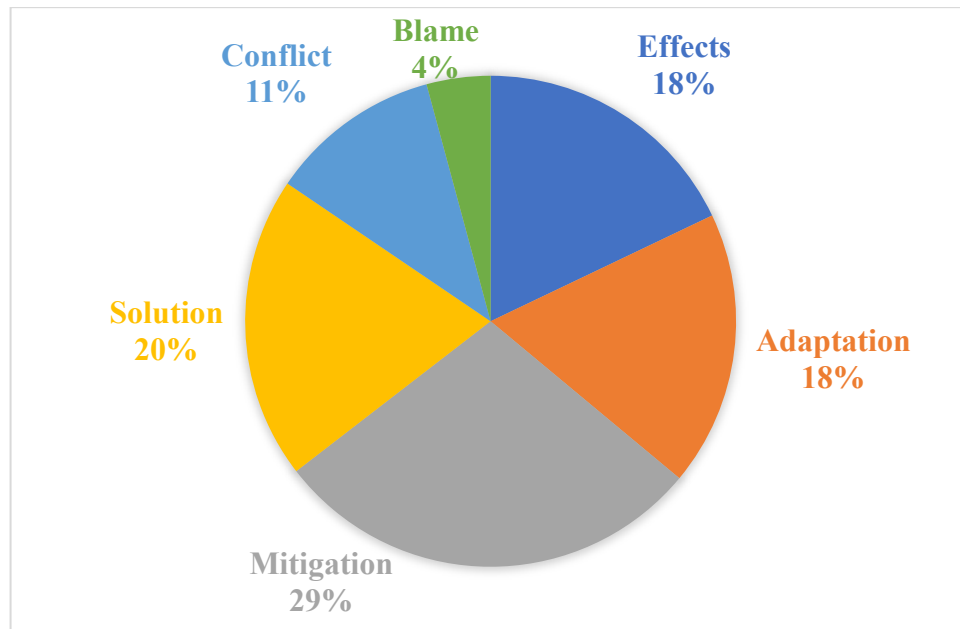


Figure 3: Chart showing the theme used by the Vanguard newspaper to cover climate change news

Figure 3 shows the frequency distribution of theme used in Vanguard newspaper. Unlike the Punch newspaper, mitigation theme was used the most by Vanguard newspaper in 29% of their published articles, this is followed by solution theme in 20%. The effect and adaptation theme were equally used in 18% of analyzed articles in Vanguard newspaper. Conflict and blame theme were used the least in 11% and 4% of the news articles respectively.

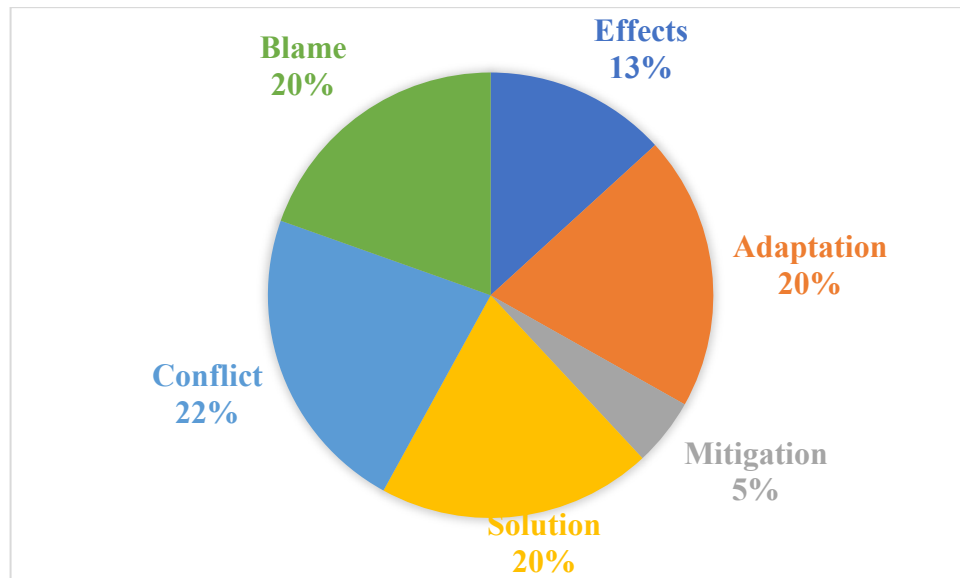


Figure 4: Chart showing the themes used by the Guardian newspaper to cover climate change news

Figure 4 shows the percentage of each themes used in the Guardian newspaper. The conflict theme was the most used theme in 22% of the Guardian news articles. Adaptation, solution and blame theme were equally used in 20% of the articles respectively. A possible reason for the difference in use of theme compared to other newspaper could be because the Guardian reported more conflict centered news and decided to proffer possible solutions and ways to mitigate against the effect of climate change. The effect and mitigation theme were used the least in 13% and 5% of the news articles.

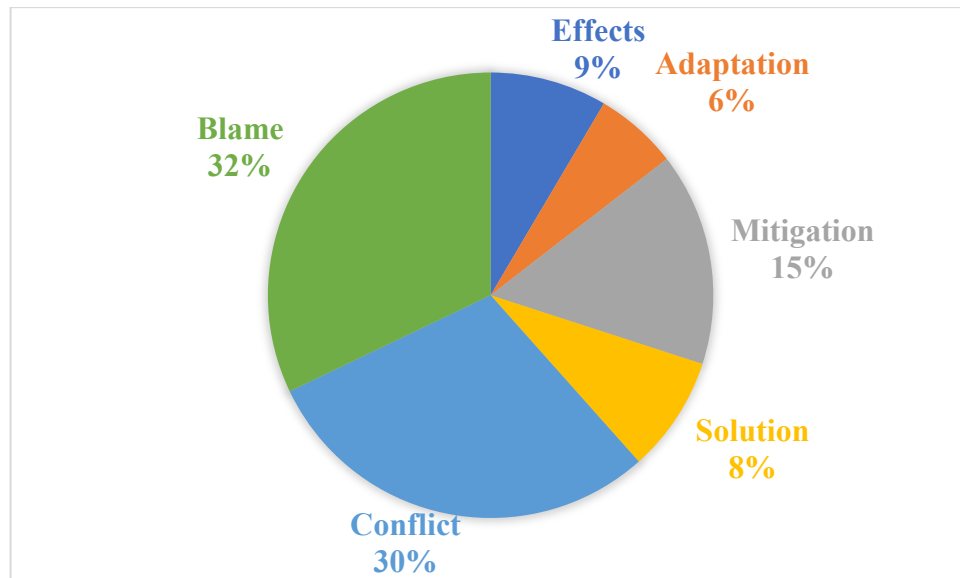


Figure 5: Chart showing the themes used by the ThisDay newspaper to cover climate change news

Lastly, the frequency of themes used in the ThisDay newspaper shows that the newspaper favored the use of blame theme in 32% of their news articles, followed by the conflict theme in 30% of the articles. Mitigation theme was also used in 15% of the news articles. Effects, solution, adaptation themes were used in 9%, 8% and 6% of the articles respectively.

4.3 Volume of Coverage of Climate Change Issues

The study's principal purpose was to establish the content of the selected media. This study analyzed a total of 303 news items on climate change-related issues published between 2015 and 2019. Figure 6 illustrates the total number of climate change articles published in the selected newspaper. Punch newspaper account for 28.1% of the total number of articles published with 85 articles, this is followed by Guardian newspaper with 78 articles (25.7%). Similarly, Vanguard newspaper published 73 climate change articles (24.1%) between 2015 and 2019. ThisDay newspaper published the least number of climate change-related articles with 67 news items (22.1%).

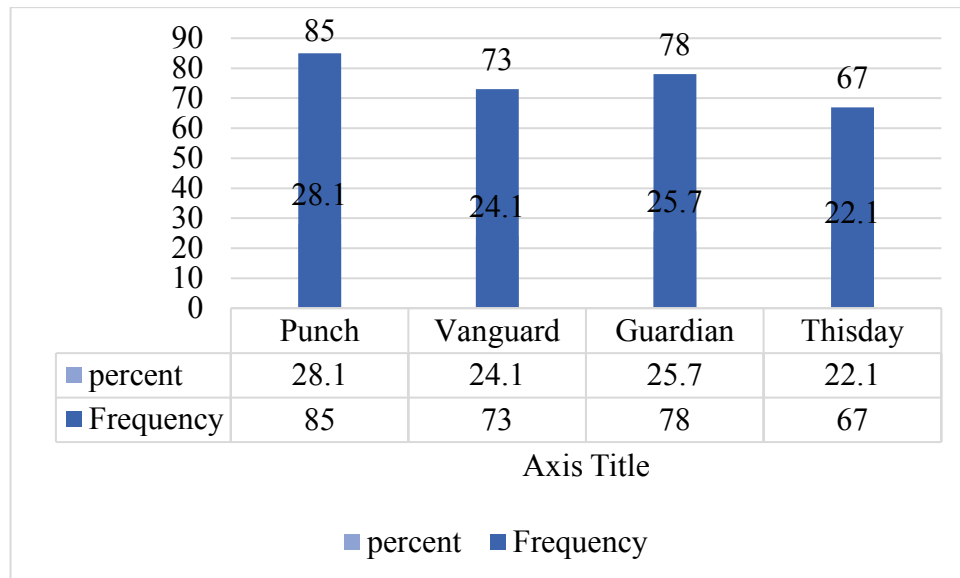


Figure 6: Chart showing the number of published news articles on climate change in the selected newspaper

Figure 7 illustrates the number of articles published in each newspaper per year. Punch produced the highest number of climate change news articles in 2015 with 24 articles while ThisDay produced the lowest that year with just 11 articles. In 2016, Vanguard produced the highest with 21 articles while ThisDay once again published the lowest with 13 articles. However, in 2017 ThisDay published the highest number of articles with 18 articles while Vanguard published just 9 articles. In 2018, Punch published 20 articles, which is the most of the four newspapers; while Guardian and ThisDay produced 13 each which was the lowest for the year. In the last year under review 2019, Guardian published 22 news articles to rank the highest for the year while Vanguard 10 published articles ranked the lowest.

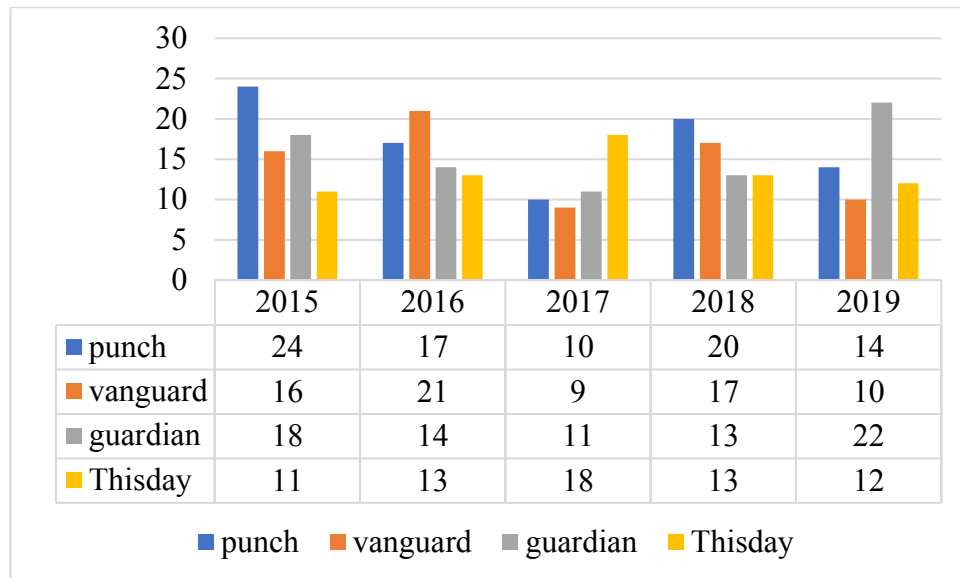


Figure 7: Chart showing the number of published news articles on climate change per year in the selected newspaper

Figure 7, below, illustrates the number of news articles published by each newspaper yearly. 2015 saw the publication of the highest number with 69 articles (22.8%), while 2017 produced the lowest number of articles with 48 articles (15.8%). 2016, 2018 and 2019 produced 65 articles (21.5%), 63 articles (20.8%) and 58 articles (19.1%) respectively. The high number of news articles published in 2015 can be as a result of the Paris agreement, where the governments of about 190 countries reached an agreement in Paris on climate change, which is targeted at reducing global greenhouse gas emissions and thus avoiding the threat of dangerous climate change.

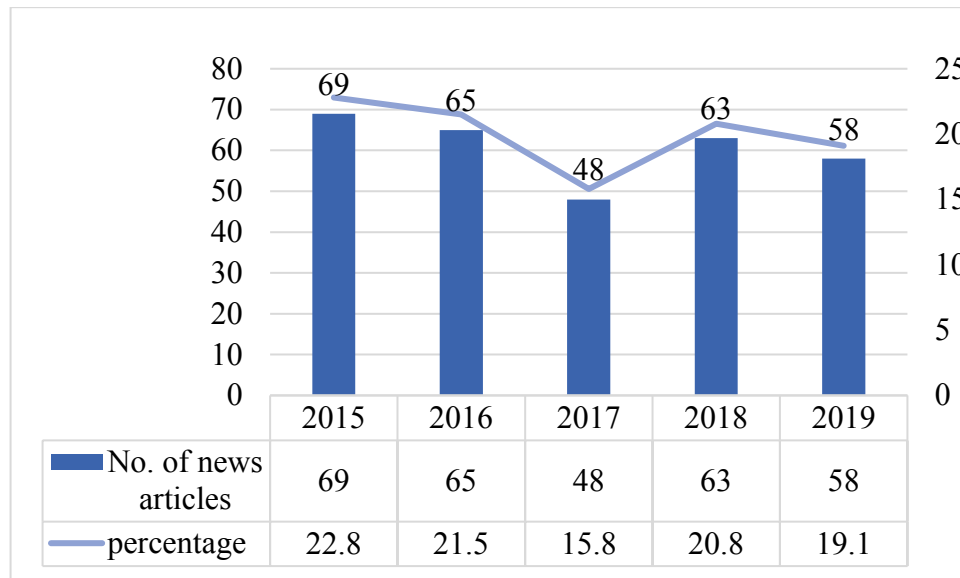


Figure 8: Chart showing the number of published news articles on climate change in the selected newspaper

4.4 Type of Tone Used in Reporting Climate Change Issues

This study, also, looked at the overall tone of the news articles under study. Figure 8, below, illustrates the overall tone of all the climate change articles as “positive,” “negative,” and “neutral”. Almost half of the news articles (46.2%, n=140) were presented in a negative tone, while 27.1% (n=82) were presented in a positive tone. 17.5% (n=53) of the articles adopted a neutral tone in the presentation. However, 9.2% (n=28) of the articles adopted a mixed tone in presentation, which is a mixture of positive and negative in representing the news. The dominance of negative tone might be a result of the dominant use of effect themes in reporting climate change issues in the newspapers. Positively toned articles, however, adopted the ‘adaptation’ and ‘mitigation’ frame which indicates deliberate efforts of climate change actors in fighting against the negative effects of climate change.

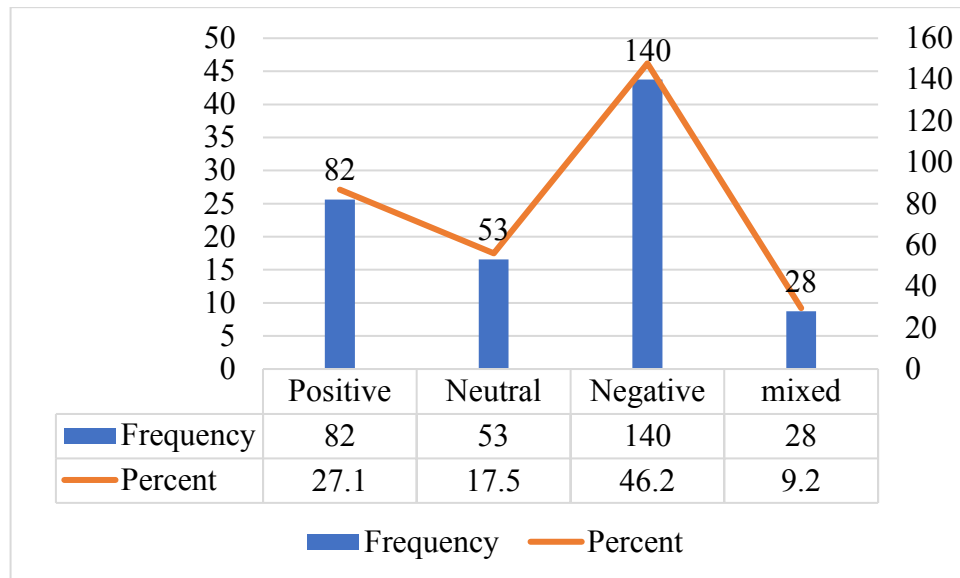


Figure 9: Chart showing the tone used in news articles on climate change in the selected newspaper

A crosstabulation of the adopted tone and the frequency of coverage shows that punch produced the highest number of negative toned news piece with 41 articles while ThisDay published the lowest with 29, Guardian and Vanguard published 37 and 33 negative toned articles respectively. Similarly Punch also produced the highest number of positive toned articles with 25 and ThisDay produced the least with 15 articles, while Vanguard and Guardian produced 20 and 22 articles respectively. For mixed toned articles, that is articles containing more than one tone, ThisDay published the highest number mixed toned articles with 15 published articles, while punch published the lowest with 2 articles. Guardian and Vanguard published 6 and 5 articles respectively.

Table 2: Crosstabulation of adopted tone and frequency of coverage

Coverage Tone	Punch	Vanguard	Guardian	ThisDay	Total
Positive	25	20	22	15	82
Neutral	17	15	13	8	53
Negative	41	33	37	29	140
Mixed	2	5	6	15	28
Total	85	73	78	67	303

4.5 Story Genre

The newspapers selected for analysis publish and sell daily that is 7-days a week, the study aims to find out the types of climate change stories featured in them. This, in itself, can be described as framing by type. When using the word story genre, it refers to the editorial decisions that preceded a story's placement in the newspaper. The story genre refers to Analysis, as shown in Figure 9, indicates that most of the news article on climate change issues by the Nigerian newspapers were in straight news with 217 (71.6%) stories, followed by editorials with 47 news items (15.5%), followed by feature story with 18 news (5.9%%) stories, followed by opinion articles with 13 (4.3%) stories and lastly, commentaries 8 (2.6%) items. Straight news and editorials produced the major genre through which climate change news was presented. According to Nwabueze and Egbra (2016), the number of articles obtained from both straight news and editorials would not raise an appropriate awareness campaign about climate change and its effect on the world. This is because there are other issues within the study period received more attention.

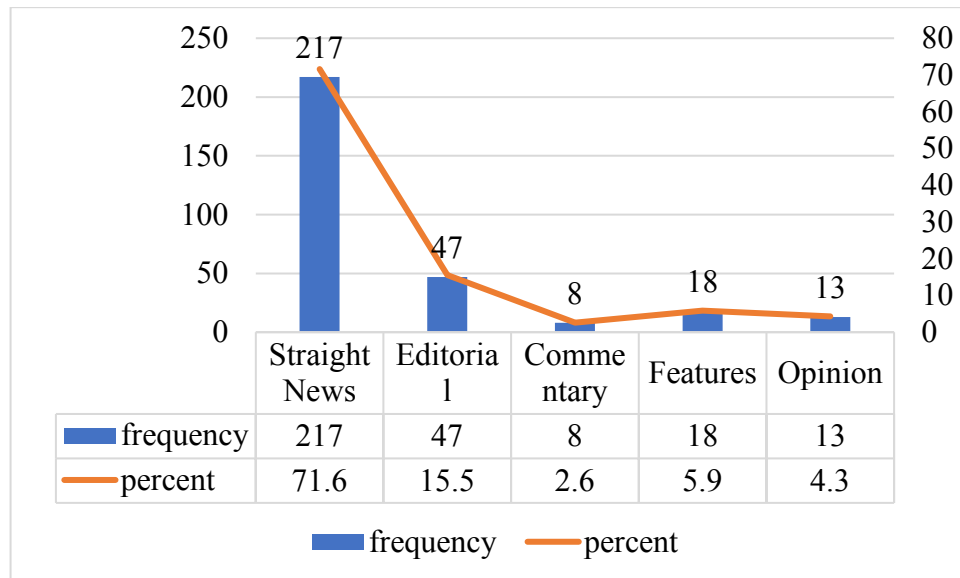


Figure 10: Chart showing the frequency distribution of story type in news articles in the selected newspaper

Figure 10, above, illustrates how each newspaper used its platform to report climate change. Out of the 85 news articles published by the Punch, 74 were straight news while it only published 1 commentary and opinion article respectively. Similarly, the Vanguard reported climate change issues in straight news format in 54 news articles, 9 editorials, 4 feature stories, 3 opinion articles, and 1 commentary. The ThisDay published the most editorials about climate change 22 news articles while 32 of its reports were straight news articles. This increase in the number of editorials published by the ThisDay newspaper could be a result of their Editor-in-chief, Nduka Obaigbena a moderator of the World Economic Forum. In the same light, the Guardian newspaper published 22 editorials and 54 straight news articles. Also, they published 2 commentary; 6 features and 3 opinions.

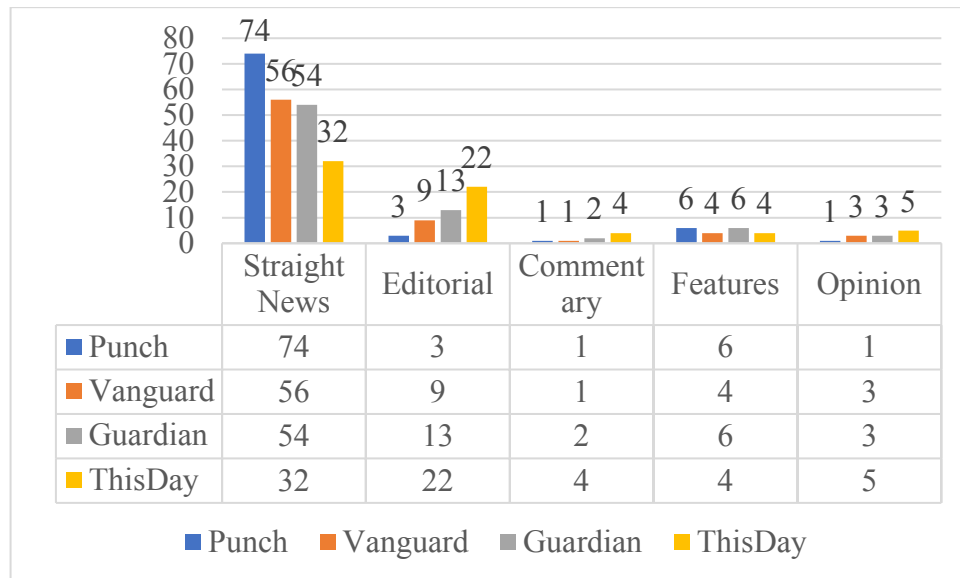


Figure 11: A crosstabulation showing the frequency distribution of story type in news articles in the selected newspaper

4.6 News Source

The source of information is as important as the information itself. Hence, this study examined the source of information reported and presented in the analyzed news articles. Figure 9 illustrates the source of information reported in the news articles. Majority of the news article originated from reporters with 197 (65%) items, while 52 (17.2%) articles emerged from a non-governmental organization (NGOs), 34 (11.2%) of the news articles originated from government agencies such as Nigerian Meteorological Agency (NIMET) and the Ministry of Environment. 20 (6.6%) articles emerged from other sources such as international agencies, e.g., UN, ECOWAS, and AU. However, the majority of the news article focused on the global climate change issue with a little focused on the Nigerian context. This collaborates the finding of Nwabueze and Egbra (2016) which suggested that climate change news articles focused more on international cases. To increase the urgency of the climate change issue in Nigeria, the media has to emphasize climate change within the Nigerian context (Umeji, 2010).

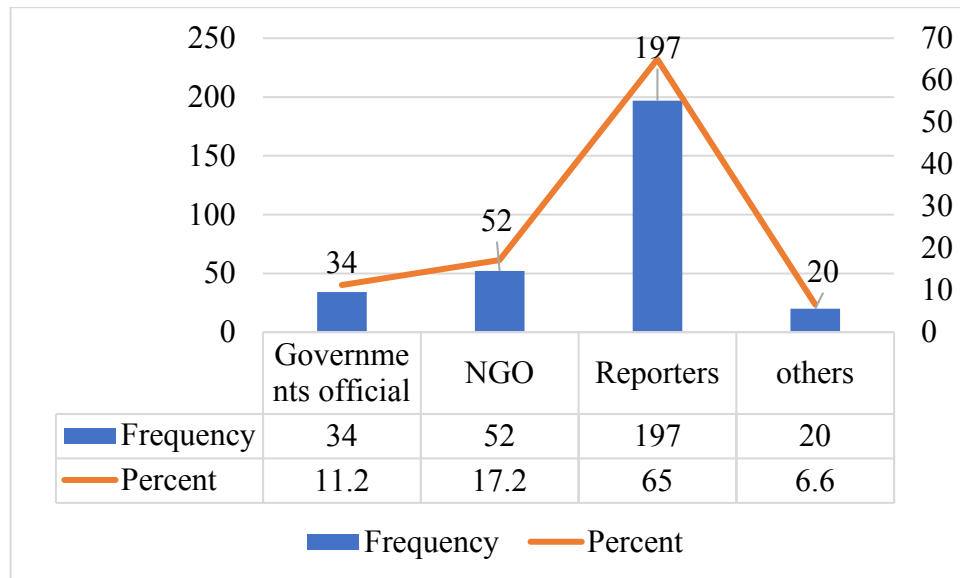


Figure 12: Chart showing the frequency distribution of story type in news articles in the selected newspaper

To have a better understanding of how each newspaper got their news report, a crosstabulation of news source and the newspaper was analyzed. Result as shown in Table 3 shows that Guardian newspaper had the highest number of news from reporters while the ThisDay got the least 42. The Vanguard and the Punch got 12 and 17 respectively. The second major source of news is from NGOs, the ThisDay newspaper used this source in 15 of their published articles, Punch used in 17 of theirs while the Vanguard and the Guardian used it in 12 and 8 articles respectively. Government agencies and officials also served as source of news report for the newspapers. Punch used this source the most in 13 of their published articles while the ThisDay used it the least in 5 of their articles. International agencies such as Ecowas and UN were also source of information, the Vanguard for example relied on this source the most with 9 published articles, the ThisDay comes next with 5 articles while the Punch and the Guardian had 4 and 2 respectively.

Table 3: Crosstabulation showing source of articles in each newspaper

Newspapers Source of information	Punch	Vanguard	Guardian	ThisDay	Total
Government official	13	7	9	5	34
NGO	17	12	8	15	52
Reporters	51	45	59	42	197
others	4	9	2	5	20
Total	85	73	78	67	303

Chapter 5

CONCLUSION

This chapter will provide an overall conclusion of the study Nigeria media framing of climate change. The summary, conclusions as well as recommendations of the study is will be discussed in this chapter.

5.1 Summary of the Study

The study seeks to examine the media framing of the climate change issue in Nigeria. The major objective is to find out how Nigerian media, particularly four major national newspapers, Punch, Vanguard, the Guardian, and ThisDay Newspapers covered the issue. The study establishes the findings on the framing of climate change by Nigerian media. By analyzing the selected Newspapers, this study has been able to establish the level to which Nigerian media treat the discourse of climate change and the issues surrounding it.

The study employed a quantitative content analysis methodology to analyze 303 newspaper articles. The results obtained from the analysis were used to provide answers to the research questions asked in chapter one. A substantial matter examined by the study was on the kind of themes used by the Nigerian media to report climate change. The analysis showed that the newspapers relied on the use of the effects frame with 25.4% of its stories describing the effects of climate change on the country. Similarly, Punch newspaper published the highest number of climate change news articles with 85 news articles (28.1%). In terms of the type of tone used in reporting

climate change, the study found that a negative tone was used in 140 of the news articles (46.2%) and 217 news articles were reported as straight news (71.6%). Finally, the study found that news reporters were the major source of information regarding climate change in Nigeria.

5.2 Conclusions Drawn from the Study

The following conclusion could be drawn from the findings of the study. First, the Nigerian newspapers do not give eminence to climate change issues, this can be seen from the volume of coverage of climate change by the Nigerian which is very low. As shown in figure 5, during a five years period in which the newspaper organizations produced Newspapers, only 303 newspaper articles were on climate change. This collaborates the finding of Tagbo (2010) that the coverage of climate change by Nigerian media is unequal to the extent of the danger it poses to the country. Similarly, the finding shows that the volume of coverage is too low to be seen as an important discourse by the public. This agrees with the findings of Nwabueze and Egbra (2016) which asserts that the volume of coverage of climate change discourse by Nigerian newspapers is not enough to make the issue prominent thereby leading to a public agenda set by the media.

The Nigerian media and by extension African media still have a lot of work to do in the campaign on climate change and its lasting effects. National and local journalists should write more about climate change issues, the more climate change issues are given an African setting, the more successful the campaign against climate change will be. By giving it an African setting, individuals especially ordinary people will participate more and get more involved in climate change discourse. Hence, the narrative, discourse, frame and coverage of climate change issues must focus on

natural climate change occurrences and socio-cultural issues. These discourses interests' individuals, communities and groups because they are personally and directly affected.

Second, as shown in the study, the dominant from framing climate change mainly in terms of effect (25.4%) and mitigation (22.8%). However, with these themes is it improbable that the perception of the public towards climate change can be fully observed in the form of effects. This is because the newspaper members of the public read regularly will be the lens through which they will view climate change. Also, the mitigation frame ostracizes a large number of people due to inadequate funds, knowledge, or other resources to mitigate against climate change. However, the adoption of an adaption frame which is inexpensive can allow ordinary citizens to engage in it such as tree planting (Batta et al., 2013).

Lastly, the study indicated that the most used story genre through which the newspapers reported climate change was straight news (71.6%). This according to Batta et al. (2013) mitigates against the participation of the ordinary citizen in climate change discourse. This is because it is easier for private individuals to participate in media discourses through letters to the editorial, commentaries, and opinions. To improve the participation of the general public in climate change discourse, newspapers outlet must increase the presentation of climate change in editorial, commentaries, opinions, and other audience- friendly space in their publications. Doing this will increase the awareness about climate change thereby setting a public agenda and create a sense for a need of urgency from all actors to mitigate against the effects of climate change.

5.3 Recommendations and Suggestions for Future Studies

Given the findings and conclusion, the study recommends that Nigeria media should increase in reportage of climate change issue in the country, it is suggested that equal attention given to political issues in the country should also be attached to the climate change issue. Also, the media should employ the use of adaptation frame more, this is due to the economics of the country. Since a higher percentage of the population lives below the poverty level, information about cheap ways to adapt to climate change should be presented regularly by the media.

Furthermore, since the study has established the framing and coverage of climate change in Nigerian media, it is suggested that future research should focus on the public perception of climate change issues based on the effect of the reports they obtain from newspapers and other forms of media. Likewise, future studies should examine the coverage of climate change by other forms of media in Nigeria such as television, radio, digital media, etc. A comparative study can also be conducted between the forms of form coverage.

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APPENDIX

CODES FOR DATA ANALYSIS

Themes	Definition
Effects	Any article describing the effects of climate change such as floods, drought, famine etc.
Adaptation	News articles depicting how people are adapting to the phenomenon of climate change.
Mitigation	News articles describing the use of eco-friendly innovations and those using the word 'mitigate'
Solution	News articles depicting an intentional effort to proffer solution to climate change challenges
Conflict	News articles describing some type of conflict between humans and between animals and humans etc. over some resource threatened by climate change
Blame	News articles indicating individuals or agencies or governments blaming or been blamed by others for contributing to climate change

Type of themes used

Adopted tone

Tone Type	Definition
Positive	News articles that used a positive tone to describe climate change
Neutral	News articles that used a neutral tone to describe climate change
Negative	News articles that used a Negative tone to describe climate change

Type of story

News articles	Definition
News	Articles that are straight news, reporting an issue etc.
Editorial	Articles expressing the newspaper's own views and policies
Commentary	Articles explaining events or situations that contributes to the audience's understanding of what is happening
Features	Articles having a personal slant and written in an individual style.
Opinion	Articles reflecting author's opinion about climate change

Volume of coverage

Volume	This is the total number of climate change issues reported by the selected newspaper
Punch Newspaper	Most read newspaper in Nigeria
Vanguard Newspaper	Second most read newspaper in Nigeria
Guardian Newspaper	Third most read newspaper in Nigeria
ThisDay Newspaper	Fourth most read newspaper in Nigeria

Sources of Nigerian newspaper

Source	Definition
Governments official	Any news article originating from government or its agencies
NGO	Any articles coming from individual organizations
Reporters	Any news articles from journalist
Others	Any news articles from unknown sources and other sources

Climate change report yearly

Year	Period
2015	January 1 st to December 31 st , 2015
2016	January 1 st to December 31 st , 2016
2017	January 1 st to December 31 st , 2017
2018	January 1 st to December 31 st , 2018
2019	January 1 st to December 31 st , 2019