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**ENVIRONMENTAL NEWS AND THE FACTORS THAT
INFLUENCE ITS COVERAGE IN THE NIGERIAN PRESS**



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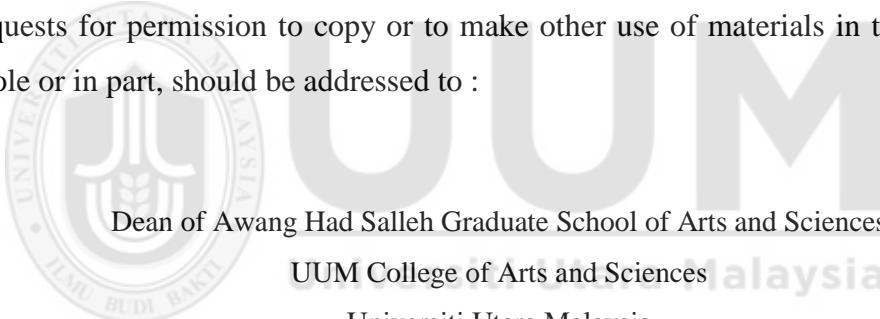
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Abstrak

Kebimbangan terhadap alam sekitar telah menjadi isu utama nasional dan antarabangsa; oleh itu terdapat keperluan untuk mengkaji seberapa banyak perhatian yang diberikan oleh media terhadapnya. Walaupun terdapat peningkatan perhatian terhadap isu-isu alam sekitar oleh pemegang taruh alam sekitar, umumnya laporan media global dan media Nigeria tidak menangani liputan berita alam sekitar dengan cara yang sesuai dengan perhatian yang sepatutnya. Oleh itu, tujuan kajian ini adalah untuk menentukan kuantum liputan alam sekitar oleh akhbar di Nigeria dan mengkaji faktor-faktor yang mempengaruhi liputan tersebut. Teori Sosiologi Pengeluaran Berita digunakan sebagai teori pendukung. Kajian ini menggunakan kaedah campuran berurutan untuk analisis kandungan dan temubual mendalam. Empat akhbar Nigeria yang terkenal iaitu Guardian, Business Day, Daily Trust, dan ThisDay telah dipilih untuk analisis kandungan berdasarkan edarannya yang meluas dan ketajaman dalam meliputi pelbagai isu penting dan menjadi antara 10 akhbar paling terkemuka di Nigeria. Sejumlah 17 orang wartawan yang dipercayai mampu memberikan maklumat yang berkualiti berkaitan dengan isu-isu alam sekitar telah dipilih untuk ditemubual. Analisis data dari kedua-dua kaedah digunakan dalam perbincangan dan kesimpulan kajian. Kajian ini mendapati bahawa liputan mengenai isu-isu alam sekitar di akhbar Nigeria amat menyediakan. Dalam tempoh dua tahun kajian, empat surat khabar yang dianalisis hanya meliputi 754 berita. Isu-isu alam sekitar dilaporkan sekali seminggu, atau terpaksa digugurkan bagi memberi laluan berita yang lebih menguntungkan. Gelora landskap politik di Nigeria juga turut menyumbang kepada kurangnya liputan ini. Kajian ini menyumbang kepada pengetahuan secara teori, metodologi dan praktikal. Secara teorinya, ia memperluaskan dan menguji teori dan pengetahuan semasa mengenai topik; kedua ia memberikan pemahaman yang lebih baik tentang konsep persekitaran; dan ketiga ia mengukuhkan kajian terdahulu. Secara metodologi, kajian ini telah meningkatkan status quo dengan menggunakan kaedah bercampur berurutan dalam mengkaji liputan berita isu-isu alam sekitar di Nigeria. Kajian ini menawarkan sumbangan praktikal kepada pengamal media, wartawan, editor, pasukan pengurusan media, orang awam dan sektor swasta bagaimana cara berurusan dengan alam sekitar dan kewartawanan alam sekitar.

Kata kunci: Kewartawanan alam sekitar, Liputan alam sekitar, Isu alam sekitar, Akhbar Nigeria, Analisis kandungan

Abstract

Environmental concerns have become major national and international issue; hence the need to study how much attention the press pays to it. Despite the intensification of attention on environmental issues by environmental stakeholders, generally global media report and the Nigerian media have not handled environmental coverage in a manner that is commensurate with the attention it demands. Therefore, the purpose of this study is to ascertain the quantum of environmental coverage by the Nigerian press and to examine the factors that affect coverage. Sociology of News Production Theory was used as the underpinning theory. The study used sequential mixed methods for content analysis and in-depth interview. Four prominent Nigerian newspapers that include the Guardian, Business Day, Daily Trust, and ThisDay were chosen for content analysis based on wide circulation and ruggedness in covering varying important issues and being among the 10 most leading newspapers in Nigeria. The 17 journalists who were believed to be able to provide quality information related to environmental issues were selected for interview. Data analyses from both methods were used in the study's discussions and inferences. This study finds that there was a dismal coverage of environmental issues in the Nigerian press. Within the two-year study period the four newspapers analyzed reported only 754 stories. Environmental issues were reported once a week, or dropped in favor of money spinning beats. Nigeria's turbulent political landscape also contributed to the poor coverage. The study contributes to knowledge theoretically, methodologically and practicality. Theoretically, it extends and tests theory and current knowledge on the topic; second, it provides a better understanding of the concept of environment; and third, it establishes previous studies. Methodologically this study improved the status quo by employing sequential mixed methods in investigating press coverage of environmental issues in Nigeria. Practicality of the study offers contributions to media practitioners, journalists, editors, media management team, the public and the private sectors on how to conduct 'businesses' relating to environment and environmental journalism.

Keywords: Environmental journalism, Environmental coverage, Environmental issues, Nigerian Press, Content analysis

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List of Abbreviations

ANEJ	African Network of Environmental Journalists
UNEP	United Nations Environment Program
UNDP	United Nations Development Program
COP	Conference of the Parties
EIA	Environment Impact Assessment
FEPA	Federal Environmental Protection Agency
NASREA	National Environmental Standards and Regulation Agency
MEA	Multilateral Environmental Agreements
LGA	Local Government Authority (third tier of government in Nigeria)
SEJ	Society of Environmental Journalists
PIEC	Project for Improved Environmental Coverage
NMMA	Nigerian Media Merit Award
ADVAN	Advertising Association of Nigeria
NES	Nigerian Environmental Society
NPAN	Newspapers Proprietors Association of Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

This chapter begins with a general background information on the degrading environment in the global and Nigerian contexts and what is being done to bring about a sustainable environment especially the media role in this regard. Given that the environment has gained tremendous attention locally and internationally, and given that there seems to be an abject neglect of environmental issues by the media (Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015; Liebler & Bendix, 1996; Nitz & West, 2004), this chapter, therefore, presents an account of media and the environment in regard to their attitude toward covering environment. This chapter, as well, presents the research problem statement, research questions, and objectives of study, significance of study, and the scope of study. It concludes with the thesis structure.

Ordinarily, the features of the earth might appear changeless, but changes occur steadily. There is significant evidence (Tilman & Lehman, 2001) that the earth's surface has changed dramatically since its original formation. Every human society changes and transforms the natural environment in the process of gaining what they need for survival (Sutton, 2007). From Australia to Zimbabwe, environmental issues/problems have in one way or the other threatened human existence on earth. At the center of these environmental changes that threaten man, is man himself. Thus, environmental concern has become a major issue and has continued to attract attention in both the industrialized and less industrialized nations. (Pierre &

Prothero, 1997; Ottoman, 1988). Tantawi et al., (2009, p.31) believe that the less developed countries are highly worried about environmental problems like “water and land pollution and have come to believe that deterioration of the environment would be detrimental to public health”. In line with Tantawi et al., (2009) study, Flower (2006) observes that the huge impact the environment has on living things are felt more now than ever before. This profound impact is evident in global resources experiencing exponential pressure as seen in over population, shrinking of forest reserves, loss of biodiversity, unceasing pollution of air, land and sea that constitute health problems. Added to this is the impact of greenhouse gases released around the world by power plants, automobiles, forest fires that are injurious to both the climate and human health (Flower, 2006).

Apart from above global environmental issues, the United Nations Environmental Program (UNEP 2005) has identified global warming or climate change as a major environmental problem facing man. This justifies the assertion of Flower (2006) that the impact of climate change might result in flooding, cyclones, sea level rise, heat or cold waves, water shortages, fires, hail, windstorm, and permafrost. Further, Peattie (1992) and Flower, (2006) argue that climate change would result in an exponential transmission of many infectious diseases including malaria, dengue and yellow fever. And these diseases would be felt in new climes. Points in case include malaria, dengue and yellow fever, Zika virus, and Ebola being contracted in new climes like Europe and United States of America other than in Africa and Asia.

Recognizing the dangers posed by the decaying environment and that man cannot be separated from his environment given that man's sustenance and continuous

existence depend on the environment, governments, non-governmental organizations (NGOs) and international bodies started making concerted efforts to secure the earth's environment. Prominent among these efforts is the famous United Nations' Conference tagged 'Man and the Biosphere' held in Stockholm in 1972. This conference rose with a declaration which presumably, for the first time, made the environment an issue of profound debate (Abbas & Emenyeonu, 2015). Ever since then there have been much efforts exerted at the global level to combat environmental decay. From Rio de Janeiro, Johannesburg, Kyoto, Bali, Copenhagen, Doha to Paris, global efforts have been unrestricted in the fight to secure the environment (Meakin, 1992; Abbas & Emenyeonu, 2015).

It is worth mentioning here that most of the global initiatives on the environment that have drawn media attention the most bother on climate change. This may explain the reason why most studies on coverage of environmental issues focus mainly on climate change. Some of the studies include those done by Schafer et al., (2016), Tandoc and Eng, (2017), Carlo et al., (2015), Lineman et al., (2015), Biswas and Kim (2016), Thirumalaiah and Aram (2017), and Luedcke and Boykoff (2017). This study is of the view that environmental degradation goes beyond climate change and includes issues like pollution, waste management, desertification, urbanization, biodiversity. These issues will be brought to the fore in this study in regard to how they are covered by the Nigerian press.

Fighting environmental issues is not only an international problem, neither is it limited to climate change or global warming only. It is also domestic and extends to other issues like waste management, pollution, overpopulation, urbanization, loss of biodiversity, desertification.

Based on the fact that environmental concerns have continued to rise and become major national and international issue, it becomes pertinent to study how much attention the press pays to it. This cannot be divorced from the fact that the media are seen as Nelkin, (2001, p.205) puts it, “brokers between science (environment) and the public, framing the social reality for their readers and shaping the public consciousness (Mutiu, et al., 2017) about the science-related events. They are, for many readers, the only accessible source of information about science and technology”. Teklesilassie (2015) contends that lack of information and awareness contributes immensely to persistent environmental problems. The media in this case plays a major role in disseminating information and knowledge needed to sustain the environment. The media also influences attitudes, values, and public actions thorough pungent coverage of issues including environmental issues (Teklesilassie, 2015). Tesema (2012) also believes that the media can create a strong environmental sensitivity by prioritizing environmental issues in news contents. Based on this one can argue that the Nigerian press and their counterparts elsewhere have a clarion national call to give due attention to environmental issues by providing adequate coverage. Thus, how people perceive the environment will influence how they feel about it which will in turn determine whether they take helpful or harmful action toward the environment (Surdamadi, 2001). This corresponds with the point of view of Tantawi et al., (2009) who argue that many environmental concerns are linked to indiscriminate human consumptions, and therefore the issue of “conservation has been brought to consumer level” (p.31).

Given that the media plays a vital role in mounting surveillance on society, (Dominick, 2002; Mu'azu, 2002) note that the surveillance role makes the media an observer and therefore a force to reckon with in establishing economic, political, cultural and moral stability in the polity. Extending this discourse further Odunewu (1995, p.7) believes that the media, in playing the surveillance role, no more dwells in describing the events as they unfold, "but rather strive to provide insight and illumination on the interplay of forces..." This aptly describes the role of the press in providing valuable information about the environment to the public. But how well the press carries out this function in relation to the environment is subject to review.

Past empirical studies have decried the impotency of the media in reporting environmental issues. Scholars have reported on the gross deficiencies in the coverage of environmental issues by the media (Liebler & Bendix, 1996; Nitz & West, 2004; Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015). This study therefore intends to update the existing body of knowledge by finding out how much attention the Nigerian press pays to environmental issues and determine the reasons behind the attention paid to environmental coverage.

In searching for the factors likely to have contributed to the environmental plagues in Nigeria, this researcher intends to examine the extent to which the mass media have shown interest in the environment by making it part of their priority in the overall coverage of public affairs (Cox, 2010). The overall intent is to bring to the fore the growing concern of the neglect of environmental issues in Nigeria and consequently

provoke a discourse that will bring about a sustainable environmental behavior and management in Nigeria.

1.2 Media and the Environment

This subsection briefly explores the attitude of the media toward the environment. It is then followed by problem statement.

The role of the media in safeguarding the environment cannot be overemphasized. Gore (1991) argues that the “media have a responsibility to inform and to educate, to tell us not only what is happening today but also why it is happening and what it will mean to us – today and tomorrow... News reporting, by drawing attention to problems, moves policy. Environmental reporting is no different” (p.183). In consonance with Gore, Sampei and Aoyagi-Usui, (2009, p.8), in Ukonu et al., (2010) state that “due to their crucial role in contemporary society and their influence on people’s perceptions of climate change issues, the media have emerged as an important setting for the (re)construction of environmental discourses”. This supports the views of Hansen (1992) who believes that “media discourses help shapes and set the parameters of discussion and understanding of environmental issues” and for resulting social and policy responses (p.500). Elsewhere, McCombs and Shaw (1972) and Odunewu (1995) believe that press plays the onerous roles to structure and organize discourses as well as shape and influence the course of events in any given society. Odunewu (1995) further contends that “in performing this function, they no longer contend merely with describing the unfolding of events; they strive to provide insight and illumination on the interplay of forces...” (p.7).

This study has the intent of probing into how the Nigerian press has handled environmental issues by looking at the quantity and quality of their environmental coverage. Special focus will be paid in regard to how much insight and illumination the environmental reporters provide on environmental issues by looking at whether environmental stories involved interpretive, investigative pieces other than event driven straight news reports.

Given that the media plays the important role of helping the public to understand environmental issues, communication researchers, have continued to study this dynamic (Dudo, 2005; Nwabueze et al., 2015; Mustapha, 2012). Results from such studies have shown to some extent a mixed reaction. Some studies have found that the media's representation of environmental issues is positive. For example, Morgan, and Stenbjerre, (1997) are of the view that media coverage may have led to better understanding of environmental issues. Priest (2001) and Smith (2002) as well as Hellebrandti and Hellebrandti (2010) are of the view that the media contribute significantly in educating the public on environmental issues. It can be argued therefore that the publics' attitude to the environment is shaped by how much attention (amount of coverage) the media focuses on environmental issues.

Conversely studies have also shown that there is a dearth of environmental reportage by the media (Liebler & Bendix, 1996; Nitz & West, 2004; Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015). This is linked to what Downs, (1972), in Ukonu et al., (2010) calls "vulture reporting" – a concept where the press only shows interest in environmental news mostly when environmental disasters or climate change issues

happen. This, aptly, is why Liebler and Bendix (1996), Boykoff and Roberts (2007, 2008), Hellebrandti and Hellebrandti, (2010) argue that environmental news has been driven by crises or events. Environmental coverage, therefore, can be said to be reactive rather than proactive as environmental issues are reported based on events and after such events would have happened or taken place. There seems to be no attempt to do environmental forecasting so as to prevent harm before they happen. Other studies have characterized media portrayal of the environment as weakened by distortions, inconsistencies, manipulations, and misrepresentation of data (Nitz & West, 2004, p.207).

Reasons that explain the lackluster performance of journalists in reporting the environment are further captured by researchers including Tran (2014) who writes that scholars like Keating (1997), Russell (2006), Boykoff (2009), Hansen (2011), and Howard-Williams (2011) have linked the poverty of environmental coverage by the media to “difficult journalistic ecosystem that is under external economic, technological and editorial pressures.” (p.15). Other scholars such as Keating (1997), Dunwoody & Peters (1992), Friedman (2004) and Sachzman et al., (2006) have attributed dearth of environmental coverage to journalists’ limited experience and knowledge about the ever-increasing complexity of science and environmental topics.

Like their global counterparts, scholars in Nigeria have argued that the Nigerian press has not done much in covering the environment. Ukonu et al., (2010) believe that the press cannot afford to give a slow and unapt coverage to the environment as it is of paramount importance to man’s existence. Other studies done by Oso (2006),

Galadimma (2006), Nwabueze (2007) and Motei et al., (2008) are of the view that the Nigerian press has not given significant coverage to, or captured the right subject matter in environmental stories. Writing specifically on the poor coverage of climate change for example, Ukonu et al., (2010) contend that the Nigerian press can never drive climate change agenda and reflect or protect Nigeria's interest in global climate discourse if it continues to report mostly foreign news, views and events on climate change. The present study will therefore probe into what forms the sources and geographical focus and influences of environmental news in the Nigerian press. This becomes necessary given that the predominant subject matter of environmental coverage in Nigeria by both journalists and scholars is global warming. This is at the detriment of other pressing local environmental issues. However, the study by Ukonu et al., (2010), which can be said to be representative of other environmental studies done in Nigeria, cannot be said to be conclusive as it looked only at the quantum of coverage of climate change without looking at the factors that underlie such coverage. The present researcher believes that Nigeria's environmental woes cannot be addressed properly by focusing on climate change issues only. It needs a holistic approach. This study will therefore look at both the quantum of coverage of climate change and other environmental issues, and what influences such coverage.

1.3 Research Setting: An Overview of the State of the Environment in Nigeria

This sub-section is undertaken to establish the state of the environment in Nigeria which sets the scene that explains the reason for embarking on this study.

Nigeria is a country of paradox. The strength of its unity is rooted in diversity as it boasts of people from different socio-cultural groupings. Its population stands at 170 million (New World Book Encyclopedia, 2013). It is rich in mineral resources especially crude oil. The quantity of petroleum deposit has helped in the development of the country. There are also rich deposits of minerals feeding the mining industry. However, the dramatic economic growth of Nigeria following the discovery of crude oil and other mineral resources has, had some consequences on its people and environment. A case in point is the Niger Delta region which has been subjected to ‘a state of endangered species’ as a result of oil exploitation and exploration – this in turn has given rise to different problems relating to the environment including destabilizing the local population, air, land and sea pollution and social unrest (Anyanwu, 2012).

Apart from oil exploration issue, Nigeria is also confronted with other serious environmental problems. These include, flooding, land degradation, erosion, desertification, drought, poor environmental health and safety, overpopulation, urbanization, urban waste management, pollution, and climate change (Omofonmwan & Osa-Edoh, 2008; Daramola & Ibem, 2010; Ibimilua & Ibimilua, 2014; CIA World Factbook, 2012; Dike, 1985; Anyanwu, 2012).

Taking the issue of deforestation for example, it is believed that at the current rate of forest depletion in the country, (forest reserve as at 1997 was 924,000km) the remaining forest will likely disappear by 2020 (ARD Report, 2002).

While desertification and drought remain the main environmental issues in northern Nigeria, persistent flooding, especially along the banks of river Niger has become an environmental hazard in the central part of the country.

Access to drinking water and lack of sewage are also major environmental issues. It is reported that about 66 million Nigerians do not have access to safe drinking water, while about 20 percent of the country's population practiced open defecation (Okpi, 2012). No wonder the World Health Organization/United Nations Children Fund Joint Monitoring Program, in its 2012 progress report ranked Nigeria as one of the worst countries with unfavorable socio-environment conditions. Okpi (2012) also points out that Nigeria ranked 119th in the 2012 Environmental Performance Index among other 132 countries on environmental issues including, water and air pollution, biodiversity, forestry, fisheries, agriculture, and climate change.

Urban waste management is a major issue in Nigeria, as in most other developing countries. Statistics from UNDP indicated that 151 city mayors around the world identified solid waste disposal as the second most pressing problem next to unemployment (Van de Kluandert et al., 2003). The scenario created by improper waste management in most cities in Nigeria, is embarrassing to say the least. Most urban centers and municipalities do not have a comprehensive system for waste collection and disposal - this has forced many households to resort to indiscriminate dumping of wastes in the streets. Pyramids of solid wastes have become a common feature in many cities in Nigerian.

It is pertinent to note that most of the environmental plagues in Nigeria are manmade. This is supported by Ibimilua and Ibimilua (2014) who classified Nigerian environmental issues under natural and anthropogenic types based on their causative agents. Nigeria could be said to be a blessed nation, as it does not witness most of the natural environmental hazards like earthquake, avalanche, volcanic eruptions, hailstorm, cyclones, tsunamis, and mudslides. However, the major environmental issues in Nigeria are man-made – result of man's interaction with nature (Ibimilua & Ibimilua, 2014). Some of the anthropogenic hazards that attract the interest of this study include pollution, liquid and solid waste disposal and management, deforestation, over logging and exploitation of forest resources, loss of biodiversity, flooding, climate change and environmental regulation.

Given the foregoing narrative on the state of the environment in Nigeria, one can safely conclude that Nigeria has persistently had one of the worst climate scenarios in the world. The press that usually mounts surveillance on the environment, and sets agenda for public discourse of important issues may have neglected its role with regard to environmental issues coverage hence the persistence of the bad environment scenario. This may give rise to revisiting some of the critiques of previous studies on environmental coverage in Nigeria which also necessitated the present study.

1.4 Critiques of Environmental Issues Coverage in Nigeria

Nigeria depends so much on its environment for sustenance, but that environment is fast degenerating. It is therefore only logical that issues relating to the sustenance of

the environment cannot but be prioritized by the Nigerian press. This can only be done by the press mounting serious pressure on the government to enact and implement laws and policies that safeguard the environment; sensitize the public and environmental stakeholders on the need to work toward protecting and preserving the environment. This sub-section x-rays critiques of environmental issues coverage in Nigeria as recorded in previous studies.

Batta et al., (2013) looked at how environmental issues in relation to climate change, are covered and framed by Nigerian newspapers. The study finds that climate change issues were narrowly covered hence it called for Nigerian newspapers to broaden the scope of reporting climate change.

In another study on Nigerian newspaper coverage of climate change, Ukonu et al., (2010) survey the reportage of climate change within the domain of global climate change discourses. The study is of the view that the extent of coverage is poor and myopic hence the study opines that Nigerian newspapers should use lots of non-news stories in reporting climate change to enable them to handle more analysis needed to portray the important issues in climate change solutions.

Adelekan (2009) analyzed two prominent Nigerian newspapers to know the extent of coverage of environmental issues with special reference to climate change, for the five-year period 1999 – 2003. The study is of the view that both newspapers assessed are yet to actively feature environmental contents tailored to concerns of everyday life as majority of environmental reports are news reports.

Nature conservation is an environmental issue that is hardly covered by the Nigerian press. This assertion is confirmed by Ogunjimmi et al., (2013) who studied media coverage of nature conservation and protection in Nigeria, and find that of 316 articles published on environmental issues by the print media, nature conservation and protection attracted the least coverage. The study therefore called for synergy between nature conservation and protection services and the media so as to bring about a better and sustained coverage of nature conservation and protection issues in the media.

Addressing the issue of pollution coverage in the press, Okoro et al., (2010) point out that pollution which constitutes a major environmental problem in Nigeria is not prioritized. The study suggests that there is need for the press to make pollution and other pressing environmental issues prominent. In a similar tone Ityavyar and Thomas (2012) suggest that the utilization of the natural environment by man for different purposes has resulted in environmental pollution which in turn leads to degradation and other pitfalls that has clogged the developmental progress of the country. To revert this, the scholars looked up to the press for “awareness creation and change in attitudes for effective environmental and resources management strategies as a way forward” (Ityavyar & Thomas, 2012, p.1). This study intends to uncover why environmental stories do not enjoy such privileges as the front page and editorials.

From the above discussions, there seems to be an apparent lack of in-depth coverage that treats the environment as an ecosystem. Given the complex and interconnected nature of environment, (Tran, 2014) is of the view that journalists who report the

beat have to have a thorough background understanding of all the components that make up the environment ecosystem thorough training and experience, and expert knowledge of the beat. Media Coverage of Science and Technology in Africa (2011) asserts that one of the bane of science and technology (including environmental issues) coverage in Africa is the apparent lack of competence or specialized knowledge. As a result of this the study argues that it is very obvious that science and technology are either not properly covered or the coverage could be sensational or uninformed. The study calls for media organizations to engage in “proactive investment in capacity building” (Media Coverage of Science and Technology in Africa, 2011, p.10) to assist journalists in getting the required skills to do a better reportage on the environment. This research finding aptly applies to environmental coverage in Nigeria.

One of the interconnected aspects of environmentalism relates to laws, policies and regulations. The need to engage authorities and policy makers to initiate laws and policies that cater for the environment has become necessary given the rate at which global warming and other environmental problems are rearing up. In view of this, Tagbo (2010) writes that given the enormous danger climate change poses to African countries it becomes pertinent to establish a potent communication apparatus to get policy makers to adopt strategies to guard against the destructive capacity of climate change. The study reports that the role of the media in setting agenda for crucial debate and understanding of the weather and climate change cannot be overemphasized as this will lead to enacting and implementing relevant policies. Tagbo’s study (2010) further reveals that the two newspapers analyzed varied in

their climate change coverage in some ways. The Guardian focused more on international climate change issues (65 per cent) and paid little or no attention to the Nigerian context. Conversely the Vanguard – the second newspaper analyzed - had its climate change coverage driven mainly by local events (42 percent) compared to about 7 percent of international events. This explains why it is necessary to study what influences journalists' coverage of the environment in Nigeria, to determine the reasons for differences in coverage.

From the foregoing discussions, it is deductible that the media is responsible for making environmental issues information available to the public. By doing this the media informs, educates, and mobilizes the public on environmental issues, while at the same time holding government and other policy makers accountable to the environment. Thus, environmental issues coverage becomes the catalyst that drives good policies and regulations on the environment. Where and when the media fail to carry out adequate coverage of the environment, the weight of environmental degradation could be blamed on them. This study is an attempt to find out how much priority the Nigerian press places on environmental issues and the factors that affect such priorities.

1.5 Problem Statement

This sub-section dwells on the coverage of current environmental issues in Nigeria and why it needs to be addressed. Accordingly, it provides the context for the research study particularly by articulating the problem statement, the research questions and objectives.

Generally, it can be argued that the salience of the environment in both local and international politics can be gleaned from the magnitude of attention focused on it by the media whether at national, regional or global platforms. With the intensification of attention on environmental issues by the international community, NGOs, activists, and the global media, and the ensuing increase in public consciousness of the environment, it has become the fad for individuals, corporate organizations, political parties, interest groups and governments to associate themselves with efforts to preserve the environment. Nevertheless, it would appear that, despite the rising levels of environmental problems, the global media in general (Keating 1997; Russell 2006; Boykoff, 2009; Hansen, 2011; Howard-Williams, 2011) and the Nigerian media in particular, have not handled environmental news coverage in a manner that is commensurate with the attention it demands (Oso, 2006; Galadimma, 2006; Nwabueze, 2007; Motei et al., 2008).

Given that Nigeria is ranked as one of the worst countries in terms of unfavorable socio-environment conditions (Okpi, 2012), it becomes pertinent to study the role played by the Nigerian press (newspapers) to advance the cause of preserving the environment through its coverage of the environment.

From practice point of view both at the global and local levels, past studies have mainly probed, in some cases, the general pattern of media coverage of the environment, and in other cases they focused on subject-based issues (Hasan, 2007). Such subject-based issues include: nuclear power issues like Chernobyl (Patterson, 1989; Friedman, 1986, Rubin, 1987); oil spills – Exxon Valdez and Braer (Wills & Warner, 1993; Daley & O'Neill, 1991; Davdison, 1990); Climate change (Tandoc &

Eng, 2017; Thirumalaiah & Aram, 2017; Schafer et al., 2016; Young & Dugas, 2011). Similarly studies done locally in Nigeria, like those of Batta et al., (2013), Ukonu et al., (2010), Nwabueze, (2005), Ladimma, (2006), Olatunji, (2006), Nwosu and Uffoh, (2005), Adelekan, (2009), Tagbo, (2010), Ogunjinmi, (2013), Okoro et al., (2010), Umeje, (2010), Dike, (1985), Mba et al., (2004), Dramola and Ibem (2010), Ibamilua and Ibamilua (2014), Popoola (2014), and Nwabueze et al., (2015) on the Nigerian press coverage of environmental issues centered mainly on isolated environmental issues, including climate change, national involvement in global environmental conventions and forums, industrial pollution, oil spills, desertification, loss of biodiversity, liquid and solid waste disposals, and the state of public sanitation. Most of these studies centered mainly on climate change with little attention focused on other pressing environmental problems. Theoretically, most of these studies employed agenda setting and or framing as the underpinning theories, and methodologically they dwelt on quantitative content analysis to express only the frequency of coverage.

This study differed from previous ones by taking a holistic look at environmental issues coverage by the Nigerian press and thus fill the gap created by researchers who studied only isolated environmental issues. Thus, this study put environmental issues at the center of its investigation so as to come up with generalized conceptualization of what makes up environmental news content.

On the theoretical front, while there is exponential research on environmental issues coverage, there are only a few sociological explanations in regard to why journalists cover the environment the way they do, especially in the Nigerian case. This study is

therefore an attempt to bridge the gap between practice-based studies of environmental reportage (Stamm et al., 2000; Liebler & Bendix, 1996; Nitz & West, 2004; Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015; Ukonu et al., 2010; Batta et al., 2013; Oso, 2006; Galadimma, 2006; Nwabueze, 2007; Motei et al., 2008) and those that reflected on general sociological journalism studies(Hess, 1996; Reese, 2003; 2007; Schudson, 2003). This will be done by providing a comprehensive quantum of environmental issues coverage, and a systematical account of the sociological factors that impinge on how journalists cover environmental issues with special reference to Nigeria.

The sociology of news production was examined in this study in regard to whether or not it has helped environmental journalists in covering environmental issues adequately or not. It has been said that the agenda setting role of the media on environmental issues determines the measure of coverage and invariably audience's perception of such issues (Teklesilassie, 2015). This is in consonance with the position of Resse (2007) that agenda setting implies that the media determine what audiences think about. This is where most of the previous studies on environmental issues coverage in the Nigerian press end. The present study intends to enhance this theory by probing into who or what sets media agenda. This is done by probing beyond the prevalent dominant and legitimate sources of news to ascertain other prevailing sources that have been hitherto unaccounted for.

Further it has been observed that sociology of news production theory has been sparsely applied to environmental issues coverage. Most of the past studies that used

the theory focused mainly on conflict-related issues (Hanitzsh & Hoxza, 2014), peace journalism (Wolfsfeld, 1997), war coverage (Vandevoordt, 2017), political economy of foreign news (Herman & Chomsky, 1998). The present study attempts to extend the frontiers of sociology of news production to the field of environmental journalism in order to explain how and why Nigerian journalists cover the environment the way they do. This has not been properly addressed in previous studies.

However, few studies that were done on environmental news production focused on sociological explanations of news coverage in relation to source influence on journalistic decisions in news production (Ericson, et al., 1991; Carlson, 2009). Consequently, there seems to be replication or recycling of research based on how journalists determine sources based on “social dominance and legitimacy” (Anderson, 2017, p. 2). To change this status quo, Anderson (2017) argues that there is need for a “major rethinking of early media-centric approaches to examining journalist/source relations...” (p1). This study will advance on the prevalent social dominance and legitimacy in news sourcing by looking at the influence of global media as a network that environmental reporters (especially those from developing countries) source their information from. Also, this study probes beyond the factors that affect news production as defined by Reese and Shoemaker’s (2014) hierarchy of influences approach to ascertain other factors that may impinge on news production, especially in Nigeria.

Further, most of the previous studies that dwelt on environmental issues coverage employed agenda setting or framing as their major theoretical frameworks (Stamm et

al., 2000; Liebler & Bendix, 1996; Nitz & West, 2004; Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015; Ukonu et al., 2010; Batta et al., 2013; Oso, 2006; Galadimma, 2006; Nwabueze, 2007; Motei et al., 2008). Theoretically the present study is an advancement on past studies as it uses sociology of news production theory (hierarchy of influences model) to determine the level of agenda setting on environmental issues.

In studying the mechanism of news production, hierarchy of influences model has helped to explain the factors that influence news contents, however this present researcher re-examined the hierarchy of influences model to suggest ways to improve it by ascertaining other issues or factors that may influence environmental content production beyond the five hierarchy of influences espoused by Reese and Shoemaker (2014).

In terms of methodological progression, while past studies on environmental coverage have highlighted paucity of coverage and that environmental stories are straight news and very simplified; events driven; sourced mainly from government officials, and given little or no prominence, (Stamm et al., 2000; Liebler & Bendix, 1996; Nitz & West, 2004; Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015; Ukonu et al., 2010; Batta et al., 2013; Oso, 2006; Galadimma, 2006; Nwabueze, 2007; Motei et al., 2008) these studies failed to probe environmental reports to ascertain how or why the observations are more targeted on environmental news as compared to other news genres. This study goes beyond existing approaches such as historical studies,

surveys and content analysis as employed in the studies mentioned above, to embark on a sequential mixed method including content analysis, and in-depth interviews. In addition to ensuring the validity of findings, this methodological approach can also set the pace for further research in news production in Nigeria.

By taking a holistic approach to the coverage of environmental issues in Nigeria, this study becomes distinct as opposed to coverage of only isolated environmental issues. The inter-connected nature of environmental issues is not only seen from the basis of related issues, it should also reflect in the collective participation of all stakeholders of the environment –hence this study also aims to emphasize the synergy that should exist between the public and private sectors and the media in other to create green culture.

Much more significantly, this study will extend the frontiers of the application of theories and methodologies in communication research. With regard to contribution to theoretical advancement, the study, as has been extensively stated in section 2.6, is built upon the framework of the news production theory and its ramifications that include media agenda setting and news framing. Endowed with the fastest growing and freest press in Africa, in addition to being the continent's most populous nation and largest economy, Nigeria can exert significant influence on national, regional and global environmental policies and pacts. By examining the factors that shape environmental news in the Nigerian press, with particular attention to media ownership, influences from external pressure groups (government, advertisers, industrialists, environmental activists), institutional routines and news sourcing (Reese, 2007), this study can offer an insight into the context of news production in

Nigeria, thus enhancing the existing body of knowledge on the theory. Future studies employing this theoretical framework can either borrow from the findings of this study or expand upon it.

1.6 Research Objectives

The general purpose of this study is to examine and determine the quantum of environmental issues coverage by the Nigerian press and the prominence given to such issues and also to examine the factors that shape or influence such coverage. Against this backdrop and in consonance with research questions, the specific objectives of the study will be as follows: (objectives 1 – 5 relate to quantitative content analysis, while objectives 6 - 8 relate to qualitative analysis)

1. To determine the extent of environmental coverage in Nigerian newspapers.
2. To identify the value attached to environmental contents.
3. To identify the important aspects of the environment that are prioritized in order to draw attention to less prioritized but pressing issues.
4. To examine the environmental contents are sourced in terms of news sources, news story authorship, and dateline and ascertain whether or not these variables have contributed to proper environmental coverage.
5. To examine the level of involvement by the national, state, and local governments in protecting the environment.
6. To examine the adequacy or inadequacy of media agenda setting on the environment

7. To explain how hierarchy of influences in news production affect environmental reportage and how journalists can overcome limiting influences in covering the environment
8. To explore journalists' relationships with, and access to tools, bodies, institutions that aid and serve as good sources of environmental news; as well as explore journalists' knowledge of environmental legislation.

1.7 Research Questions

Given that there are gaps to be filled in previous researches relating to environmental coverage in Nigeria either in regard to comprehensive coverage of environmental issues, (not just limited to climate change issue or other isolated issues); or publications on climate change coverage being limited only to frequency of coverage, no attempt has yet been made to determine the influences of such coverage. Reviewed literature indicates that the press is subject to certain factors that usually shape or condition the press in the performance of its functions, (Friedman, 2004; Russell, 2006; Hansen, 2011; Keating, 1997; Edani, 1994; Howard-Williams, 2011; Boykoff, 2009) - this study will determine these influences and how they affect environmental coverage in the Nigerian press. Apart from this, there is also an apparent lack of proper legislation and implementation to address environmental issues in Nigeria. These may have had some impacts on environmental behavior in Nigeria. Based on the foregoing discussion and in order to address the problem of this research, the study will aim at finding answers to the following research questions:

1. To what extent has the Nigerian press carried out its responsibility in carrying out a comprehensive coverage of the environment in regard to how frequent environmental issues are featured in Nigerian newspapers?
2. What is the value attached to environmental news?
3. What particular aspects of the environment are given the most coverage in the Nigerian press?
4. How are environmental contents sourced among the selected newspapers?
5. What is the dominant depiction of the attitude of the federal, state and local governments to environmental issues?
6. Is the coverage of environmental issues in the Nigerian print media seasonal? Has the press set enough agenda on environmental issues?
7. What are the social factors that affect press coverage of environmental issues?
 - a. How does the hierarchy of influences affect environment coverage?
 - b. What are the goals/objectives of environmental coverage?
 - c. What major challenges do reporters face and how do they affect coverage of the environment?
 - d. Is there enough relationship between environmental reporters and environmental news/policy makers, associations, and or tools that enhance good coverage?

It is pertinent to note here that research question number 7 particularly relates to in-depth interview of editors and reporters. The sub-questions emanating from research question 7 are raised in the in-depth interview and posed to editors and reporters in order to find out what influences their coverage of environmental issues in Nigeria. As discussed earlier, one of the short comings of previous studies on environmental issues coverage in Nigeria is that studies have yet to find out the factors that affect journalists' performance in the coverage of the environment. It has already been pointed out that reporters are guided by organizational policies, among others, in the way they cover the environment. If a newspaper for example, does not believe in climate change or does not consider the environment as a priority, whatever efforts the reporter and citizens make to draw attention of the newspaper to the environment will amount to nothing. Therefore, the above sub-questions are posed to elicit answers to what influences journalists' coverage of environmental issues in Nigeria.

Overall these research questions will be answered through data generated from content analysis of the selected (four) newspapers and in-depth interview questions given to journalists.

1.8 Purpose of Study

As in most aspects of the public's social reality (politics, economy, health, education, religion, and environment) the mass media are expected to provide a forum for ventilation of news and opinions on current and topical issues (Odunewu, 1995; Popoola, 2014). The manner in which the Nigerian press has performed this function in relation to environmental coverage is the subject matter of this study. In

other words, this study seeks to address how the Nigerian press covers environmental issues to determine adequacy or inadequacy therefrom by examining the five hierarchy of influences model (individual, routines, organizational, institutional, and ideological) on news contents as identified by Reese and Shoemaker (2014) on how they impact on journalists in covering environmental issues in order to ascertain if they(journalists) set proper agenda on the environment or not.

The purpose of this study therefore is to ascertain the quantum of environmental coverage by the Nigerian press and to examine the factors that affect coverage. The hierarchy of influences model promoted by Reese and Shoemaker (2014) were used as variables in shading light on the complex factors that shape media production, especially in relation to environmental news content. Beyond the media-centric hierarchy of influences model the study intends to identify other factors that may play crucial roles in the manufacturing of environmental news.

1.9 Significance of Study

The press plays a central role in surveillance of the environment; the correlation of the parts of the society in responding to the environment; and the transmission of the social heritage from one generation to the next (Severin & Tankard, 1992). Mounting surveillance on the environment implies that the press puts environmental issues within the ambit of its overall construction of reality. It does so by presenting news, analysis and opinions on the environment.

It has been established that by agenda setting the news media, through their news report, determine the issues that publics think and talk about (Severin & Tankard, 1992). The public depends on the media not only for news and information, but also for making meaning of complex issues affecting their lives such as the environment. However, news selection and reporting may as well go beyond the borders of the news media. This makes it necessary to find out not only how much of environmental news is reported, but most significantly, the forces that influence environmental news selection in the Nigerian press.

The study is relevant as it seeks to gauge empirically the level of media interest in the environment by determining what influences journalists in their coverage of environmental issues in Nigeria. This is a major flaw in studies relating to environmental coverage in Nigeria.

Overall this study assumes significance for the following reasons: First and foremost, it will help in exploring the role the media play (through environmental coverage) in creating a sustainable environment in Nigeria. The role the media play in fostering a safer environment cannot be over emphasized. Ukonu et al., (2010) believe that, the media have emerged as an important setting for the (re)construction of environmental discourses. Therefore, there is need to engage the press constructively if vistas of effective collaboration amongst all the stakeholders of the environment – government, civil society, and non-governmental organizations – must be created. Given the current state of environmental coverage, it seems either that the press has neglected its role, or there may be some forces militating against this role. By looking at the social forces that impinge on environmental coverage,

which has been hitherto not covered very well in past studies, this study is poised to present a systematic account of the sociological factors that affect environmental issues coverage, especially in Nigeria, and thus add to the body of existing knowledge on the topic.

Environmental quality can be enhanced through good media coverage of the environment; and by the media creating awareness about the environment and educating the civil society. Researchers (Stamm et al., 2000; Cox, 2010) have found that public interest in environmental issues is related to the quantum of coverage given by the media. This study examined how much the media has carried out these responsibilities in relation to setting adequate agenda on environmental issues coverage.

Secondly the study probes into the sociological forces that influence or shape environmental news production process in Nigeria. This was apparently lacking in most studies done on press coverage of environment in Nigeria. Media contents are influenced by a number of cultural, ideological, and organizational factors. Ideological factors as posited by Marxist tradition, links ideology to the interests of the elite/ruling class which are mostly reported by the journalists (Herman & Chomsky, 1998). Organizational factors border on news selection criteria, space and budget constraints, slant, interest (Tuchman, 1973). It is equally pertinent to say here that the newsroom culture of any news organization helps in shaping its media content. The newsroom culture is a typical agenda setting process – where the media determines the issues to be highlighted and those to be downplayed. This, in other words, is where the media prioritizes the issues that are to make it to the news stand.

This study will add to previous studies by investigating how these sociological forces affect environmental coverage in the Nigerian press.

Thirdly, the study will be instructive to policy makers in the formulation of clear, tangible and achievable environmental policies. One major obstacle to sustainable environment management in Nigeria is the lack of clear policy formulation or the lack of proper legal framework and implementation by the government (Eneh, 2011; Adelegan, 2004). This study will therefore draw the attention of policy makers on the need to take environmental issues seriously by promulgating and implementing good policies that will help in safeguarding the environment.

Fourthly, the importance of the study also lies in the fact that it seeks to know if sociological factors that affect news production have led the media in setting enough agenda on environmental issues. Past studies stopped at decrying lack of media agenda on environmental issues without looking into factors that were responsible for lack of attention.

The fifth reason is that it will help in raising awareness for a balanced coverage of environmental issues in Nigeria to include other pressing local issues rather than the misplaced priority on climate change.

Further to the reason for embarking on this study is the fact that currency/continuity, impact, and significance are news values or crucial determinants in the selection of news or debates in the media (Fleming et al., 2006). No issue could be as current, topical, and significant as the environment. Environmental issues are deemed current by the fact that they became burning issues since 1972 when the United Nations held

the first environmental conference in Stockholm and has continued till today. It is very obvious to state that degradation of the environment has both explicit and implicit impact on humanity and even the lower animals. Therefore, environmental issues have a huge impact and significance on man. This study will examine how the Nigerian press has reacted to environmental issues in order to create a sustainable environment.

1.10 Scope of Study

This study aims at examining the extent to which the environment features in the agenda of the Nigerian print media, as well as the possible factors or influences affecting such coverage. In other words, the study intends to ascertain if environmental issues are frequently made part of the overall focus of print media coverage, and what types of media contents on the environment are available. Beyond these questions whose answers we shall seek through content analysis of selected print media, we shall also attempt, through an in-depth interview of print media practitioners, to examine the issues and influences that impinge on coverage of the environment. Having said this, it might be pertinent to add here that this study does not entail any evaluation of the impact of the coverage of the environment on government policy or public awareness and action regarding environmental issues.

As it is not feasible to study all the newspapers published in Nigeria regarding their environmental coverage since their inception, some newspapers are chosen to represent the press. The decision not to study the entire population is based on the argument by Wimmer and Dominick (2006) that rather than embarking on an

impossible mission of studying the whole group (population) that is to be investigated, the researcher can safely draw up a subset of the entire population that represents the population. Elsewhere Wimmer and Dominic (2006) argue that in as much as larger numbers are more representational they cautioned researchers against the use of large unrepresentative sample. According to them, researchers “should not consider numbers alone. Quality is always more important in sample selection than mere size” (Wimmer & Dominic, 2006, p.102). Also, poor archiving system of newspapers may be an obstacle to studying all the population. To recall, the selected newspapers are The Guardian, Business Day, This Day, and Daily Trust. This study will focus on the coverage of the environment in these publications for a period of two years – January 2013 to December 2014. Within the two years, 384 issues of the selected newspapers will be analyzed to generate data to answer quantitative research questions. 16 journalists, plus one independent journalist will be selected for the in-depth interview to generate data to answer qualitative research questions.

1.11 Structure of Thesis

This thesis is composed of five chapters. Chapter one presents a snap shot of the thesis. It provides a brief account on the demise of good environment in Nigeria. It goes further to present a general overview of media and environment in Nigeria. The research problem was discussed. Research questions/objectives, significant of study, and scope of study were also presented in this chapter.

Chapter two focuses on literature review starting with tracing the beginning of global attention to environmental issues which gave rise to environmental journalism.

Literatures on various aspects of environmentalism were also reviewed. Given that this study investigated the factors that affect or influence journalists in covering environmental issues, it became necessary to review literature relating to news production. Also, the researcher reviewed literature on diffusion of innovation in relation to adoption of green culture. Finally, this chapter discusses the theoretical framework under the umbrella of sociology of news production theories.

In chapter three, the methodology used for this study is explained in detail. While content analysis is used to collect data to explain the trends and patterns of environmental issues coverage, in-depth interview questions were used to determine the forces which shaped news trends and patterns observed in content analysis.

Chapter four dwells on data presentation and analysis. This explains how environmental issues are represented in the Nigerian press. Implications for such representations are discussed.

Finally, chapter five ends the study with discussions and conclusions. It further discusses the theoretical, methodological and managerial implications. It also suggests the way forward for proper environmental issues coverage in Nigeria.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter focuses on review of literature related to the research topic. This research builds on a comprehensive review of all related materials to the topic. In doing so the researcher first and foremost looked at the conceptual frameworks that inform this study. They include the concept of the environment; environmental journalism and its evolution; environmental reporting and its challenges; media coverage of environment; media landscape in Nigeria; principles of news production. Furthermore, National System of Innovation and adoption of green culture was reviewed to bring to the fore the synergy that should exist amongst environmental stakeholders in order to bring about a sustainable environment. The researcher looked at institutional control mechanism on environmental issues from the global and Nigerian contexts by reviewing materials relating to environmental legislation. The theoretical framework namely sociology of news production is discussed in this chapter. The chapter also discusses gaps to be filled by this study.

Most of the literatures reviewed were found to focus mostly on isolated environmental issues especially those bordering on climate change issues as represented by the media internationally, (Hasan, 2007; Paterson, 1989; Friedman, 1986; Rubin, 1987; Wills & Warner, 1993; Daley & O'neil, 1991; Young & Dugas, 2011) and environmental problems in Nigeria (Batta et al., 2013; Ukonu et al., 2010; Nwabueze, 2005; Ladimma, 2006; Olatunji, 2006; Nwosu & Uffoh, 2005; Adelekan, 2009; Tagbo, 2010; Ogunjinmi, 2013; Okoro et al., 2010, Umeje, 2010; Dike, 1985;

Mba et al., 2004; Dramola & Ibem, 2010; Ibimilua & Ibimilua, 2014; Popoola, 2014; Nwabueze et al., 2015). Majority of the contents reveal that Nigeria's natural environmental resources including water, air and soil are seriously threatened. Increasing population growth, high rate of poverty, and migration, especially into urban areas, political/institutional constraints, urbanization and industrialization, and oil and gas exploration are the major reasons for environmental degradation in the country. Most studies on environmental coverage in Nigeria focused specifically on climate change issues (Ukonu et al., 2010; Okoro et al., 2010; Tagbo, 2010). Other aspects of the environment like indiscriminate waste dumping, urban decay and deforestation were hardly taken on board. Researches dealing with underlying factors that shape environmental representations in the Nigerian press remain an uncharted area. The present study will fill these gaps.

2.1 The Concept of Environment

This section looks at the meaning and different interpretations of environment so as to arrive at a consensus in what could guide journalists in covering environmental issues. It also helps bring attention to the meaning of environment as applied to this study. It further looks at the need to protect the environment from indiscriminate and harmful human interactions with nature.

The word “environment” has varied meanings in its contextual application. Generally, it is used to denote (Teklesilassie, 2015) all the natural environments that comprise of both the abiotic (physical or non-living) and biotic (living) environment. Man’s sustenance depends on the natural environment which provides him with

everything he needs to live. Dependability on the environment by living creatures is expressed in the air we breathe, the water we drink, the food we eat (Teklesilassie, 2015). In line with the above discussion, Yared (2009, p.4) gives a more inclusive definition of the environment in the following way:

“...the totality of all materials whether in their natural state or modified or changed by humans, their external spaces and the interactions which affect their quality or quantity and the welfare of human or other living beings, including but not restricted to, land, atmosphere, climate, water, living things, sound, odor, taste, social factors and aesthetics”.

In explaining the constituting elements of the environment, environmental scholars agree in common that environment consists of both nature and humans (O'Donnell & Rice, 2008; Scheese, 2003; Tesema, 2012; Dennis, 1991; Einsiedel & Coughan, 1993; Remillard, 2011). Nature according to environmental researchers is “anything not made by humankind, domesticated, or cultivated” (O'Donnell & Rice, 2008, p.644). Extending the discussion further, Teklesilassie (2015) identifies three interacting systems namely physical, biological, and cultural elements that make up the environment. The cultural elements would include economic, social, and political issues. These cultural factors affect the environment immensely (Teklesilassie, 2015). In a similar note, MacNaghten and Urry (1998) identify three themes used in explaining the environment. First, environment is seen as a real entity otherwise called environmental realism. In this case the environment is separate from human

experience and social interactions. The second theme is environmental idealism which explains that the best way to study nature and the environment is by identifying, critiquing and realizing various values that relate to the character, sense and quality of nature (Hasan, 2007). The third theme is what they called environmental instrumentalism. This theme specifically addresses interactions and responses of human beings to the environment and also focuses on the need to motivate humans to engage in good practices that sustain the environment. It is related to the positions of Barnes and Duncan (1992) that the environment can be seen, explained, interpreted and evaluated in various ways by looking at it socially and culturally.

There is a contention as to the meaning and definition of nature and environment. Thus, for the purpose of this study it may be necessary to briefly look at the two terms – nature and environment that are in most cases used interchangeably, so as to identify which is applied in this study. Nature is seen as the physical world which includes animals, plants and landscapes, excluding humans and human creations (The Oxford Dictionary of English, 2003). Explaining the meaning of nature further, Ruse (1995) puts nature into three categories. Firstly, he sees nature as the universe and its components; secondly nature is seen as the biotic or living world (both past and present) excluding the abiotic or non-living things. Thirdly, nature is identified as the organic world which does not have any relationship with humans and the consequences of their interactions. Thus, nature does not involve human impacts or interactions which are the reasons for environmental degradation (Hasan, 2007).

The environment on the other hand is seen as “external surroundings within which an organism lives or any external factors that affect the organism’s development or behavior...” (A Dictionary of Psychology, 2001). In a more elaborate way, A Dictionary of Sociology (1998) defines the environment as “...(delimited) social context in which the individual (or any living organism) is located, and the emphasis is on issues of adaptation and adjustment to this environment...”.

Given that the term nature is widely used as the universe and does not include humans as part of nature, and whereas the environment includes that which surrounds human beings and their interactions in that surrounding, therefore the term environment is more applicable to this study than nature.

Based on the foregoing, environmental discourses in the present time center on such issues as pollution, population growth, wilderness protection, depletion of natural resources, species extinction, ecosystem protection, environmental justice, human livelihood, attitudes and relations to other things on the planet earth (Dryzek, 1997, p.3).

In consonance with this, Ibimilua and Ibimilua (2014) classified Nigerian environmental issues under natural and anthropogenic types based on their causative agents. Natural environment in this respect involves those not directly under the control of humans but nature. Natural environment hazards include earthquakes, avalanche and volcanic eruptions. Anthropogenic environment hazard is as a result of man’s interaction with nature that results in pollution, desertification, climate

change, biodiversity loss, and flooding (Remillard, 2011). These issues will be highlighted in this study in regard to how they are covered by the Nigerian press.

The deplorable state of the environment calls for its protection and sustainability. Tran (2014) believes that nature “reflects an image of purity, beauty and spirituality evoking the nostalgia of a simpler time and calling for its protection” (p.10). The environment cannot take care of itself hence there is need to preserve and conserve it (Dennis, 1991; Einsiedel & Coughan, 1993). While there is need for conservation and protection of the environment, there is also a greater need to sustain it. Sustainability in this case implies as Lemons (2011) and Tran (2014) argue, meeting at present, the basic human needs justly and equitably in such a way as not to deny or deprive future generations of their basic requirements while ensuring the wellbeing and integrity of ecosystem.

The roles of journalists in mounting surveillance on the environment cannot be properly done without first getting to know what ecosystem is given the strong bonds that exist between members of an ecosystem (Keating, 1993). Consequently, Cox, (2006) calls on journalists, as it were, to engage in a better understanding of the environment and find a better way in constructing environmental contents that help in shaping society’s responses to the environment.

There is therefore need for journalists to organize the frames or discourses of environment to include all aspects environmental issues as the environment is multifaceted. Einsiedel and Coughlan (1993, p.142) write that environmental topics have “permeated a wide range of fora indicated by proliferation of sub-topics” For

example pollution could be seen from the point of view of an environmental problem to economic, legal or ethical discourses, thus creating what Trans (2014) calls an “expansion of diversification of discourse in the media”. This study intends to find out if this expansion and diversification of environmental discourse obtains in the Nigerian press or not.

Environmental discourse in the media can be referred to as environmental journalism. At this juncture, the researcher will briefly look at literature relating to the concept of environmental journalism.

2.2 Concept of Environmental Journalism and its Evolution

To put this study in a proper perspective, we need to bring environmental journalism to the fore as it is the bed rock of the study. This sub-section explores the meaning of environmental journalism. It goes further to look at its evolution at both the global and Nigerian levels.

Environmental journalism takes bearing from the fact that the media are seen as the main source from which the public gets information on science-related issues, including the environment (LaFollette, 1990). This is amply supported by researchers (Nelkin, 1995; Rubin & Sachs, 1973; Cox, 2010) who argue that the role or responsibility of educating, informing, persuading, mobilizing and alerting the public about science and technology related challenges rests on the mass media. Thus, the assertions that the media is the science teacher of the public (Goodfield, 1981), and that the media bridge different ways of knowing about the media (Luedcke & Boykoff, 2017) cannot be less true.

Rademakers (2004) writes that environmental journalism has different meanings “and often embraces several at once” (p.14). She goes further to argue that when properly analyzed, environmental journalism simply means “journalism about the environment” (p.14). Rademakers (2004) is of the view that environmental journalism definition has varied over time – from the traditional, preservative ones to the pollution related issues, and consequently the way that the press has covered the environment has changed. This is a major concern of this study given that the western media have pursued a rigorous and empirical method in reporting the environment, but this is yet to be seen in the developing countries including Nigeria, where most of the environmental issues are reported as straight news (Ukonu et al., 2010). Critical examination and explanation of environmental issues are apparently lacking. Thus, it could be said that while environmental journalism has gained impetus in many developed and developing countries, it is rather worrying that the Nigerian press has paid undue attention to the coverage of environmental woes ravaging the country.

Betts and Gibson (2012) contend that the traditional journalistic model is not so applicable to environmental journalism given its nature. This is in agreement with Bueno’s (2007) assertion that though environmental journalism builds on a concept that extrapolates that of traditional journalism, it must however “build its own ethos” despite the similarities shared with other genres of journalism.

The purpose of environmental journalism is to explain the implications of the relationship between humanity and earth. Thus, Bets and Gibson (2012, p.382) are of the view that the job of environmental journalists’ is to inform the public and get

them to understand for example, the “interconnections between energy use, climate change and food to make the transition to an efficient, resilient, and sustainable society.”

Environmental journalism is a progression of nature writing (Ronald, 2003) from the early explorers like Christopher Columbus, to acclaimed philosophers of the recent past like Henry David Thoreau and Aldo Leopold. The goal of environmental journalism is to observe, report and discuss man’s relationship with nature/environment. Put differently, environmental journalism involves gathering, verifying, producing, distributing, and exhibiting current information, trends, issues, peoples that are associated with the environment, with the intent, to enrich the public’s understanding of environmental issues by elevating the quality in the media (Ackland, 1995).

Environmental journalism covers a wide spectrum of topics, ranging from pollution, waste management, urban decay, climate change, health issues, desertification, deforestation, (Ibimilua & Ibimilua, 2014; Rubin & Scahs, 1973). However, the subject of coverage depends mostly on journalists and their areas of jurisdiction. West et al., (2003) surveyed journalists to find out how they prioritized environmental issues. It was found out that those surveyed would most likely focus on specific, local environmental issues than the global environmental concerns. This is supported by the study done by Betts and Gibson (2012) who determined that the Sunday environment section of two Vermont newspapers featured articles selected based on their importance or relevance to major environmental issues in Vermont and not just any international environmental occurrence.

This is of particular interest to this study given that most of environmental reportage in the Nigerian press focus mostly on global environmental concerns than local ones (Zhu et al., 1993). While climate change issue may be of paramount importance to environmental reporters in the United States and the rest of the West given the level of carbon emissions there, it may be interesting to find out why journalists in Nigeria, or Africa focus mainly on this issue even when it is not a pertinent local issue. This could be because of media globalization (Reese, 2007) and the common patterns of news across different nations (Shomaker & Cohen, 2006). It, thus, becomes important to find out how Nigerian environmental journalists source environmental information. Finding out if the Nigerian press depends on foreign or local sources for environmental news will help explain, in part, environmental news production. This becomes one of the probing questions that this study will provide answers to.

From the fore going discussions, the researcher could conclude that environmental reporting encompasses every aspect of existence and not just the report of current practices, issues and trends.

Regarding its evolution, environmental journalism became prominent in the 1960's and 70's following the publication of Rachel Carson's book – *Silent Spring* – in which she alerted people to the ensuing dire problems in the environment with the intent to raise awareness about environmental issues, and influence policy and action to resolve them (Detjan, 1977). Ever since the publication of Carson's book in 1962, many grassroot environmental organizations have appeared on the scene to raise

public awareness on environmental crises and working to influence adequate environmental legislation or policies to address them.

Consequently, the mass media have ever since then followed and generated public interest on issues relating to the environment. It is on record that the *New York Times* had environmental reporters (beats) as early as 1969, while *Time and Saturday Review* started regular environmental coverage in the same year (Sachsman, 1996). It is widely believed by many researchers that the first Earth Day in 1970 brought about the revolutionary trend in environmental coverage by the media (Bowman, 1978; Cantrill & Oravec, 1996; Burke, 1995; Brooks, 1990).

In Nigeria, environmental journalism and legislation gained momentum in 1988 when Saint Antuan, an Italian company dumped highly toxic and radioactive wastes in Koko, a coastal community in Nigeria. With this incident both the government and the press woke up to the clarion call to promulgate laws to protect the Nigerian environment; and the press began mounting serious surveillance on the environment (The National Mirror, 2012; Nwufo, 2010).

Environmental journalism gained further impetus with the formation of the Society of Environmental Reporters in the United States in 1990. The Society's mission is to improve public perception and understanding of issues related to environment by improving the quality, accuracy, and visibility of environmental reporting (Rademakers, 2004). Following this, journalists who report environmental issues in different countries and continents have formed networks and associations. In Africa for example, the African Network of Environmental Journalists (ANEJ) was formed

in 2002 to facilitate environmental information sharing in the African region. Ever since its establishment, ANEJ has conducted a number of training workshops to help build and improve the capacity of environmental reporting. Each training focuses on problems peculiar to environmental issues in Africa (UNEP, 2010).

The ANEJ was formed with the following objectives among others: to serve the main stream Environmental Journalism in Africa; enhance the capacity of African Journalists to deal with new and emerging environmental challenges; promote web journalism on environment and sustainable development in Africa; influence decision-making process with regard to environmental policies in Africa; and provide extra leverage for the dissemination of environmental information in the region (UNEP, 2010).

This study seeks to find out how much influence/help the Nigerian journalists on environmental beats have drawn from ANEJ and similar bodies in regard to proper coverage of the environment.

When compared to the West, environmental journalism in Africa is yet to find a strong footing. Journalism schools and environmental societies which boost environmental coverage are lacking. For example, the Society of Environmental Journalists in the United States has more than 1400 members, whereas the ANEJ has a membership of about 700 journalists from 50 countries across Africa (Fahn, 2011). Also in the United States, it is found that there are well established schools and centers in universities and foundations devoted to teaching and sponsoring environmental Journalism programs. For example, in 1991, the Environmental

Journalism Center of Radio and television News Directors' Association and Foundation was formed; also in 1992, the Center for Environmental Journalism at the University of Colorado was established and in 1994 the Knight Center for Environmental Journalism at Michigan State University was created (Rademakers, 2004). These few examples of organized efforts to promote environmental journalism in the West, is conspicuously lacking in Africa in general and Nigeria in particular. It is also of interest to note that environmental reporters in the West depend very much on handbooks of environmental journalism to put environmental issues in proper perspectives (Rademakers, 2004). While environmental journalism is seen as a key beat in American journalism (Rogers, 2002) that cannot be said to be the situation in Nigeria given the poor attention given to environmental issues by the press (Ukonu et al., 2010).

2.3 Critical Studies on Environmental Issues and the Media

This subsection intends to look at previous studies on the topic from topic, theoretical, and methodological points of views and also explore what should be done to extend research.

Across the globe there is proof of huge research on media coverage of environmental issues. Most of these studies are of the view that environmental issues are not properly represented in the media. In the Indian sub-continent for example, several studies on environmental issues coverage (Dutt, Garg, & Bhatta 2013), Sanitation issues, (Showkat, 2016), environmental issues (Meda, 2016), online media coverage of air pollution (Murukutla et al., 2017), environmental degradation (Viegas, 1989),

pollution (Kumar, 2001), and comparative study of climate change coverage by India and US newspapers (Biswas and Kim, 2016) have decried the improper coverage of the environment.

Similarly, studies done in neighboring Sri Lanka indicate that there is improper coverage of environmental issues as priority is given to poverty and underdevelopment issues (Jalarajan & Sreekumar, 2011). Discussing the factors that have given rise to environmental coverage in Sri Lanka, Jalarajan and Sreekumar, (2011) argue that commercialization, media ownership pattern among others are responsible for the escalation of commercial imperatives.

However, there seems to be a different tune in Bangladesh where it is believed that environmental coverage is a vital, strong and evolving field of journalism. Bacon, Das and Zaman (2009) argue that environmental journalists in Bangladesh report environmental issues in relation to social, economic and political contexts. Reza (2010) supports the above findings when she argues that environmental issues coverage in Bangladesh is prioritized especially on issues like climate change and pollution.

In the Middle East, studies on environmental coverage also project environmental issues as under-represented in the media (Abbas & Emenyeonu, 2015, Al-Foor, 2013). It is believed that covering the environment in its geopolitical, social and scientific contexts requires expert knowledge and the capacity to frame environmental stories in an attractive way. In the Arab region such general narrative challenges are exacerbated by the lack of journalism professionals (Pintak & Ginges

2008, p.214). Tolba and Saab (2008, p.18) are of the view that less than 10 percent of newspapers in the Arab world have dedicated environmental writers: “the subject is seldom dealt with in depth and critical analysis and expert insights are rarely provided”.

Reinisch (2010) studied the evolving field of environmental journalism in the UAE using a qualitative assessment and finds that environmental issues though privileged is confined to little space.

A study by Mare (2011) finds out that newspaper coverage of climate change/environment were generalized, did not reflect urgency, was negative, event based, official centered, and hidden in the inside pages.

The above studies focused mainly on isolated environmental issues ranging from pollution, environmental degradation and mostly on climate change. The studies employed agenda setting and framing as underpinning theories, while the methodology employed was quantitative content analysis. This researcher intends to improve on previous studies from all fronts. First by looking at the quantum of coverage of a series of environmental issues not just isolated or case-study issues. Second by extending sociology of news production theory in explaining the factors that affect environmental coverage in Nigeria. Third by using mixed methods rather than the prevalent quantitative measurement in assessing coverage of environmental issues, especially as applied to Nigeria.

In the West (North America and Europe) a myriad of studies has been done on the topic as well. For example, Boykoff (2009) x-rayed factors that shape media

coverage in a nonlinear, complex and dynamic way. Boykoff (2009) is of the view that the media are part of the complex process through which environmental messages are gathered, packaged and disseminated for consumption. The implication is that the press has to go through an avalanche of sources, information, and influences in order to provide news to the public. There is a yawning gap in almost all the studies done on environmental coverage in Nigerian press as the forces that determine who selects what and why have never been put under proper scrutiny. This study will fill this gap by looking at the environmental news production mechanism in the Nigerian press by conducting in-depth interview to ascertain what influences environmental news coverage in Nigeria.

In another study Neuzil (2008) writes on the progression in media coverage of environmental issues. Neuzil (2008) points out that the media coverage of the environment has passed through two stages namely, when newspapers covered the environment as only part of the disaster or corporate misdeeds, and secondly when environmental beats were firmly established as a result of huge attention focused on the environment. Proper environmental issues coverage can only take place when the journalists are properly trained and equipped to do their job. Most of the studies on environmental coverage in Nigeria did not pay much attention to the education, training and experience of the journalists that report the environment. This will be taken on board in this study to identify how this has contributed to the coverage of environmental issues in the Nigerian press.

Babcock (1979) examined the relationship between the nature and frequency of media coverage of environmental pollution as compared to the public's concern on

environmental pollution, the reported quality of environment, and the governmental regulations for pollution control and abatement. The result of this study points to the fact Newsweek is not a good barometer of the public's concern in regard to environmental pollution, the reported quality of the environment, or the government's obligations and outlays for pollution control and abatement. Earlier studies did not probe into coverage of government's regulatory roles as this is one sure way to fighting environmental decay. Therefore, this study will examine the attention of the Nigerian government on environmental issues by looking at the coverage of environmental related regulations.

Knight (2010) probes into the U.S news coverage of environmental issues from 1890 to 1960, and establishes among other things that contrary to speculations, that environmental concerns in the U.S were pegged to the post-World War 11 era, that environmental issues ranging from air pollution to wildlife protection were highly reported in news content within the study period and that journalists of the past relied heavily on sources from the government sector in writing environmental news while other sources or views were neglected. The study is of the view that past coverage of environmental issues distanced environmental problems from the public to such effect that it discouraged environmental problem solution in Nigeria. This study will ascertain whether there is a balance on environmental news sourcing between government sources and ordinary people.

Sonnet et al., (2005) studied how discursive contexts shape the framing of drought in temporal and spatial scales. They found that discursive contexts in the two states are shaped by their cultural and political histories – pointing, as it were, to the factors

that shape news contents. This study will look to determine if there are major differences in contents and framing of environmental issues by newspapers from different geopolitical zones in Nigeria.

Wilson, (2001) did a comparative newspaper analysis (The Guardian and The Daily Telegraph) on representations of framing and environment from 1975 to 1997 so as to find out if there has been a shift from productivism to post-productivism in media representation of agricultural change. The study uses three methodologies in media studies, namely content analysis; discourse analysis; and semi-structured interview with media gate-keepers, to generate data for the study. The study finds that the coverage of framing and the environment in the Daily Telegraph portrayed paradoxical representations of manifest and latent meanings in agriculture, the Guardian rather maintained a more latent representation of post productivism. This, (different stances of the two newspapers) according to the researcher, is as a result of different social and cultural contexts between different newspapers. The newspapers selected for this study were, apart from other factors like prominence and wide circulation, chosen based on their geopolitical zones. This is quite unlike other studies in Nigeria where the newspapers were merely selected based on circulation and almost from the same zone. The gap to be filled here is that this study will focus on the influences of environmental news production in selected newspapers based on the different social and cultural environments in which they operate. This has been neglected by earlier studies.

Bucknall et al., (2000) write that there is a relationship between a country's environmental status and its economy. They contend that most of the poor countries

in the world have very poor environments as a result of low household income and consumption, inequality, inadequate health care, education, security and lack of political will. This study will therefore look at the social forces that determine selection of environmental news content.

It is pertinent to mention that while some studies in the West dwelt mostly on isolated or case study issues or disaster stories (i.e. Chernobyl, Exxon Valdez and Braer) other studies focused on the frequency of environmental contents and not the processes or influences of content production (Dunwoody & Griffin, 1993; Campbell, 1999; Dunwoody & Ryan, 1987; Friedman et al., 1986). This is expected given that the developed world has gone beyond the problems of such environmental problems as waste management, environmental sanitation, urbanization, nature conservation etc., hence coverage and studies are confined to environmental natural disasters and industry related, and climate change issues. Jalarajan and Seerkumar (2011) explain this phenomenon by arguing that in Asian and other developing countries, environmental issues may not be prioritized due to other pressing problems like poverty, underdevelopment, and war, however the concept of environmental issues differs from the West and developing countries given that developing countries depend directly on the environment for sustenance, (for example over dependence on wood fuel that may cause deforestation) while the needs of those in the developed countries are met – not depending directly on the environment for sustenance. Thus, while the West may prioritize climate change issue given their level of carbon emissions and the controversy it has generated, this

present study intends to find out if climate change is given priority over other pressing local environmental issues.

Other issues on environmental coverage across the globe are dwelt on the sub-sections 2.4 Environmental reporting and its challenges, and 2.5 Media coverage of environment: quantum. Further theoretical and methodological issues on the topic are provided in the principles of news production subsection.

2.4 Environmental Reporting and its Challenges

This subsection highlights the challenges that face environmental coverage across the globe.

Studies bordering on environmental coverage have indicated that the media is giving undue attention and coverage to environmental issues. Tran (2014) write that such researchers as (Keating 1997; Friedman 2004; Russell 2006; Boykoff, 2009; Hansen, 2011; Howard-Williams, 2011) have linked the undue coverage to the beat as being under “external economic, technological, political and editorial pressure” (p.15).

Contributing to this discourse, Teklesilassie (2015) contends that part of the challenges are inherent in the gaps found by content analysts which emanate from event-driven or episodic coverage of spectacular environmental events, and sometimes focusing mainly on human interest and economic consequences while neglecting systemic issues. This pattern of covering the environment inadequately according to Stamm et al., (2000) is directly related to the poor public understanding of environmental issues.

Extending the discourse on episodic coverage of environmental issues, researchers like Wilkins and Patterson (1990), Soroka et al., (2009), Anderson (1997) and Boykoff (2009) argue that the media dwell mainly on event driven coverage of the environment because it provides them with outstanding images or visuals and also gives them different news stories and angles. Thus, the pattern of coverage is reactive rather than proactive given the action-response sequence seen in most of the environmental contents (Mutiu et al., 2017; Stamm et al., 2000; Einsiedel & Coughlan, 1993; Hessing, 2003). Other scholars have criticized event-driven coverage of environmental issues as providing a leeway for journalists to dramatize (Weingart et al., 2000), and sensationalize coverage (Nelkin, 1995).

Similarly, Cox (2006) believes that environmental issues are quite unobtrusive and as such journalists find them difficult to cover hence they often report or represent them in sensational ways. In most cases, rather than looking at the environmental issues from a long-term social and economic perspective, the media presents them from a one-time action from individuals or organizations (Wilkins & Patterson, 1990).

Environmental contents are also critiqued for oversimplification of issues given that they are reported as straight news and not investigative or in-depth news coverage (Weingart et al., 2000; Rice, 2008; Wyss, 2008; Young & Douglass, 2011; Gamson & Modigliani, 1989; Bubela & Caulfield, 2004). This shortcoming is a consequence of adapting to traditional methods of news coverage (inverted pyramid structure, space limitation, deadline pressures) which do not augur well in environmental writing (Bourassa et al., 2013). Succumbing to organizational pressures, selection

processes and source selection, or adapting to institutionalized practices in reporting the environment by placing emphasis on breaking or “bleeding” stories, objectivity – exposing conflicting views to achieve balance negate proper environmental coverage (Dunwoody, 1982; Pallen, 1999; Manning, 2001; Berglez, 2011; Singer, 1990). The fact that objectivity, as Hasan (2007, p.24) argues, cannot be applied by journalists to produce “value-free and comprehensive accounts of “real” events” applies more to environmental coverage. Boykoff (2008) presents a similar case to Hasan’s (2007) and argues that bringing into account all sides of the story results in a weakening of scientific consensus and thus creates more uncertainty and misunderstanding of the already complex issue (LaMay, 1991; Nibset, 2011).

In a similar tone, Cote (1981) has argued that environmental news should not be treated as soft news that describes human interest news, rather it should be seen as, technical, complicated, pluralistic, interlinked, multidisciplinary and often made up of hard scientific data and quantitative as well as qualitative data (Campbell, 1999).

Hasan (2007) explains that human interest format is a ploy employed by environmental journalists to soften stories. Hasan (2007) illustrates this assertion by referring to pictures of seals during culling (slaughtering them to reduce their population) that evoke human emotion. While this is good, the stories are not always expressive of the reasons behind the action.

Environmental issues coverage has also been criticized for being susceptible to personal opinion and biases (Teklesilassie, 2015; Tran, 2014). Nonetheless, environmental reporters are also frowned at for polarization of coverage of environmental issues as they are pressured by both pro and anti-environmental

bodies for being biased. Anti-environmental bodies have blamed reporters for resorting to advocacy stance in reporting environmental issues. While the debate for media environmental advocacy rages on, researchers like Teklesilassie (2015) and Bean (2010) are of the view that it would not be proper for reporters to stay aloof and unconcerned while the environment degrades, it is rather proper for them to use their influence to advocate for the well-being of the environment. Scholars such as Nelkin (1995), Carvalho (2007) and Young and Douglas (2011) further argue that environmental coverage has become more polarized politically and economically (Soroka et al., 2009) rather than an ecosystem and how humanity relates to it.

Similar to the issue of polarization/bias, a study conducted by Dunwoody and Griffin (1993) to ascertain how newspapers framed the super fund toxic waste sites in the United States, find that newspapers in homogenous communities downplayed the seriousness of the toxic waste site while emphasizing what is being done by the local authorities to solve the problem. On the other hand, in a more heterogeneous situation, newspapers were in position to cover the toxic waste sites in-depth or extensively by reporting on the offending parties and also harping on the potential risks emanating from the toxic sites as worthy of publicity for public awareness. This finding supports the assertion that small-town newspapers are in most cases, more consensus inclined than larger metro newspapers (Tichenor, Donohue, & Olien, 1980).

To counter these challenges and critiques, Teklesilassie (2015) summarizes the thoughts of UNEP (2006, p.137) on a viable environmental coverage thus:

“Environmental journalism demands both outstanding scientific understanding of environmental issues and journalistic skill. It is necessary to have an understanding of scientific language and practice, knowledge of historical environmental events, the ability to keep abreast of environmental policy decisions and the work of environmental organizations, a general understanding of current environmental concerns and the ability to communicate all of that information to the public in such a way that it can be easily understood despite its complexity”.

In as much as reporting the environment is very necessary, there are some difficulties associated with it. These include uncertainties relating to research and innovation and their long-term impacts in real life (Tran, 2014). How well the environmental reporters are trained and equipped to address such uncertainties are highlighted as part of the problems of environmental reporting and will be addressed in this study. This study will also probe into other obstacles that hinder proper environmental coverage. For example, editors may pose an obstacle to environmental reporting in that they may not have interest in environmental journalism or be educated about it, or believe in its importance. This becomes the bane of the efforts of environmental reporters whose reports on the environment may be labeled ‘un-newsy’ by the editors. This study will therefore attempt to probe into

the quantity of environmental coverage and those factors or influences that determine environmental journalism in the Nigerian press.

2.5 Media Coverage of the Environment (Quantum)

The intent of this sub-section is to evaluate media representation of the environment. This stems from the fact that communication, as Stamm et al., (2009) put it, is paramount in improving the public's understanding of environmental problems. The media is also said to structure the publics' perception of the world and also mediates beliefs, attitudes and behaviors related to environmental issues (Cox, 2010). How well and frequently the media presents the environment becomes a key strategy in the realization of a sustainable environment (Telesilassie, 2015).

The need to develop, improve and sustain environmental coverage is huge given the importance of its focus. This is the mission of environmental journalism which is mainly derived from environmental literature - a genre of writing that focuses on, and analyzes environmental themes in relation to interaction between man, society and environment. Environmental literature advocates care and concern for the society thereby bringing about a sustainable relationship of man and the environment (Tran, 2014).

But unfortunately, rather than bring about this sustained relationship between nature and man, researchers believe that environmental journalists are not living up to their responsibility. They claim that environmental issues coverage all over the world has dropped despite the extreme strange weather that is being experienced recently.

Fischer (2013) writes that coverage of climate change by the world's journalists

dropped by two percent in 2012. This is supported by Fahey, (2013) who contends that despite the fact that climate impacts were felt more intensely and more frequently in 2011, there was declining media coverage of global warming in 2012 in favor of politics. However, Fahey (2013) presents the brighter side of environmental coverage by citing a study done by Bill Kovarik of Radford University, Virginia that the four largest U.S daily newspapers – New York Times, Washington Post, Wall Street Journal and USA Today – increased their coverage of the environment by 10 percent in 2012, more than the tally in 2011, but 11 percent below 2010.

A study conducted by Gavin (2009) finds that the media is not paying serious attention to environmental issues with the seriousness they deserve. In his words “...Climate change, therefore may not be high enough on media agenda to stimulate the sort of public concern that prompts concerted political action. The media may well continue to focus its attention on health, the economy or crime, thereby drawing public attention from the issue of climate change” (p.61). This applies to other environmental issues. Therefore, this study, while focusing on environmental story prominence, will be better placed, to find out whether the Nigerian media has adequately or inadequately represented environmental issues and identify the reasons for such adequate or inadequate representation.

A more vivid depiction of environmental coverage by the media is presented by Pew Research Center for Excellence in journalism. It writes that only one percent of news stories in 2011 focused on the environment. It blamed the dearth of environmental coverage on the prevalence of the old journalism parlance that “if it bleeds it leads”.

When compared to environmental coverage, the report found that, celebrity news garnered 48 stories – ten times the coverage allocated to environmental news.

Fahn, (2008), argues that climate change issues coverage by the media is very important, but little attention is given to it in developing countries where it is not seen as a prestigious, and in most cases assigned to inexperienced (Singer, 1990; Keating, 1997) or general reporters who cannot do in-depth stories. It may be safe to say that environmental news in most cases is only considered important as long as there is no alternative news, and then environmental news can be considered to fill the spaces in the absence of something more urgent, timely, or valuable to present. In other cases, Fahn (2008) contends that editors may constitute an obstacle to environmental coverage when they impose their value orientations and news judgment (Roscho, 1975) on environmental news selection, or when they are not interested or do not understand climate change issues, or when they have vested interests in advertisers (Davison et al., 1976) and energy companies that may want the climate change issues to be down played. This study will investigate if this obtains in the Nigerian press.

Elsewhere the Project for Improved Environmental Coverage (2013) believes that most news outlets prioritize entertainment and crime news. According to this study, entertainment headlines appeared three times more than environmental headlines, while crime headlines, albeit considered a local issue, appeared at the ratio of 69 – 1 in the national morning network news.

The reasons for the poverty of coverage as seen in environmental issues is attributed to the unobtrusiveness of environmental issues, which implies that it is difficult to concretely link their importance to the public's lives (Cox, 2006, p.169). The unobtrusive nature of environmental issues, as Hasan (2007) argues, makes it impossible or rather difficult for journalists to fit them into media's convention of writing.

This gloomy narrative of poor environmental coverage is also inherent in Nigeria. Okunlola (1996) who studied what makes lead stories in the Nigerian media finds that environmental stories were not considered prominent issues that sell a newspaper. Okunlola (1996) identified business and economy-related stories as the two main dominant issues that dominated newspaper cover pages in Nigeria. Uyo (1996) also finds in a study on environmental management in Nigeria that only very few Nigerian newspapers had columns for the environment. Even at that, such columns are stoked – Safety and Environment; Energy/Environment; Environment and Property. Uyo (1996) finds that the columns that were regular and properly reported in the Nigerian Media included: politics, banking and finance, education, estate guide, marketing, and advertising.

Miller (2012) writes that given their reach, the main stream news outlets have a moral responsibility to do a better job covering public interest news like the environment. Unfortunately, this is a far cry from what is required hence Miller (2012) hopes to see environmental headlines three times more than entertainment ones. Given this prognosis of environmental coverage, one wonders if environmental journalism or environmental communication in Nigeria has set enough agenda on

environmental issues in a multifaceted dimension. For the press to perform its functions in any given society it must be free from any interference from constituted authorities and the private sector. This takes this researcher to take a look at the media scene in Nigeria.

2.6 Media Scene in Nigeria

This section reviews the state of the Nigerian press so as to provide an understanding of how it operates in regard to freedom or lack of it in coverage of news. An understanding of the Nigerian press, especially its (media) economy, will help shade light on why certain genres of news are covered at the expense of others.

The press in Nigeria is famous as it is the most vibrant press in Africa (Tagbo, 2011). The press has had a history of varying degrees of press freedom over the years. There is diversity of voices in the Nigerian media as a result of varying socio-cultural and religious background of the country. Pate (2012) writes that the plural and diverse nature of media ownership in Nigeria is the foundation of its vibrancy and independence, though relative. The multiplicity of news outlets implies that Nigerians have choices of sources of information. Freedom of the press is enshrined in the country's constitution. Section 36(1) of 1999 Constitution defines and guarantees press freedom in Nigeria. It states that "every person shall be entitled to freedom of expression, including freedom to hold opinions and to receive and impart ideas and information without interference". Section 39(2) of the Constitution states that "... every person shall be entitled to own, establish and operate any medium for the dissemination of information, ideas and opinions". Section 22 of the same

Constitution defined the role of the media in holding the government accountable to the society. It states, “the press, radio, television and other agencies of mass media shall at all times be free to uphold the fundamental objectives … and to uphold the responsibility and accountability of the government to the people”. With these provisions in the Constitution, the Nigerian press, as it were, is thus empowered to champion the cause of good governance by objectively criticizing government’s short comings with the intent of creating a stable and prosperous polity. Nonetheless the freedom of the press was in most cases not obtained especially during military regimes.

Despite the fact that Freedom of Information Act (FOI) was enacted in 2011 to promote freedom of speech and or expression and establish dialogue between government and the governed, the Reporters without Borders, which publishes an Annual Press Freedom Index, ranked Nigeria as the 64th world’s violator of press freedom (The Street Journal, 2013). However, despite media clamp down by government, the Nigerian press has continued to grow and wield its power in reporting government and other issues to the people. The number of media or news outlets in the country points to the vibrancy of media industry in Nigeria. The BBC News Africa reports that there are as many as hundreds of radio stations and terrestrial television stations, as well as cable and satellite stations. This report also reveals that there are more than 100 national and local press titles run either by the public or private sector. Despite the fact that this report ranked Nigeria’s press as one of the most vibrant in Africa, it cited Reporters without Borders (RSF) in what seems

like a contradiction, ranking Nigeria 126th out of 179 countries in its 2012 world press freedom index (BBC News Africa: Nigeria Profile 2013).

Studies done by many researchers such as Emenyeonu (1997), Musa (1989) and Oso (1986) all reported a persistent passion for robust reportage and commentary on political issues among independent Nigerian press. This tradition has been partly attributed to the vibrancy and relative freedom of the Nigerian press.

It is worth mentioning here that the vibrancy that has characterized the media in Nigeria is on a decline as a result of many reasons including a collapsing economy and the emergence of online journalism. There is a huge loss of readership and revenue as a result of these challenges (Aliagana, 2015).

The above paragraph may explain why Nigerian newspapers prefer other contents that spin money other than environmental news in a bid to stay afloat in the news market. Thus, it becomes necessary to review what influences news selection hence the next section focuses on principles of news selection.

2.7 Principles of News Production

It is not just enough to report or conclude in studies that the environment is adequately or inadequately covered by the media without looking at the influences of such coverage. There may be journalistic constraints that condition journalists in the manner they cover environmental issues (Tran, 2014; Reese, 2007; Dunwoody & Peters, 1992; Valenti 1998; Singer 1990; Keating 1997; Boykoff, 2009). This section therefore reviews the factors that shape media content in news production. This

review becomes relevant in this study as it will specifically identify factors that influence journalists in covering the environment the way they do. In order to do justice to the topic, it may be pertinent to start with an explanation of what news production is. In the first place, an understanding of what news is will help in explaining news production. Nossek (2008) defines news as a type of media content that is a result of journalists' information gathering and decisions taken by editors on the information gathered based on professional practices and norms. Harrison (2006) asserts that news "is judged to be newsworthy by journalists who exercise their news sense within the constraints of the news organizations in which they operate" (p.16). These definitions tend to point to the fact that there are levels of influences that affect news production.

Researchers have variously seen news production as a process that involved several levels/stages like news professionals, work routines, organization and external level (Wilson 1996; Harrison, 2006; Bantz et al., 1980). In a similar but slightly different tone, Domingo (2008) posits that news production involves five stages – namely access and observation; selection and filtering; processing and editing; distribution; and interpretation. Other researchers (Whitney, Sumpter & McQuail 2004; Ettema, Whitney & Wackman 1987; Preston 2009; Gans 1979) have theorized the complexity of fields of influences in news production, For example Gans (1979) and Gitlin (1980) find, in their different studies of what influences news content that a variety of factors that can be categorized into the following approaches were hugely responsible for media contents. They include:

- a. The mirror approach: The mirror approach suggests that the media are just channels of information as they are neutral and gather and disseminate social reality to audiences. Thus, it is believed that content depicts social reality with little or no distortion. To support this, Borman (1978), and Renfro (1979) found that media represent events and people based on true occurrence. However, it is found that journalist's conceptions of which people or events are newsworthy become the bane of representativeness of news content. Hence political issues may be seen as more newsworthy than environmental news.
- b. On the organizational routine approach, content is seen to be determined by media routines. Studies by communication scholars like Tuchman, (1978), Giltin (1980), Fishman (1980), indicate that news organization cultures and routines determine how stories are selected, written and published. Such routines as deadlines, story holes/quotas, news sources and the conventional pyramid structure of news writing are organizational procedures that perhaps outweigh the constraints imposed by audience needs and interests.
- c. It is also believed that journalist's attitudes, socialization, beliefs, values impact on stories they select and write. This renders the argument by Paetz and Entman (1981) that "internal logic of media organizations and personnel" determine news contents, a truism. It is worth mentioning here that journalism training journalists received or receive help shape their news taste. Journalists who are well rounded in a given beat would always select relevant news items and interpret and write them thoroughly well. That is to say that beat reporters do better stories on specialized topics like environment

other than when they are handled by general reporters. Can a general reporter do a good job on environmental reporting as compared to a journalist who specializes in environmental journalism?

- d. The external influences-centered approach emphasizes that media contents are determined by social and institutional forces like ownership, advertisers, technology, culture and audience. It's often said that media contents reflect the wishes of those who own or finance the media (Altschull, 1984; McQuail, 1992)

However, a more applicable model of news production which this study has adopted is Reese and Shoemaker (2014) hierarchy of influences model which encompasses all aspects of previous theories on the topic. This model explains that news contents are influenced hierarchically at five levels namely, individual, routines, organizational, institutional (extramedia), and social structure (Reese & Shoemaker, 2014; Reese, 2007; Encyclopedia of Communication and Information, 2002).

2.7.1 Hierarchy of Influences Model

The hierarchy of influences model used by Reese and Shoemaker (2014) in their study of sociology of news production (what influences news production) helps in explaining the complexity inherent in media production, especially news contents. They achieved this by explaining factors that shape media content at five levels. These include “from the micro to the macro: individual characteristics of specific news workers, their routines of work, organizational-level concerns, institutional issues, and larger social systems” (Reese & Shoemaker, 2016, p. 396). This model

considers the various forces that influence the press and explain how influence at one point may mingle with another.

At the individual level of analysis, the focus is on news professionals. As Reese and Shoemaker (2016) put it, analysis at this point “considers the relative autonomy of individuals, how they are shaped by, contribute to, and identify with their surrounding organizations. The routines level dwells on the patterns of behavior that form the structures of media work. In other words, routines are looked at as the methods of work that inform practice, including both implicit and explicit rules. These routines so to say shape pattern of work that serve the requirements and needs of the organization, and control the flow of work thereby legitimizing the structure (Reese & Shoemaker 2016). The third hierarchy of influence is the organization. At this level content is seen as an organizational product. This points to Breed’s (1955) analysis of social control in the newsroom – where the various sections of the news organization work collectively to achieve goals. Social institutions have to do with influences that come from outside the media organization and would include audiences, elite sources, and corporate entities (Reese & Shoemaker 2014). The last hierarchy of influence is the social system. This most macro level influence is concerned with interplay of society and power and how they relate to the press. It is pertinent to note that media institutions operate in a larger social system that may cross national boundaries. In analyzing the social system, this study will, apart from looking at the social system from within, examine the influence cross national social system (global press) in influencing environmental coverage in the Nigerian Press. This becomes necessary given that Reese and shoemaker (2016) argue that social

system level goes beyond the “nation-state to more globally connected forces that affect the media” (p.404). In this study, the hierarchy of influences model was re-examined to determine how they contributed in the coverage environmental news and also suggest additional influences that could aid proper and informed coverage of environmental news.

In a similar study, Keith (2011) summed up the hierarchy of influences model in the following ways:

- Individual: the selection of news content is influenced by individual news professionals.
- Routines: selection of content is influenced by the norms of selection that have evolved within the organization which is in turn influenced by norms of selection in mass communication.
- Organizational: Content selection is affected by group decision making in a given setting.
- Social institution: Content is determined by factors like markets, audiences, advertisers, and interest groups.
- Social system: Ideologies or social systems of societies influence content.

While hierarchy of influences model has helped a great deal in explaining the factors that influence news contents, this present researcher wonders what there may be beyond this model. There is need therefore to re-examine the hierarchy of influences model to ascertain other issues or factors that may influence content production. This has been previously done in relation to (account for) newer-media content (Keith,

2011). The present study aims to suggest more factors that influence environmental news content other than the media-centered ones.

Contributing further to the discourse on news production, Edeani, (2004) opines that there are certain factors which usually condition the press in the performance of its functions. These according to Edeani (2004) include the prevailing political systems and political culture, the level of economic strength and independence enjoyed by the press, the ownership pattern, and the level of professional education and training of journalists. At this juncture, literature on some factors that affect news production will be reviewed as this study will look at how these factors have impacted on environmental coverage in Nigeria.

The review of literature related to news production as the frame work for this study focused on sociology of news production theories using Reese and Shoemaker (2014) hierarchy of influences model as variables. In this section however, some of the issues reviewed included, 1) media ownership, 2) external factors/advertisers and pressure groups, 3) institutional routines, 4) news sources, 5) journalistic orientations. These social forces which influence the entire process of newspaper content selection will help shade light on what informs journalists' attitude to environmental news coverage.

2.7.2 Ownership

The media of mass communication have been associated with a wide range of roles and functions. Communication scholars such as Luedcke and Boykoff (2017), Lasswell (1971), Wright (1964), Schulte (1983), and McQuail (1987) have

contributed extensively to the debate on what role the media can play in society. Albeit such roles are rendered in different modes, their commonness include, the provision of information; persuasion, education and opinion-making; the maintenance of surveillance on the environment; the linking or correlation of different units of society; transformation of cultural ethos; the provision of entertainment. This study is much interested in finding out if the Nigerian newspapers have, through educative, informative, persuasive, opinionated stories on the environment, carried out the surveillance role on environment or not.

One of the major factors that shape media contents is ownership. In most capitalist countries, the mass media are mainly established as business ventures which are expected to yield profits and serve the interest of their owners. Hollingsworth (1986) supports this assertion when he wrote that Lord Richard Marsh, former chairman of newspaper proprietors in Britain once said that after spending a great deal of money on a newspaper, proprietors cannot allow the newspaper to express views in conflict with those of the owners. The interest of the owners does not just refer to financial returns, but it extends to political supremacy, the control of power, the monopoly of ideas, and the imposition of ideologies (Reese, 2007; Nasser, 1983). Murdock (1990), contends that owners of big chains of media establishment control and influence media contents intrinsically and extrinsically by intervening in the management of news production for the former, and employing like-minded managers for the later.

Despite the fact that big media chains do not exist in most of the developing countries like Nigeria, yet it is evident, as Nwabueze (1994) reveals that a number of

well-established newspapers belonging to government, individuals, political parties or religious organizations, are in most cases subject to the whims of their respective owners and financiers. The rule here is that affiliations of the newspapers determine their stances on most issues.

Apart from privately owned media, how does ownership affect the public media in covering issues, especially that of the environment. In most of the developing countries one central issue in media content is that of government regulation. Many scholars have identified government interference in media as limiting media content. Wiio (1983) and Curry (1982) have argued that what underscores state controlled media is total control over the management system and strict censorship so that government can legitimize and preserve their power.

It is not just that government sets up and controls its own media; it also tries to control the private media by enacting laws of libel, sedition in addition to decrees made by military regimes as in the Nigerian case.

2.7.3 External Factors

Media contents are affected also by pressures from external influences. The reason for this cannot be divorced from financial survival of the media. Gans, (1979) identifies the major external pressures to include the business class, advertisers, and interest groups. Due to lean financial resources, especially in economically depressed nations, the role and content of the mass media are subjected to the influence of economic rationalization. Communication scholars like Robinson (1980) have identified how the media succumb to the whims of advertisers. These

include allocating more space to adverts than editorial or other important matters, stifling of news, articles and features that are critical of advertisers, and in some cases going against the policies of the news outlet to publish materials just to please advertisers. The mass media are also influenced by clashing political parties, interest groups, and religious sects who aim to sell or impose their ideologies, manifestos and values to the public. Herman and Chomsky (1998) refer to this in their propaganda model of media roles.

2.7.4 Institutional Routine

The production of media contents goes through a number of procedures. These procedures or formalities or rituals are called news routine in news parlance. The chain of news routines invariably affects what is selected as news and what is left out (Gans, 1979). Musa (1989) in a study of the various stages of news routine of the News Agency of Nigeria (NAN) paints a picture of how routines can help determine media contents. Musa noted that the production of news in the Agency revolved around – editorial board meetings to discuss news angles; making a diary of inventions for news coverage; selection of the invitations to be covered and those to be ignored; and instructions to reporters on the specific areas to be covered. Whatever that is covered by the reporter is further subjected to moderate or streamline and cut out unwanted angles so as to fit into space, avoid legal suits, and in some cases to please owners and advertisers (Akpan, 1987). In all these routines, the overriding influences are the policies of the medium as dictated by the interest of the owners or advertisers.

From the fore going discussions, it is discernible that no matter what socio-cultural system the media operate in (whether they operate in free or oppressive systems), no media can be said to be totally free to function or operate as it pleases. Curry, (1982, in Shaari, 2009) analyzed the system of press control around the world and finds that the structure and content of mass media everywhere is limited by forces such as: (a) the monopoly of bureaucrats over information, (b) the needs of politicians and officials to ensure their own legitimacy with and penetration of their societies, (c) the necessary bureaucratic pressures and interests involved in journalistic work, and (d) the natural coloring of events by observer's preoccupations (p.40).

2.7.5 News Sources

The relevance of news sources in the news production process has been pointed out by researchers like Ginnekan (1998), Berkowitz, (1997), Hall (1978), Gans (1979) and Grandy (1982). In the production of news journalists always depend or rely on members of the public for cues, data and opinions which make up the news of the day (Ginnekan, 1998; Obiechina, 1987; Mencher, 1984). In most cases interviews, press releases, and coverage of events and occurrences are the main sources of information gathering for journalists. Even in cases where the journalists have to inject their own opinions or ideas, such as articles and essays, they often cite sources to either support their views or make them legitimate, authentic, and authoritative. Journalists do not just accept any sources, they have a way of establishing sources – those who become news sources because of their positions, expertise, or rare qualities. Aborishade (1977), Musa (1989), Oso (1986) and Obiechina (1987) have all identified major news sources as government executives, leading politicians,

opposition leaders, business tycoons, academics, religious leaders, and celebrities. They are cited as both sources and subjects of most news items. The selection of news sources shapes news contents as what is presented directly or indirectly reflect opinion and views of the sources. Despite the fact the news production processes play vital roles in shaping news contents – including environmental contents, it may amount to waste of time and resources if the public for whom the contents are written for do not care or have the right attitude to the issues that are written about. There is therefore a need to review literature relating to innovation and adoption of green culture.

2.8 National System of Innovation and Adoption of Green Culture

National System of Innovation builds on diffusion of innovations. This study focuses on diffusion of innovation in relation to adoption and adaptation to green culture. Thus, it simply refers to the opportunities for learning how to make optimum use of new knowledge and to design new interventions to curb environmental decay. The provision of these opportunities lies in the hands of both the public and private sectors but cannot be put in place without media intervention. The media has been credited to influence values, attitudes, thoughts and public actions (Panos, 2007). This part of the review aims to look at the integration of the public and the private sectors and the media in creating innovations that sustain environment by mobilizing and persuading the public to live in harmony with the environment. This will be done by reviewing the concepts of National System of Innovation and Diffusion of Innovation which are linked to modifying and diffusing behavior (Freeman, 1995).

Ndubisi and Nair (2009) believe that green entrepreneurial leadership plays a vital role in creating a green culture in the organization and society. In line with this, Surdarmi (2001) believes that finding out what the public know about the environment, their feelings about it and how they react to it is important in creating a sustainable society. This will give rise to a viable environmental movement whose intent is to solve environmental problems so as to conserve the environment. Adopting green culture has helped consumers (publics) in the United States and Western Europe to behave responsibly toward the environment in relation to their lifestyles and habits. This is in stark contrast to what obtains in the Middle East (and other developing countries, where little or no attention is focused on consumers green behavior (Rice, 2006; Tantawi et al., 2009).

National System of Innovation emphasizes interrelationships among innovative actors (Chung, 2002) when applied to the environment it means that the government, the private sector and the media ought to work together and complement each other to create a sustainable environment. Organizations may involve in environmental campaigns or researches that benefit the environment. Government could initiate laws and coordinate the activities of organizations, while the media plays the watchdog role (Chung, 2002). Being a watchdog in this case underscores investigative environmental journalism. Thus, environmental reporters in being part of innovation and diffusion of knowledge and information pertaining to environment must what parties are involved in a particular event, what government agencies should be monitoring it, what actions are being taken and what orders should be

taken. It means getting the citizens informed so as to engage in appropriate behavior toward the environment (Emenyeonu & Ndulaka, 1996).

National System of Innovation (NSI) is culture specific. Essebith (2007) posits that NSI are shaped by distinctive socio-cultural attributes of respective national entities. However, what determines the success of NSI is the integration of supportive organizations and institutions so as to create a synergy in the innovation process (Essebith, 2007).

To understand the diffusion and innovation process, this study brings into focus the concept of diffusion of innovation as posited by Rogers (2003) who explained diffusion of innovations as a theory that analyzes and helps to explain the process of social change through the adaptation of a new innovation. Rogers (2003) consequently defines innovation as “an idea, practice, or project that is perceived as new by an individual or other unit of adoption” (p.12). Rogers (2003) identifies four main elements of diffusion of innovations to include innovation, communication channels, time, and social system. He sees diffusion as “the process in which an innovation is communicated through certain channels over time among the members of a social system” (p.5). Time dimension would involve the innovation and diffusion process, putting the adopter into category and the intensity of adoptions (Sahin, 2006). The social system according to Rogers (2003, p.23), is “a set of interrelated units engaged in joint problem solving to accomplish a common goal”.

Diffusion of innovation can only take place through what Rogers (2003) calls an information-seeking and information-processing activity. This encourages the

individual to reduce doubt about the advantages and disadvantages of an innovation. Rogers (2003) further writes that innovation-decision process involves five steps; they are: persuasion, knowledge, decision, implementation and confirmation (Rosenberry & Vicker, 2009).

The success or failure of diffusion of innovations and adoption of green culture in Nigeria and elsewhere will therefore, depend to a large extent, on the adoption and implementation of the five stages in the innovation-decision process mentioned above.

In line with the fact that innovation processes toward sustainable development (Rennings, 1998), and environmental sustainability have received increasing attention all over the world in recent years (Jackson et al., 2011), the Nigerian Government recognized the need for diffusion of innovations for the adoption of science and technology culture in general and green culture in particular in Nigeria by setting up the Science, Technology and Innovation (STI) Policy to among other things, transform Nigeria's peoples, organizations, and institutions as science and technology thinking entities.

The STI Policy of the Federal Republic of Nigeria has the following objectives for the Environmental Science and Technology sector.

- Promote the integration of environmental concerns in all development policies and ensuring public understanding of the scientific basis of their actions on the environment.

- Develop an appropriate and effective waste management system to reduce pollution emission from waste generation.
- Encourage the use of clean technologies in production system.
- Develop capacity to monitor, predict and mitigate the adverse effects of natural phenomena such as floods, draught and desertification.
- Encourage science and technology intervention that promotes sustainable development.
- Encourage integration of environmental factors with standard national accounts/assets to improve environmental monitoring systems.
- Promoting the development of a national data base to support economic development (Federal Republic of Nigeria STI Policy, September 2011).

One short coming of this policy on diffusion of innovation and adoption of green culture is that it failed to define how it will diffuse innovation to the Nigerian populace. Thus, the role of the press in doing this was underplayed. Given that diffusion is about communicating innovation through media over time among the members of a social system (Rogers, 1983), it may create a research need to know whether or not government is making adequate use of the media in the diffusion of innovation and adoption of green culture in Nigeria.

Further to the discussion above, the Nigerian government also came up with a ‘Framework for the Nigerian National System of Innovation’. This framework argues that a resilient and effective innovation system that caters for all diversities requires the right conditions for entrepreneurship where people have sufficient

support, resources, skills and good timing to accept generate and apply new ideas that have value (National System of Innovation: Executive Summary, n.d).

For citizens, organizations, and governments to change and have the right attitude toward the environment, the public need to be adequately informed and also have access to environmental information; and the government and organizations need to be monitored by the media in relation to their activities bordering on environment. Babalola et al., (2010) contend that the public has the right of access to environmental information held by public authority and that making such information publicly available is essential to achieving sustainable development. The study further believes that access to environmental information will help people to know the implications of their activities on the environment, and also enable them to participate effectively in decision making process that effect the environment. On the effort of the government to create environmental awareness, the study says that the Nigerian government has, through relevant agencies made efforts to educate the Nigerian people on environmental issues using the media. One prominent effort made by government is the collaboration between the Federal Ministries of Environment and Education to set up Environmental Conservation Clubs in schools and the development of environmental educational master plan and curricula to boost knowledge of environment. The paper concludes that despite the efforts exerted at providing environmental information, there are still substantial constraints to the effective management of environment. These stem from uncoordinated policies and legal framework, weak data base, inadequate enforcement, institutional conflicts,

inadequate and irregular funding, and lack of public awareness on environmental issues.

In line with government's determination to create a green culture in Nigeria, Balogun (2013) writes in allAfrica.com that the wife of the Ogun State Governor, Mrs. Olufunsho Amosun launched the 'Going Green Initiative' in a bid to protect the environment and instill the culture of environmental preservation in the residents of Ogun State. The program was planned to incorporate environmental education in schools to encourage the youths to cultivate green culture. This study will find out if the press advocates and supports such programs.

Still writing on the need to make green culture part of school curricula, Ozor and Madukwe (2012) believe that diffusion of innovation and adoption of green culture for a sustainable environment in Nigeria can be influenced by developing curriculum that focus on knowledge of climate change issues in institutions of higher learning. They are of the opinion that the current institutional structures and academic programs in most universities in Nigeria do not include effective education and capacity building on issues of climate change (and perhaps other environmental issues). Results of their study which included the participation of over 320 participants in a multi-stakeholder dialogue, show that there is need to provide a clearer understanding of climate change issues; build capacity at individual and institutional levels for climate change adaptation; transform the youths by promoting the culture of innovation for climate change adaptation. This researcher believes that this gesture should be extended to other prevailing environmental issues in Nigeria as well.

In a workshop on Green Technology in Africa co-hosted by African Technology Policy Studies and United Nations University (UNU), participants harped on, among other things, the need for governments in Africa to ‘orient’ themselves to green innovators and incubate green innovation startups. Governments were also called to create special points for interaction with green innovators to learn about their problems and ideas for policy change. Most importantly, participants argued that education should be well integrated into national innovation systems. This is only workable if it involves a framework that links the private sector to the education system (UNU, 2013).

In as much as the Nigerian government has been making efforts to inculcate green culture habits in its citizens, it seems from the above reviews that there aren’t much time and persuasion devoted to the campaign. There is need for allocation of ample time, and use of meaningful persuasion strategies to win Nigerians over in the green culture campaign. This can only be meaningfully achieved through the media.

From the review so far, it could be said that the Nigerian publics’ attitude to the environment has not been encouraging. The reason for this has been traced to poverty, lack of awareness, and bad policy initiatives and implementations (Adelegan, 2004). Adelegan (2004) further asserts regarding lack of inadequate environmental legislation that it required the dumping of toxic and hazardous wastes in Nigeria before the Federal Government and the Nigerian Press woke up to confront environmental abuse as they made efforts to get the citizenry informed and active in protecting the environment. Echefu and Akpofure (2003) assert that public participation on environmental issues is not statutorily protected, yet current realities

have encouraged public involvement which has resulted in communities becoming aware of the need to protect the environment. Therefore, with the right diffusion of innovation on the environment the publics' attitude and response to the environmental issues will change – they will become aware on the necessity for conservation, aforestation, clean surrounding, and proper wastes disposal (Echefu & Akpofure, 2003).

The fact that the level of publics' awareness about environmental issues is low may be a pointer that the press is not covering the environment adequately and not mounting pressures on policy makers to initiate good policies that enforce environmental protection. Unless the public is properly informed and educated on environmental issues, their level of participation in being environmentally good citizens will be low. The press has a role to play in this direction. As Goodfield (1981) believes, "the public are those whose science teachers are the media" (p.8).

Public's low attitude to environmental issues has been linked to government's inability to put in place effective legislation to check environmental crisis. Nasidi et al., (2009) write that incoherent legislations and lack of continuity in policies by government/ leaders have created a huge vacuum in subsequent administrations and as such, vast majority of the Nigerian populace are left in obscurity as to the measures being put in place to ameliorate frequent environmental crisis.

Ebonugwo and Adegbeye, (2009), argue that while the West are beginning to heed the warnings at rising to the challenges that climate change engenders, there is unfortunately little or no evidence of such efforts in Africa in spite of the fact that

many countries in the continent suffer the worst brunt of a climate pattern that is spinning out of control at the moment. While the government has been blamed for poor environmental legislation and implementation, the government is not happy with the public's attitude to the environment. Suleiman (2009), writing in the Daily Trust quotes the then Minister of Environment Mr. John Odey as saying:

Poor environmental sanitation in our country is characterized by the presence of heaps of refuse in cities, indiscriminate disposal of solid and other waste, blocked drains, overgrown weeds and poor food sanitation... Despite efforts by government to improve public health and quality of life, basic health challenges have remained high due to poor sanitation attitude among our people.

Agu (2008), reports that one of the factors that have contributed to environmental degradation in Nigeria is the nonchalant attitude of Nigerians towards maintaining a clean environment. He also points out that lack of political will, non-stringent measures and poor funding have also contributed significantly to the present poor sanitary situation (allAfrica.com, 2008).

While the public sector seems to be making little efforts in creating and adopting green culture, the private sector is found wanting on the balance. It has been found that corporate advance to sustainability of the environment is yet to reach majority of global companies (Environmental Resource Management, n.d). This paper reveals

that the three major reasons why organizations have not shifted toward sustainable environmental practices included

- a) Not understanding what sustainability is.
- b) Having difficulty modeling an economically viable case that will bring about change.
- c) Having a flawed execution plan, or a lack thereof.

The paper further suggests that the most important part of shifting an organization to adopt sustainability in environmental resource management would be to create a shared vision and understanding of what sustainability is for that particular organization and society.

Ndubisi and Sumesh (2009) are of the view that natural environmental issues are increasingly becoming integral part of business. Thus, there has to be holistic green business solutions that add value to organizations and their stakeholders should be made part of the basic system of business, so much so that addressing the natural environmental problems has become a matter of survival and prosperity of every business (Baker & Sinkula, 2005). For organizations to come up with green initiatives, the study suggests that policies should be designed by governments to encourage new business startups with environmental initiatives as such initiatives will foster economic growth through innovation, and job creation while protecting the environment. The paper also calls on government to punish environmentally unfriendly firms so as to encourage them to comply with environmental quality standards and create green initiatives.

Writing on the broad constraints of adopting innovations toward green culture in both the public and private sectors, Wilga (2000) opines that the constraints stem from lack of knowledge, inadequate training, and lack of extension. Other constraints stem from culture, local environment, educational level, and the concerned individuals (Rogers, 1983).

Akon-Yamga et al., (2011) sought to identify and document indigenous innovations and good practices by climate change vulnerable communities for improved food security in Ghana and the Gambia; provide information on agricultural practices and activities of farmers towards food security and climate change adaptation in the two countries, promote adaptation to changes through training and field demonstrations. This study concludes that despite the fact that farmers in the countries perceived that the climate is changing, most of them did not adapt to any change to address the climate change issue, they rather believed that the climate change will not prevail for long; hence they hoped that the situation will turn around for the better. This study however fell short of coming up with solutions to help the farmers adapt to innovative changes. This is where the media comes in to mobilize, inform, educate and persuade the farmers to adapt to change – new information on agricultural practices that will boost food security.

From the above reviews, it is understood that implementing National Systems of Innovation and diffusion of innovation in regard to adopting a favorable attitude toward the environment is necessary, but this cannot be done without the integration of the government, the private sector and the media. The press plays a gigantic role

in educating, informing, mobilizing and persuading both the private and public sectors to be environmentally responsible.

2.9 Environmental Legislation

Efforts to protect the environment will amount to nothing if there are no laws, or policies enacted to regulate the environment. Such laws and policies will also amount to nothing if they were not implemented. Implementation of such laws will only be successful when they are made accessible to the public through the media. This section of the review briefly explores global environmental legislation and also focuses on environmental enactments in Nigeria and the critiques they have drawn. This review is also necessary as it addresses one of the research objectives aimed at determining the level of involvement by the national, state, and local governments in initiating laws and policies that support environmental sustainability.

Environmental legal issues have been internationalized given the continued global growth of public interest and concern about environmental issues. This claim is supported with the huge number of international environmental agreements and the rise of national environmental legal systems throughout the world (Yang & Percival, 2009).

The need for global environmental law becomes necessary given that environmental problems are not place specific, but rather they transcend borders. Cases of climate change and airborne diseases validate this assertion, hence there is need to develop effective environmental laws and legal systems throughout the world so as to direct “economic development and growth onto a path of environmental sustainability”

(Yang & Percival, 2009). The development of global environmental regulation is further necessitated by the growth of, and increased collaborations between governments, non-governmental organizations, multinational corporations, and also the creation and growth of transnational environmental groups. The integration, harmonization and synergy that arise from this arrangement is called global environmental law which Yang and Percival (2009, p.619) define as:

...a set of legal principles developed by national, international, and transnational environmental regulatory systems to protect the environment and manage natural resources. ...It includes: (1) public international environmental law, commonly used to refer to the set of treaties and customary international legal principles governing the relations between nations; (2) national environmental law, which describes the principles used by national governments to regulate the behavior of private individuals, organizations, and subnational government entities within borders; and (3) transnational law, which describes the set of legal principles used to regulate the cross-border relationships between private individuals and organizations.

From the international angle for example, the United Nations Climate Change Conferences have been held every year from 1995 to date under the auspices of the

United Nations Framework Convention on Climate Change (UNFCCC). These conferences establish laws that legally bind both developed and developing countries to reduce greenhouse emissions (What is UNFCCC, 2009).

At the national level both the developed and developing countries have continued to put in place laws and formal structures to fight environmental malfunction. For example, adoption of producer responsibility regulations championed by Germany has helped in waste management as the regulation mandated manufacturers to recycle their packaging materials (Yang & Percival, 2009). The European Union enacted a regulation that intended to control and restrict some hazardous substances (ROHS program). Similarly, China, a huge consumer and producer of chemicals in the world has adopted regulations that ensure the testing of toxicity levels of new substances before they are sent to consumer markets (Provisions on Environment Management, 2003). Given the magnitude of the danger posed by climate change, the Dutch, German and Danish governments – otherwise called “the green states” enacted regulations that called for curbing of greenhouse emissions (Porter & Brown, 1999). The list of national environmental regulations is endless, the few mentioned above suffices.

Despite the effort exerted at regulating the environment, it has not been a success story all the way especially in developing countries where there are so many impediments to implementing the regulations. ARD Report (2002) argues that while there may be some reasonable success in the developed world, the developing countries are lagging behind as only few of the laws and structures established have been successful in solving environmental problems. The Report states that the gap in

environmental legislation and regulations and the very limited human resources available are impediments to effective handling of the environment (ARD Report, 2002). While protecting the environment may be costly and herculean, the World Bank goes on to warn that neglecting the environment can impose high economic and even financial costs, while many environmental benefits can in fact be achieved at low cost. Thus, as it were, the bane of sustainable environment is the lack of good policies and their implementation.

From the Nigerian perspective, Nigeria is part of the global initiative to combat environmental degradation. This informs the reason why the country has contributed immensely to international, regional and national or local laws to fight environmental decay. Nigeria participated and was signatory to the following international agreements/conventions: The 1972 UN conference on Human environment in Stockholm which gave rise to the Stockholm declaration; the 1992 UN Earth summit in Rio Brazil which gave rise to agenda 21, Rio declaration, convention on biodiversity, convention on climate change, and a statement on forest principles (Eneh, 2011). Regionally, Nigeria participated in African charter on human and peoples' rights (Ifeanyi, 2002).

Environmental legislation in Nigeria took a dramatic turn after the illegal dumping of toxic wastes in Nigeria in 1987 by Chain of Saint Antuan – an Italian company specialized in selling industrial toxic and radioactive wastes (National Mirror, 2012).

The Nigerian Government in reaction to the illegal dumping promulgated the harmful Wastes Decree which provided the legal framework for control and disposal of toxic and hazardous waste into any environment within the confines of Nigeria.

Thus, the basis of environmental policy in Nigeria could be traced back to Section 20 of the 1999 Constitution of Nigeria which contains provisions for the protection and improvement of the environment and safeguarding of water, air and land, forest and wildlife of Nigeria (Federal Government of Nigeria Gazette, 2007, p. A637).

The following is the summary of laws and regulations promulgated by the Nigerian government to protect the Nigerian environment:

- The Federal Environmental Protection Agency Act of 1988 (FEPA Act), with the following regulations put in place in pursuant of FEPA Act: (i) National Environmental Protection (Effluent Limitations) Regulation, (ii) National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations, and (iii) National Environmental Protection ((Management of Solid and Hazardous wastes) regulation.
- Environmental Impact Assessment Act of 1992 (EIA Act). This legislation governs environmental impact assessment in regard to proposed projects in Nigeria, and is informed by the Principle 17 of Rio Declaration (Eneh, 2011).
- Harmful Wastes (Special Criminal Provisions) Act of 1988
- The Environmental Guidelines and Standards for the Petroleum Industry in Nigeria, 2002, published by the Department of Petroleum Resources.
- The National Environmental standards and regulations Enforcement Agency (Act 25) of 2007. This Agency was established to replace FEPA and is charged with the following responsibilities.

“The Agency, shall, subject to the provisions of this Act, have responsibility for the protection of and development of environment, biodiversity conservation and sustainable development of Nigeria’s natural resources in general and environmental technology, including coordination and liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines” (Federal Government of Nigeria Gazette, 2007, p.A637).

The various States and local Governments in Nigeria are empowered to make laws and bi-laws to protect the environment within their jurisdiction. The Federal Government of Nigeria has also put in place a number of initiatives since the earth Summit Conference in Rio de Janeiro, Brazil in 1992. Some of these initiatives include:

- National Environmental Master and Action Plan.
- National Environmental Policy.
- National Agenda 21.
- National Forestry Action Plan.
- National and State-specific Environmental Awareness Master Plan.
- National Action Plan to Combat Desertification.
- First National Communication on Climate Change Summit.
- National Biodiversity and Action Plan.

The National Environmental Policy was created with the sole intent of identifying key sectors that needed to be integrated into environmental concerns and recommending strategies for such integration.

The Federal Ministry of Environment is responsible for enforcing environmental laws and regulations in Nigeria. However, each State and Local Government in the country is expected to set up their own apparatus to protect their respective environments. The responsibility of regulatory agencies within the government is to prevent environmental damages, regulation of potentially harmful activities and punishment of willful harmful damage whenever this occurs.

Despite the efforts made by the successive regimes in Nigeria, publications on environmental legislation in Nigeria have decried the inadequacy of legislation to curb environmental excesses (Eneh, 2011; Echefu & Akpofure, 2003; Adelegan, 2004; UN Country Report, 2002).

Lack of laws, polices, and rules to combat environmental issues dates back to the colonial era. In a study on environmental legislation in Nigeria, Adelegan, (2004) writes that the colonial economic policies and plans had little or no stringent rules to conserve the natural resources or to limit pollution. The formative years of institutional environmental regulation in Nigeria, Adelegan (2004) concludes, could be said to be characterized by the absence of clear scientific criteria and standards on toxic wastes and pollution levels. Echefu and Akpofure, (2003) tend to agree with the above assertion as they write:

.... With financial resources available from oil and no development policy, unguided urbanization and industrialization took place. Uncontrolled population growth, desertification, and deforestation led to degradation and devastation of the environment (p.64).

Thus, in as much as development is desirable, it becomes harmful if there are no appropriate policies to guide and control it.

The Center for Energy Economics in a case study of environmental dilemma in the Niger Delta opines that the absence of an effective framework for resolving environmental issues in the region results in a persistent cycle of negligence.

In yet another report, the UN (UN Country Report, 2002) finds that the inability of the Nigerian government to implement Agenda 21 stems from, among others, an uncoordinated policy and legal instruments in environmental and natural resources conservation in Nigeria.

Eneh (2011) contends that lack of proper legal framework is the bane of environmental degradation in Nigeria. Eneh (2011) writes that “after two decades of EIA Act in Nigeria, the country’s environment is still characterized by unplanned growth, ecological problems and skyrocketing problems of domestic and industrial waste disposal and pollution” (p.250).

In as much as environmental regulation in Nigeria is weak, poor and in some cases nonexistent, the question that the researcher seeks to answer in this study is how

much information do the environmental journalists have regarding environmental regulation, what is their relationship with relevant bodies or organizations that dish out these policies and regulations? Proper knowledge and sourcing of environmental issues/news cannot be divorced from establishing a solid rapport with relevant environmental legislative bodies.

2.10 Summary of Literature Review and Gaps

From the review of the above materials it is understood that:

1. Scholarly or academic studies on media coverage of environmental issues focused mainly on media and source relations; case studies on disaster stories (i.e. Chernobyl, Exxon Valdez and Braer) and other studies focused on the frequency of environmental contents and not the processes or influences of content production (Dunwoody & Griffin, 1993; Campbell, 1999; Dunwoody & Ryan, 1987; Friedman et al., 1986). In the Nigerian context, most of the studies focused on climate change issues. Little or no attempt has been made to look at the coverage of other environmental issues like environmental degradation (Agu, 2008), proper waste disposal (Echefu & Akpofure, 2003), urban decay (Dramola & Ibem, 2010) and pollution (Mba et al., 2004). This study will fill this gap by looking holistically at the quantum and value attached to coverage of other aspects of the environment other than climate change.
2. Even the studies on climate change issues focused only on the frequency of coverage (Fahey, 2013; Gavin, 2009; Fahn, 2008; Fischer, 2013; Ukonu et

al., 2010) little or no attempt has been made yet to determine the forces behind such coverage. This study will address this shortcoming by interviewing journalists in order to find out what informs or shapes or influences their opinion in the coverage of environmental issues.

3. The review also indicates that there is an apparent lack of proper legislation and its implementation to address environmental issues (Yang & Percival, 2009; UN Country Report, 2002; ARD Report, 2002; Adelegan, 2004; Olekesusi, 1987; Nasidi et al., 2009; Nwufo, 2010). This study will aim to find out how much environmental journalists know about environmental legislative bodies and how this has affected the coverage of environmental issues in Nigeria and how the trend can be reversed.
4. Further literature review reveals that the media is subject to certain factors which usually condition or shape the press in the performance of its functions (Shaari, 2009; Nasser, 1983; Nwbueze, 1994; Murdock, 1990). This study intends to find out the factors that affect the Nigerian journalists in covering environmental issues. This becomes pertinent as no study so far has looked at the social factors that shaped environmental coverage in Nigeria.
5. It was also observed that the environment was not treated as an ecosystem hence environmental issues were reported in isolation (Keating, 1993; Gunster, 2009; Lindenfeld et al., 2012; Hansen, 2011; Boykoff, 2009; Einsiedel & Coughlan, 1993). This study will advance on this observation by looking into the reasons why the status quo obtains.

Overall this study will provide an empirically comprehensive report that will add to, and improve existing literature on the topic, and encourage all environment stakeholders to be responsive in the fight to preserve the environment.

2.11 Underpinning Theory

Given that this study aims to look at media coverage of environmental issues and the forces that shape or determine such coverage, this study will be based on theories related to news construction and production. Generally speaking, Sociology of news production theory is the major theory on which this research rests. This theory is selected because it harps on influences of news selection and production. Other theories like agenda setting, gate keeping and framing are all viewed as part and parcel of the sociology of news production theory and were reviewed.

2.11.1 Sociology of News Production Theory

The concept of news production theory explains that different media houses have different influences with regard to news selection and presentation. This concept focuses on how news organizations produce their messages or news through social institutions and systems (mass media, political organizations, government, and advocacy groups). It is strongly influenced by scientific methods from the field of sociology, but also by the methods of political science, history, and public affairs (McQuail, 1992). In this study therefore, sociology of news production, which has been variously discussed by media scholars, like (Reese & Shoemaker 1996, 2014, 2016; Rees, 2007; Shuldsen, 1989; McQuail, 1992; Sahlins, 1985), is used to explore different factors that influence media, especially as it relates to news contents. The

researcher used the hierarchy of influences model promoted by Reese and Shoemaker (2016) as the variables to be examined in the sociology of news production in relation to environmental contents in the Nigerian press. The hierarchy of influences model include a five level analysis of factors that shape media content. The levels of analysis used as variables in this study include: individual characteristics, work routines, organizational concerns, institutional issues, and the larger social systems. Thus this study will examine how the hierarchy of influences model affected the Nigerian press in setting adequate or inadequate agenda on environmental issues.

The model below explains sociology of news production theory and the hierarchy of influences and its impact on agenda setting.



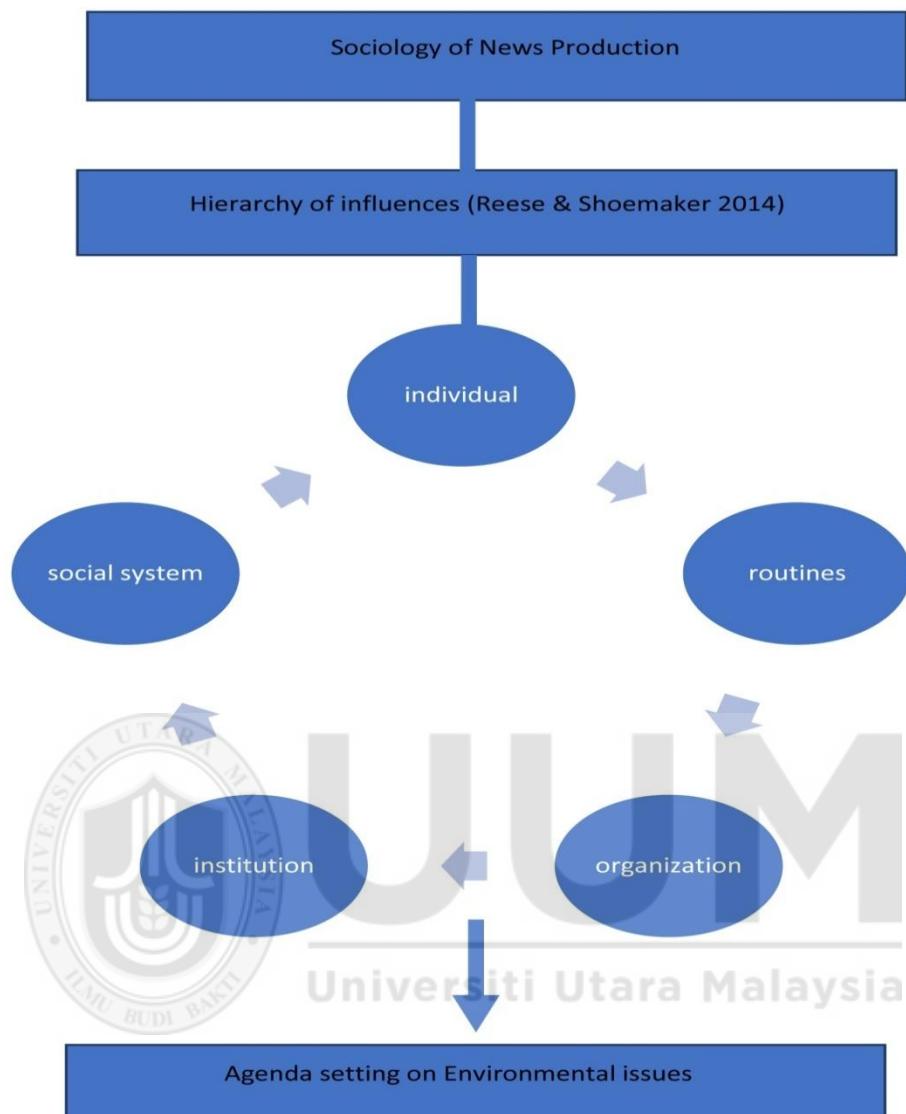


Figure 2.1: Sociology of News Production Theory

In the model above, the first level of influence is the individual/professional journalist while the last level of influence is the larger social system. This study will gauge how these levels of influences affected the press in regard to agenda setting on environmental issues.

Sociology of news production had its beginning in the 1950's when, according to Reese (2007), and Reese and Ballinger (2001), White (1950) and Breed (1955) explored the influences of news and social control in the newsroom, and how news stories are selected based on the editor's subjectivity. This gave rise to what is popularly known as gate-keeping in the news parlance. While White (1950) asserts that news is 'what the gatekeeper says it is', Breed (1955) believes that organizational policy was instrumental in not allowing certain events from being published, especially when they do not conform to the publisher's partisan leanings. In line with early proponents of news production theory, researchers like Reese, (2007), McQuail (1992), and Shuldsion (1989) have written extensively on the news production theory. McQuail (1992) for example is of the view that news is a socially manufactured product as it is the end product of a selective process. He goes on to reason that news gatekeepers like editors, journalists and newspaper owners decide about what events are important and how they should be covered. Schudson (1989), in his own part posits that the study of news production strives to determine and make plausible the order behind news selection and production. Thus while content analysis measures the frequency of environmental issues coverage, sociology of news production theory will be used in the qualitative part of the study to find out the rationale behind selection and production of environmental contents. Further the adoption of sociology of news production theory will be useful in gauging whether or not the press has set enough agenda on environmental issues. Therefore, it may become pertinent to relate news gate keeping, agenda setting, and framing as part of news production theory.

While it may not be plausible to select only gate-keeping, or agenda setting or framing as the framework to study how news is generated, this researcher has clubbed them together as part of sociology of news production theory. In other words, gate-keeping theory alone may not explicitly be used while discussing news generation. Schudson (1989) seems to agree with this argument when he observed that the gate keeper model of news production is ultimately as confused as it suggests, and therefore suggested what he called ‘three perspectives’ in studying news production. The perspectives include the political economy, main stream sociology, and ‘culturological’ approach. This approach is entrenched in the hierarchy of influences model adopted in this study.

Sahlins (1985) argues that the fact that news is ‘constructed’ or ‘manufactured’ implies that it is “socially constructed, where an event is not just happening but is a relation between a certain happening and a given symbolic system” (p.153). Use of sociology of news production theory is necessary in the present study as it will help gauge how news contents, in this case, environmental issues, are decisively influenced by the social system in which the journalists work which invariably shape their thinking. Journalists do not just consider and select whatever they deem important. They are rather guided by what their organizations prioritize. This in turn is influenced by ownership or society. Therefore, there are people, institutions, and cultures that determine what the media should cover and how they should cover it. These are called, in the media parlance, agenda setters (Berkowitz, 1997; Willis, 1991; Halloran, 1988). It is not just that the media set the agenda for public discuss,

it is rather interesting to look at those who are right behind the scene setting media agendas (Fishman, 1980; Gans, 1990).

The agenda setting theory is based on the fact that the “mass media have the ability to transfer the salience of items on their news agendas to the public agenda” (Griffin, 2006, p.395). People therefore depend and look up to news professionals for cues on what and where to focus their attention on. Before the agenda setting theory came on board, there was a prevailing selective exposure hypothesis which argued that audiences would relate only to news and views that agreed to their norms and beliefs. The media were thus seen as not being able to influence the public (Griffin, 2006). However, the introduction of agenda setting theory by McCombs and Shaw (1972) reaffirmed the power of the press as the public began to judge as important what the media judge as important. Nnoli, (2006) suggests that because the media consistently present the picture of the social world, audiences don’t have any options but to adopt the media version of social reality of fact and norm. Contributing to the discourse on agenda setting Rosenberry and Vicker, (2009) write that there are three major factors that define agenda setting which include “priming, obtrusiveness, and framing” (p.151). Priming has to do with paying huge attention on a news story by considering it prominent and therefore giving it more coverage. Rosenberry and Vicker (2009) further contend that “Agenda setting is more powerful in bringing issues that are unobtrusive to the public’s agenda” (p.152). To illustrate this they argued that “the price of gas will be important to people whether or not the news media cover it, but the topic of global warming attracted noticeably more interest after the release of Al Gore’s movie, *An Inconvenient Truth...*” (p.152). That the

media set agenda or not on any issue depends on the effects of the factors of news production. This study will therefore examine the hierarchy of influences model to ascertain its impact on agenda setting on environmental issues especially in the Nigerian press.

On Framing, Rosenberry and Vicker, (2009) defines framing as “the central organizing idea for news content that supplies a context and suggests what the issue is through the use of selection, emphasis, exclusion, and elaboration” (p.152). Agenda setting theory points out that media help decide the saliency of information based on what they decide to highlight; gate keeping becomes the process by which the media decide on what to hype and what to sweep under the carpet (McCombs, 2004). Griffin (2006) believes that story placement and length of story are the two main factors that define prominence. Griffin (2006) writes that in the case of print media (newspapers), “the front-page headline story, a three-column story on the inside page, and the lead editorial were all counted as evidence of significant focus on an issue” (p.396). Scheufele and Tewksbury (2007) believe that placement and availability of information in communication texts are part of the agenda-setting plan. Bringing the point home, Teklesilassie (2015) writes that the media shapes the publics’ considerations and judgments on issues by giving large space and front-page coverage to such issues they consider important. Agenda setting theory becomes relevant to this study as it will probe into the prominence attached to environmental issues by finding out the amount of emphasis and elaboration on, and where environmental stories are placed in the selected newspapers. Further agenda setting highlights the fact that the news the public gets is not just a reflection of what

happens in society, rather it is an outcome of a complex process. Hasan (2007, p.17) believes that public knowledge about the environment and their responses to environmental issues are determined by the agenda setting of the media. However, the position of Hallinan (1995) that media public agenda may not be necessarily what the public needs but rather what the media is aware of holds true for environmental issues coverage, especially in Nigeria where major and pressing environmental issues are neglected in preference to the trending climate change issue. Also the contention of Atwater et al., (1985) that the coverage of some scientific issues is so minimal to the point that it cannot achieve agenda setting holds true of environmental coverage especially in Nigeria. Given the minimal coverage of environmental issues (Atwater et al., 1985; Liebler & Bendix, 1996; Nitz & West, 2004; Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015) the assertion that agenda-setting effects do not lie in the information about the issues reported, but rather in the heightened amount of processing time and attention the issues receive cannot be less true (Price & Tewksbury, 1997; Scheufele & Tewksbury, 2007). If it is true that the media, through agenda setting, assigns importance or value to public issues, (Teklesilassie, 2015) it could be argued that the public learn not only about the environment, but how much importance to attach to it based on value the media attaches to it.

The gate-keeping theory - propounded by a renowned social scientist, Kurt Lewin in 1947 is also considered part of sociology of news production. It explains the process through which news items, facts and messages, opinions and comments go through

before they become media contents. Its intent is to explain why some news items are chosen as good media contents while some others are rejected. Lewin (1949) argues that news moves through certain communication channels in a group. That environmental issues are prioritized or not is directly linked to news gate keeping.

Beeman and Peterson (2001) are of the view that news production involves the interaction of routine procedures, cultural categories, and social positions in the interpretation and presentation of news. The focus here is the role interplay between sources, reporters and editors (Peterson, 2003). This seems to argument the earlier assertion by White (1980) that the reporters and editors, by virtue of their positions as gate-keepers, disseminate whatever information they deem fit for their reading publics. Gate-keeping function invariably determines mass media contents. McQuail (1992) also harps on reporters/editors' gate keeping role in news production when he argues that news is a socially manufactured product as it is the end product of a selective process. He goes on to reason that news gatekeepers (reporters/editors, newspaper owners) decide about what events or issues are important and how they should be covered. This means that gate keeping is the first step by which the media set agenda for public discussion. Gate-keeping theory becomes relevant in this study as it emphasizes the power reporters and editors wield in choosing environmental news contents. This explains why the researcher resorted to in-depth interview to get firsthand information from environmental reporters regarding what influences them in the choice they make when it comes to environmental news contents. The overall intent is to determine what informs news preferences in the Nigerian press. For

example, this study will seek to determine why an environmental news would be preferred to a political news and vice-versa.

Another aspect of sociology of news production that needs to be taken into consideration is the framing theory. McCombs, (2005) and Scheufele, (1999) refer framing theory as the second level of agenda setting, hence Mutiu et al., (2017) believe that framing enhances agenda setting by “focusing on the importance of particular issues” (p.155). Earlier, Scheufele (2000) posits that framing is not just about prioritization of individual objects or attributes but rather an activation of the entire interpretative schema. Scheufele (2000) is of the view that framing “is based on the concept of prospect theory: that is, on the assumption that subtle changes in the wording of the description of a situation might affect how audiences think about issues, not by making aspects of the issue more salient, but by invoking interpretative schemas that influence the interpretation of incoming information” (p.309). Entman (1993) slightly differs in opinion as he believes that framing is about what side of issue journalists decides to make salient so as to give them particular interpretations, evaluations and solutions over others. Gatlin (1980) contends that media frames in the construction of meanings “are persistent patterns of cognition, interpretation, and presentation, of selection, emphasis, and exclusion, by which symbol-handlers routinely organized discourse” (p.7). This theory becomes relevant given that what the media focuses on, especially when they are of immense public importance, in most cases result in action being taken either to support or contradict such projected issues (Biswas & Kim, 2016). The relevance of this theory will be determined in regard to whether or not it helped in drawing relevant actions

from environmental stakeholders on environmental issues. This theory will further help in determining the qualitative aspect of the content analysis of selected newspapers in regard to their framing of environmental issues in Nigeria. It will be applied in looking, for example, at the tones of selected newspapers in general, and specifically from different geopolitical zones to determine if there are differences in tone and thereafter proffer reasons for such differences.

Thus, in this study, while framing theory is used in determining content context (Spark, 2001) in relation to tone or direction of news content, agenda setting is used to highlight the preference or prominence given to, and frequency of environmental issues (Griffin, 2006), while gate keeping becomes the engine that drives prominence as what is not allowed into the news room may not become news (Peterson, 2003; White, 1980).

By being the first to undertake a thorough examination of not only the extent of environmental coverage in the Nigerian press, but more importantly, the internal and external factors impinging on such coverage, this study advances the frontiers of global research based on the theory, with particular insights from the context in the most populous and leading nation of the African continent. Theoretical contributions and theoretical implications of this study are further discussed in sections 1.2 (Research Problem) and 5.3.1 (Theoretical implications).

2.12 Conclusion

From the discussions/ review of materials related to the study, it is obvious that there is no holistic study on environmental issues coverage by the Nigerian press. Some

studies on the environment narrowly focused on climate change to the neglect of other environmental issues like waste disposal, desertification and pollution. Even these studies on climate change were quantitatively (quantum) done without taking into consideration the qualitative (influences of such coverage) aspect. This work cannot but be timely as it will fill the gaps left in the previous studies.

From the theoretical front, it is known fact that theories help in explaining situations or phenomena. Theories are therefore the bedrocks of academic studies. Silverman (2010, p.110) believes that “by provoking ideas about the presently unknown, theories provide the impetus for research”. Thus, the main theoretical framework and the sub theories used in this study were aptly chosen as they helped in shading light on the concept and nature of the problem being investigated (Silverman, 2010). The frameworks used in this study helped the researcher in drawing solid conclusions on the extent of environmental coverage and what influences such coverage and thus make recommendations for a better coverage of environmental issues in Nigeria.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The intent of this chapter is to explain in detail how this study was carried out. It begins with research design which explains and justifies the method adopted to generate data for the study. The chapter also focuses as well on the review of the research methodologies so as to drive home the import of the chosen methods in this study. It goes further to explain the sampling method for content analysis and the selection of respondents for the in-depth interview. The chapter also discusses the selection of newspapers for analysis and the justification for the newspapers selected. It goes on to discuss the justification of the number of respondents for the in-depth interview. Further, it explains the following: sample size and how it was arrived at; issues to be analyzed (categories and units); and the coding instrument for content analysis, and the parameters for analyzing the in-depth interview data.

3.1 Research Design

This research focuses on newspaper coverage of the environment in Nigeria and what influences such coverage. It will therefore use mixed methods to assess the quantum and value of environmental coverage and also probe how journalists' opinions are formed and which factors are important in the formation of views and judgments on environmental coverage. Consequently, the study will rely on two types of data: content analysis of selected newspapers, and in-depth interview of selected journalists. While content analysis will determine the quantum and value of

environmental coverage, in-depth interview will be used to determine influences on journalists' coverage of the environment. Put differently the study will adopt both quantitative assessment based on content analysis of news stories on environmental issues in the selected newspapers, and qualitative audit based on in-depth interview of selected journalists. Similar mixed methods have been used by previous researchers in studies on content analysis like those done by Emenyeonu (2009), Hasan (2007), Shaari (1997), Tran (2014), Media Coverage of Science and Technology in Africa (2011), Hilmi (2009) and found to be useful and successful.

The diagram below shows the flow of mixed research method employed in this study. It begins with collection of data from content analysis of selected newspapers, analyses (results) of data from content analysis led to formulation of in-depth interview questions. Data analyses from both methods were used in the study's discussions and for drawing inferences.

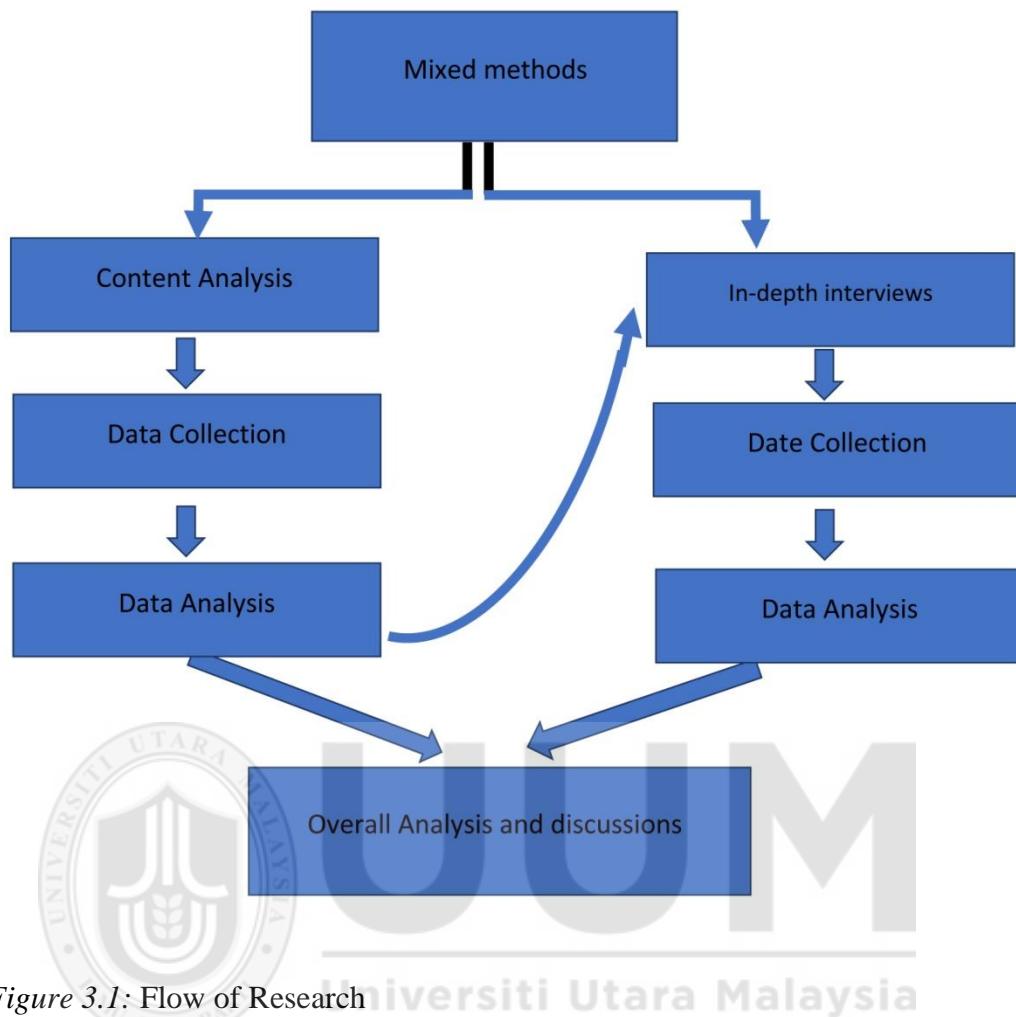


Figure 3.1: Flow of Research

3.1.1 Mixed Methods Research Design

Mixed methods research design employs a combination of quantitative and qualitative approach. This method has gained acceptance following its strength in augmenting one method with another. So many published researches in the social and human sciences have used mixed methods to arrive at a logical conclusion of the problems investigated (Creswell, 2009). Historically, mixed methods design can be traced to the field of psychology and in the multitrait- multimethod matrix of Campbell and Fiske (1959) and then to interest in combining different quantitative

and qualitative data sources (Jick, 1979), and of more recent the development of mixed method as a distinct method of investigation (Creswell & Plano, 2007).

Creswell (2006, p.5) gives us a better understanding of what mixed methods research is:

“Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process.

As a method it focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provide a better understanding of research problems than either approach alone.”

The researcher has adopted the mixed methods in this study so as to meet the objectives of the study, namely to determine the extent of environmental issues coverage through content analysis; and to explore the factors or influences behind such coverage through in depth interview. The choice is therefore informed by the fact that neither content analysis nor in-depth interview can independently serve as a sufficient method of generating data that can reliably form the basis of reaching valid conclusions on media coverage of the environment in Nigeria. In other words, the

use of mixed methods will help provide a better understanding of the research problems rather than using a single approach (Creswell, 2009).

Furthermore, a combination of content analysis and in-depth interview of selected journalists will add to the depth of this study. By using “mixed methodology”, the researcher can be sure that the picture he presents of the reality of environmental setting or situation is clear and accurate. Further to the argument on the use of multiple methods to address research questions, Adler and Adler (1994) posit that its usefulness hinges on enhancing reliability as the same data may be collected from other samples at other times and in other places. This is supported by Holtzhausen, (2001) who states that researchers who relied on a single research method cannot be more confident of the reliability and validity of their results, but using mixed methods, will rather give a wholesome portrayal of the units studied. The researcher therefore used mixed methods in order to achieve the above purpose in this study.

Mathison (1988) sums the value of mixed methodology as a method for improving the validity of research or evaluation findings. This author further cites the following arguments from different studies to drive home the need for mixed methods in research methodology. “. . . triangulation (mixed method) is supposed to support a finding by showing that independent measures of it agree with it or, at least, don’t contradict it” (Miles & Huberman, 1984, p.235). It is essentially a strategy that will aid the elimination of bias and allow the dismissal of plausible rival explanations such that a truthful proposition about some social phenomenon can be made (Campbell & Fiske, 1959; Denzin, 1978; Webb, Campbell, Schwartz, & Sechrest, 1966). In this study therefore, both methods (content analysis and in-depth

interview) complemented each other by offering data that can be used to gain more insights into the nature of environmental coverage and the factors influencing such coverage. This could not be achieved using either method alone.

3.1.2 Mixed Methods Strategies

There are so many classifications of mixed methods. Creswell et al., (2003) has come up with six standard mixed methods of research designs. They are: sequential explanatory; sequential exploratory; sequential transformative; concurrent triangulation; concurrent nested; and concurrent transformative. For the purpose of this study, the researcher will focus on sequential explanatory method.

Sequential explanatory method involves the collection and analysis of quantitative data followed by a collection and analysis of qualitative data. In this type of method, qualitative results will be used in explaining and interpreting the findings of quantitative results. Given that this study will employ sequential explanatory method, the issues of timing, weighting, mixing, and theorizing (the procedures of mixed methods) will be covered (Creswell, 2009). Timing has to do with deciding whether data collection will be in phases (sequential) or they will run concurrently. The approach adopted in this research is sequential. Weighting determines whether qualitative or quantitative data collection is prioritized. In this case quantitative data collection is prioritized. Mixing in this study will come at the period of analysis where data collected from both methods will be connected to justify the findings and conclusions. From the findings and conclusions this research will relate to the theoretical frame work that guides the entire study. The model for sequential explanatory design adopted for this study is given in the below figure.

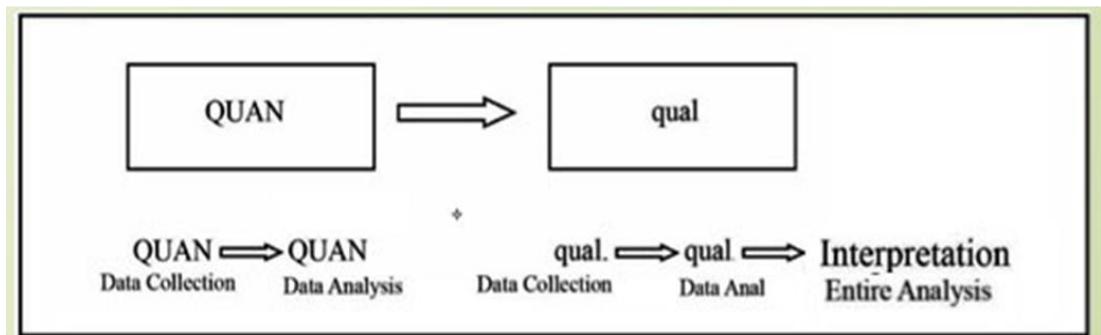


Figure 3.2: Sequential Explanatory Design (Creswell et al., 2003)

This model indicates that quantitative data collection and analysis will precede qualitative data collection and analysis, and both quantitative and qualitative analyses will lead to final interpretation and entire analysis of the study.

3.2 Review of Research Methods

In the auditing of various classes of media contents, Macnamara (2006) argues that content analysis has been found to be the most appropriate research method. Since this research seeks to examine to a larger extent the quantum of press coverage of the environment, the content analysis method will be adopted as it is the most appropriate. The two types of content analysis – quantitative and qualitative content analysis will be employed to generate data for the study. While quantitative content analysis will be used to determine the quantum of coverage, qualitative analysis will be used to determine the value attached to such coverage. The reason for inclusion of qualitative content analysis stems from the fact that some researchers have argued that quantitative content analysis concentrates on assessment only on the basis of numerical frequency. For example, Newbold et al., (2000) contend that quantitative

content analysis "has not been able to capture the context within which a media text becomes meaningful" (p.84), he therefore insists on including qualitative content analysis. Titscher et al., (2000) contend that the quantitative orientation neglected the particular quality of texts and that it was important to reconstruct contexts. According to them, it is not by counting and measuring that "patterns" or "wholes" in texts can be demonstrated but by showing the different possibilities of interpretation of "multiple connotations". Glaser and Laudel (2004) and Mayring (2000) write of quantitative content analysis as a method that does not pay attention to contents and contexts. Its main aim, according to them, has to do with simplifying and distorting quantification. These critiques finally led to the development of qualitative approaches to content analysis (Altheide, 1996).

Therefore depictions, through thematic analysis of selected texts (citations) from news reports, editorials, opinions, pictures and other items, will be analyzed through qualitative content analysis. Examples:

- Government is committed to/uncaring about the environment (Shaari, 1997; Hasan, 2007; Tran, 2014)
- Corporate organizations care/do not care about the environment.
- Where are environmental stories placed? (Shaari, 1997)
- Do environmental issues feature as editorials? (Hasan, 2007)
- Are environmental stories interpretive, investigative stories? (Tran, 2014)
- Citizens are/are not environment conscious. (Tran, 2014).

In relation to this study, content analysis is used to measure the frequency of environmental coverage and also the value attached to such coverage. The use of content analysis will be helpful in this study in probing into agenda setting of the press (McCombs, Shaw & Weaver, 1997; McCombs & Shaw, 1972), in this case, on environmental issues.

However, content analysis as a single research method cannot serve the purpose of the present research following some limitations there from. Wimmer and Dominick (2006) have argued that content analysis alone cannot serve as the basis for making statements about the effects of media contents on audience. In such cases where there is need to find out what informs audience's reaction to media contents, Wimmer and Dominick (2006) contend that an additional study on the audience becomes necessary, hence this researcher plans to do an in-depth interview of journalists to determine what influences them in regard to coverage of environment in Nigeria.

3.2.1 Content Analysis and its Application

Scholars in social sciences and humanities, like Krippendorff (2012), Holsti (1969), Berelson (1952), Brislin (1980), Griffin (2006), just to mention this few, have had extensive discussion on the use of content analysis to study media content so as to draw inferences on the quality and quantity of media coverage of issues. Content analysis is not novel to studying environmental issues coverage in the press as many scholars – including Dunwoody and Grifin, (1993), Sachsman (1976), Collins and

Kephart (1995) among others – have used the method in studying media representation of environmental issues.

Content analysis is used in this study for the structured analysis of (environmental) news contents (Macnamara, 2006), so as to describe and interpret the news contents (messages) (Griffin, 2006). It is supported by several researchers in communication studies who have further discussed the use of content analysis variously and yet in similar ways. The classical definition of content analysis by Lasswell (1927) still holds sway “Who says what, through which channel(s), to whom and with what effect” (p.2). In the context of this study, content analysis will help in creating an understanding of media effects and the power of the media to influence public opinion (Macnamara, 2006; Scheufele & Tewksbury, 2007; McCombs & Shaw, 1972) in relation to environmental issues. This study will review how much of this power the Nigerian media has in influencing the Nigerian publics on environmental issues by looking at the prominence, tone of, and extent of environmental coverage.

Content analysis as method of research should be replicable and valid in terms inferences drawn from data to content (Krippendorff, 1991). The implication is that for the analysis to be reliable, the same method should produce the same result when conducted by different researchers at different times. For the purpose of reliability in this study, the researcher conducted pilot tests and inter-coder reliability tests so as to achieve stability and validity or dependability of study across different times.

Content analysis is a very useful research method for this study as it will allow the researcher to systematically, objectively and reliably analyze media content by

weighing the content and format of text. This aligns to BBC World Service Trust (2008) which argues that content analysis as a research method makes for quantitative measurement of differences between media contents by systematically identifying and recording their properties from such criteria as length of articles, number of photos, use of sound bites, frequencies of words or sources. This will help the researcher in making inferences regarding the extent of environmental coverage by the Nigerian press.

Also the researcher has employed content analysis to measure the values attached to environmental stories by looking at the spaces, placements allotted to environmental stories. The researcher will also ascertain why such spaces (big or small), and placements (front or inside pages) are allotted to environmental stories. This is in line with Lynch and Peer (2002) who argue that content analysis is very useful in research as it enables news outlets to make decisions regarding allocation of time and space in their news products to particular stories, which invariably influences audiences' response to such news content.

Another reason for adopting content analysis as a relevant method of data collection in this study is that it is seen as a non-reactive or unobstructed research technique (Berger, 1991). Put differently this method will help in eliminating the influence the presence of the researcher will have on the respondents.

Content analysis is also relevant in this study as it may not be possible for the researcher to carry out the research alone given the enormous nature of the volume of the material to be analyzed. As Shaari (1997) puts it “....in studies of newspapers,

magazines, radio, literature and many other forms of communication, the analyst can rarely afford to examine all relevant data. Content analysis helps to overcome the problem of data volume by allowing a sample of the data (which is representative and whose characteristics are clearly and precisely described) to be analyzed” (p.105).

3.2.2 Types of Content Analysis and their use in This Study

In content analysis, the focus in most cases is on the quantity of the news output to the negligence of the value of news content. A good content analysis, as intended in this study, will therefore include both quantitative (how much of something is in the news story), and qualitative (the value or meaning of the news story) methods.

This study uses quantitative content analysis to determine the amount or quantity of each ingredient of substance, by weight or by volume. Thus, counting is the main method used in quantitative content analysis. While Berelson (1952) believes that content analysis has to be quantitative, systematic and objective in the description of manifest content of communication, other researchers (e.g. Stempel, 1981; Holsti, 1969) look at Berelson’s (1952) definition as problematic as it is very restrictive to numerical values or frequencies. Stempel (1981) was of the view that studies that used only quantitative method are weak, shallow and do not give the right meaning. Thus, this study while looking at the frequency of environmental coverage by the Nigerian press, will also use qualitative content analysis to support quantitative method.

Qualitative content analysis on the other hand is employed to determine the constituents of a substance without paying attention to numerical value/quantity. This method is rather preoccupied with the values attached to the content and not how much of it there is. In sum, while quantitative content analysis answers the question ‘how much/how many, qualitative content analysis helps researchers to interpret the data in meaningful ways (Macnamara, 2006). However, researchers that subscribe to quantitative method have also criticized qualitative method as lacking merit and precision. Given that the qualitative-quantitative controversy will continue to rage, researchers have come to terms with the combination of both qualitative and quantitative methods in content analysis to complement each other and thus generate a better result. This is what informed the use of both methods in this study. By using both methods the researcher will have a lee way and ample opportunity to record both the manifest content and analyze the meanings and or values embedded in the newspaper contents. A media content that has both frequency and prominence in terms of placement could be said to be of top priority to the media.

3.3 Sampling

Sampling here explains both the qualitative and the quantitative methods, as both will be using the same purposive or judgmental method in selecting the samples to be studied. Treating them differently would amount to duplication of words. Other aspects of quantitative and qualitative researches are treated differently under the sub-heads ‘Quantitative research methodology’ and ‘Qualitative research methodology’.

For reasons ranging from inaccessibility to the entire research population to feasibility of research design, it is not the intention of this researcher to analyze all the issues of newspapers published in Nigeria over the years regarding their contents on environmental issues. This researcher cannot as well conduct an in-depth interview on all the journalists in Nigeria to know what influences them in the coverage of environmental news. This stems from the fact that in-depth interview is time consuming and very expensive. Also, it may not be possible to identify all members of the total relevant population (Smith, 2000). This is typical in Nigeria where the total number of journalists is highly disputed. A subgroup of the target population was therefore selected for the purpose of the study (Marshal, 1996; Crabtree, 2006). Furthermore, in consonance with Wimmer and Dominick, (2006) the researcher did not embark on an impossible mission of studying the whole group (population) that is to be investigated for both content analysis and in-depth interview. The researcher will rather safely draw up a subset of the entire population that represents the population (sample). The purposive sampling method was employed to select the newspapers to be studied, and the journalists to be interviewed. This sampling method was used as it helped the researcher in selecting a sample of individuals or materials with a particular purpose in mind (Wrench et al., 2009). Therefore, the choice of newspapers and journalists will help to generate ample and quality data that will help to answer research questions and meet research objectives. This tallies with Nworgu (1991) who writes that “in purposive sampling, specific elements which satisfy some predetermined criteria, are selected. Although the criteria to be used are usually a matter of the researcher’s judgment, he exercises

this judgment in relation to what he thinks will constitute a representative sample with respect to the research purpose" (p.78).

Purposive sampling was employed in the belief that some informants or participants in research are much richer in terms of quality ideas and information than others. Rather than paying attention to the largeness of size, priority will be given to richness of information or ideas that would be extracted from the prospective participants in this research (Nworgu, 1991). The journalists and newspapers that were chosen for the in-depth interview and content analysis respectively were based on the aforementioned. Supporting this reasoning and conviction of qualitative researchers, Marshall (1996) also states that, "choosing someone at random to answer a qualitative question would be analogous to randomly asking a passer-by how to repair a broken-down car, rather than asking a garage mechanic – the former might have a good stab, but asking the latter is likely to be more productive" (p.524). Choosing journalists randomly for the in-depth interview may not be as productive as choosing environmental journalists for the same purpose.

Based on the foregoing the researcher, in order to generate relevant answers to the in-depth interview questions, selected editors and reporters who have a flair for environmental reporting. Popular newspapers were also selected for auditing of their environmental contents. Days of the week devoted to environmental coverage were considered in choosing days to be analyzed. The criteria for newspaper selection are discussed below. See list of functional newspapers in Appendix A.

3.4 Content Analysis: Selection of Newspapers

In selecting newspapers whose environmental issues contents will be analyzed for this study, the researcher adopted the purposive and quota method. While purposive method has to do with selecting articles for analysis from the key media, and not the less important media, quota method is used in selecting contents from across several regions (Macnamara, 2006). In a different perspective scholars like Holsti (1969) and Krippendorff (1980) are of the view that when sampling publications or other sources of communications, researchers may need to take into consideration such factors like geographical location, frequency of publication, time of publication (morning or evening), target audience, and size of circulation.

Therefore, the researcher has selected four newspapers based on the aforementioned factors. The newspapers are (1) The Guardian, (2) Daily Trust (3) Business day, and (4) ThisDay. These papers are all national newspapers and represent the elite press in Nigeria. The press landscape in Nigeria is polarized between the south and north, otherwise known as the Lagos and Abuja axis. The Guardian and Business Day represent the southern media, (Lagos axis) while ThisDay and Daily Trust represent the north (Abuja axis). All the newspapers selected for this study are published only in the morning. These papers are also selected because they have stayed on the news stand since they were first published quite unlike other newspapers that have had to close up for one reason or the other. Another reason for selecting them is that they enjoy wide circulation, and are famed for their rugged coverage of events. This complies to one of the variables researchers have identified for best practice content analysis, namely media weighting or categorization, to allow, as Macnamara, (2006)

puts it, “high circulation, high rating or highly influential media to be scored higher than small, less important media” (p.10). Newspapers for this study were selected based on the above criteria. Circulation statistics of newspapers got from the Newspapers Proprietors Association of Nigeria (NPAN) and Advertising Association of Nigeria (ADVAN) of Nigeria are in disagreement. According to NPAN, Punch is the highest circulating newspaper and has a daily sale of between 120,000 to 150,000 copies. Other newspapers, including the four newspapers selected for this study, circulate between 50,000, 80,000, and 100,000 copies per day. On the other hand, ADVAN argued that these figures were inflated by NPAN in order to attract adverts. ADVAN carried out a study which indicated that Punch circulates only 34,264 copies per day, while Guardian and ThisDay (newspapers included in this study) circulate only 25, 222 and 21,703 daily respectively. (www.m2weekly.com). Though the circulation figures are at variance, but from both groups, the selected newspapers are among the highest circulating newspapers in Nigeria. This controversy would have been easily resolved if Nigerian newspapers subscribed to the services of Audit Bureau of Circulation (ABC). A brief account of each newspaper is presented below. A list of newspapers in Nigeria is attached as Appendix A.

3.4.1 The Guardian

This is a private newspaper and is seen as the flagship of Nigerian press. It is owned by Chief Alex Ibru, a wealthy businessman from Delta State. The Guardian is an elite, sober, and serious newspaper which has a wide circulation and appeals to serious minded Nigerians. This newspaper has a liberal outlook and is seen as the

most influential newspaper in the country (Guide to Nigerian Media, n.d). According to the Africa Media Directory (1996), The Guardian was ranked top quality newspaper not only in Nigeria but in Africa. This newspaper carries well-informed articles on serious of general interest. Its uniqueness lies in specialized reporting and employment of specialists, and experts to treat special topics, thus making it (the Guardian) very educative and authoritative.

3.4.2 Daily Trust

Daily Trust newspapers include a weekly trust newspaper and a daily trust newspaper, published by Media Trust Limited (MTL) which comprised of a group of young Nigerians concerned about bringing back integrity to the media profession. MTL started their newspaper business in 1998 with the publication Weekly Trust. Daily Trust came on board in 2001 and was remarkably the first private daily newspaper to be printed in the Federal Capital Territory (FCT) Abuja. Daily Trust is famed as the largest circulating newspaper in the northern region of Nigeria.

3.4.3 Business Day

Business day is published by the former editor of Vanguard newspaper – Frank Aigbogun – a renowned journalist in Nigeria. The newspaper was established in 2001 as a daily business newspaper focusing on many sectors like banking, finance, politics and environment. It was one of the newspapers that allocated regular pages to environmental contents. Business day is widely circulated both within and beyond Nigeria. It is famed as the only Nigerian newspaper that has a bureau in Accra, Ghana.

3.4.4 ThisDay

This newspaper was first published in January 1995 and very soon recorded nation wide acceptance as one of the top newspapers in Nigeria. It won the newspaper of the year award for several years in Nigeria. One of its hallmarks was the introduction of full color printing. Its major focus is on Nigerian and African news. Though it covers international news as well but priority is given to local news. Apart from being a top newspaper in Nigeria, it is also recognized all over Africa as a powerful voice in African media.

3.5 Content Analysis Procedure

Given that content analysis is the main method of gathering data in this study, it is pertinent to explain the procedure of conducting content analysis in this study. It was carried out through several key steps including: identification of newspaper issues (editions), to be studied, construction of category, selection of units of analysis creation of coding instrument, sampling of content and reliability of contents coded.

3.5.1 Issues (Editions) Studied

A total of 384 issues of the four selected newspapers were studied for a period of two years, from January 2013 to December 2014. These years were chosen as relatively remarkable environmental issues took place during these years. They include the flood that ravaged Nigeria between 2012 and 2013 leading to a record loss of lives and properties; international conventions like Climate Change Conference (COP19) held in Warsaw Poland in 2013, and other local environmental

summits. The researcher had the intention of studying environmental coverage from 2010 to 2011, but had to change the period to 2013/2014 so as to make the study as current as possible.

384 issues of the four newspapers studied were selected using the composite week or stratified system. Four days were selected each month from each of the four newspapers being studied during the study period. Four issues from four newspapers per month becomes $4 \times 4 = 16$. Therefore, a total of 16 issues were studied for the four newspapers in one month. For one year it becomes $16 \times 12 = 192$. For two years it becomes $192 \times 2 = 384$ (Bailey & Hackett, 1997; Krippendorff, 2004; Neuman, 2000).

Table 3.1
Composite week system.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

The selected days (using the composite week) are in bold.
The month is assumed to be June.

From the one month sample, we select the issues from June. 1st which is Monday, 9th is Tuesday, 17th is Wednesday, 25th is Thursday (4 issues per month), then Friday will be next which is July 3 and down the line until the 384 issues are selected.

The composite week is chosen so as to study all the days of the week equally, and much more, so as to represent the whole period of study (Neuman, 2000; Krippendorff, 2004).

The composite week system has been found to be very reliable by researchers in selecting samples from the population, (Bailey & Hackett, 1997). Wimmer and Dominick (1987) assert that “A composite week uses a sample of one Monday, drawn from the four or five possible Mondays in the sampling period (typically a month or more), one Tuesday drawn from the available Tuesdays, and so on until all week days have been included” (p.173). “The number of dates should be a function on the incidence of the phenomenon in question: the lower the incidence, the more dates will have to be sampled” (Wimmer & Dominick, 1987, p.170). However, during pre-coding exercise it was discovered that the newspapers studied had specific days for reporting environmental stories. The Guardian devoted Mondays to environmental stories, while Business Day, Daily Trust and ThisDay reported environmental news on Tuesdays, Wednesdays and Thursdays respectively. The researcher had to revert to these specified days as doing otherwise (using composite week) would amount to lesser stories on the environment. The good thing is that the specified days did not alter the number of issues originally planned to be studied.

3.5.2 Data Gathering and Coding Instrument (Content Analysis)

Media contents were carefully coded and analyzed so as to be able to make descriptive and justifiable judgments on the manner in which journalists covered the environment. However, in places where content could not be coded for counting,

provision will be made for a brief summary of such items. In order to be consistent in coding, a coding guide attached as Appendix B was developed. Coding Instrument (form) is attached as Appendix C.

The need for a good coding system cannot be overemphasized in content analytical studies. It has been described as the heart of content analysis (Smith, 2000). McAdams and Zeldow (1993) are of the view that a coding system is of paramount importance to content analysis because it specifies the information to be obtained from the materials to be analyzed.

3.5.3 Category Construction and Selection of Units of Analysis

McAdams and Zeldow (1993) are of the opinion that if appropriate categories of analysis are not used, vital information may not be detected, and the analysis may not reveal anything of interest. This researcher therefore created categories that helped in realizing vital information that led to inferences in the study. In the construction of categories the researcher relied on several category systems that have already been developed by previous researchers (Shaari, 1997; Marukatat, 1991; McGeachy, 1987; Hasan, 2007; Tran, 2014, Teklesilassie, 2015) which proved to be relevant in the present study. Modifications were made where necessary. The categories used in this research were developed in order to answer research questions and meet research objectives.

In selecting the units of analysis, the researcher was guided by the research purpose and research questions. A set of units of analysis was developed for each category.

The categories and units of analysis for content analysis are discussed in Section 3.10 below. The categories formulated to meet research objectives include frequency; issues covered; item type; prominence; dateline; sources/main actors; subsidiary actors; news/story authors, and direction/tone. For a proper analysis of data generated from content analysis, the researcher resorted to the use of relevant computer program namely Statistical Package for Social Sciences (SPSS). According to Macnamara, (2006) computer soft-wares are usually applied at two levels in content analysis. Level one is for storing, analyzing and reporting research data such as coding and notations by researchers (including table construction, charts and graphs). Level two involves cases for automatic scanning of texts and identification and coding of words and phrases. This leads to automation of the process of coding and analysis. This will not be employed in this study based on the fact that automated coding may assign the same meaning to a word that appeared many times in the text with different contextual meanings. In other words, computers may not consider the context of contents but rather focus on the text which obviously will lead to incomplete inferences. In level one, Macnamara, (2006) posits that texts are read and coded by trained researchers and computer software programs are then used as tools to assist in the analysis in the same way they are used to analyze the result of survey and other researches. Statistical Package for Social Sciences (SPSS) is one of such computer software programs used for statistical analysis in content analysis. SPSS is chosen as it is apt in data calculations and generating relevant tabulations from the data (Wilmer & Dominic, 2003; Ekeanyanwu, 2011).

3.5.4 Reliability of Coding: Content Analysis

Coding has to be reliable and consistent to yield a good result. The reliability and consistency of any coding depends on the coders. The challenge in content analysis, as Lynch and Peer (2002) argue, is to make sure that coders follow the rule and code in the same way. They recommend a proactive approach where the project manager has to check what the coders are doing to ensure quality. This researcher therefore appointed and trained two professional journalists who showed good judgment in news content analysis, were able to follow rules, and were detail-oriented to assist him in coding the newspaper contents.

The researcher also developed a coding guideline to guide the coders in deciding what to and what not to code. The researcher adopted test approaches in order to ensure consistency like the one prepared by Lynch and Peer (2000). In coding the units and categories of the newspaper contents, the researcher adopted an established standard coding form like the one developed by Lynch and Peer (2000) and made modifications where necessary (See Appendix B for coding guide; and Appendix C for coding instrument). This coding form was chosen because of ease of use and the way it is designed to help in coding the items that will be recorded as numbers so that the frequencies and percentages can be calculated. In sum, the reliability of the coded data was determined using Holsti's (1969) inter-coder reliability test to show consistency.

In establishing reliability, the researcher resorted to the inter-coder reliability check based on Holsti's (1969) formula. This formula is seen as one of the best in mass media research (Lombard et al., 2005). Eighty(80) issues (editions) of the four

newspapers studied were analyzed and coded by the two coders, 20 editions per newspaper. Two hundred and fifty news items were coded from different categories. Six disagreements were found and resolved by double coding (Schreier 2012). Based on the simple percent agreement format of calculating reliability test, (total number agreed upon out of total decisions on a dichotomous decision of agree – disagree basis (Lacy & Riffe 1996), the overall inter-coder reliability gained was about 96 percent. This percentage is acceptable based on Laswell et al., (1952) position that inter-coder reliability is adequate and acceptable if the agreement between coders is about 70 and above. The inter-coder reliability result is attached as Appendix D.

$$R = \frac{2(C^1, C^2)}{C^1 + C^2}$$

Figure 3.3. Holsti's inter-coder reliability formula

3.5.5 Categories and Units of Analysis for Content Analysis

In creating categories for this study, the researcher did not rely comprehensively on existing categories used by previous researchers like economic category (Einsiedel & Coughlan, 1993; Sorokat et al., 2009; Way, 2011), political (Carvalho, 2007; Maeseele, 2011), Ecological (O'Donnell & Rice, 2008), Risk (Remillard, 2011) etc, rather categories were created based on the purpose and objectives of study. However, some existing categories that were relevant to this study like News type (Hasan 2007), legal issues, and international conventions (Tran, 2014) were adopted.

The overall unit of analysis in this study is environmental news story. Environmental news story is used in this study to denote any environmental content that deals with

natural occurrences like volcanic eruptions, floods, earthquakes; and human influences on the environment. In other words, environmental news includes stories relating to all matters and not merely issue-based coverage. Further environmental news in this study was found under different themes. The adoption of broad definition of environmental news in this study bears from the stances of previous researchers like Sessions (2003), Friedman et al. (1986) who argue that coverage that focused specifically on any environmental theme could be said to be telling only part of the story. This study therefore included contents from different themes that have elements that relate to environmental issues (Campbell, 1999; Ader, 1995; Sessions, 2003). Environmental stories would extend to topics like pollution, nature conservation, biodiversity, waste management, international conventions, and legal issues, to mention these few, irrespective of how they are themed. Based on this definition and data emanating from the pre-coding of newspaper contents, and pre-interview of some Nigerians regarding pressing environmental issues, the researcher was able to come up with the categories and sub-categories of analysis.

The media contents were analyzed were based on sub-categories or units of analysis. The selection of units of analysis, especially in content analysis, is rather important as it helps create a clear direction for the research. It is the more important as it defines the scientific nature, reliability and validity of the study. Mahmood, (2001) notes that data collected to solve the problem of the research revolves around units of analysis. Consequently to provide adequate answers to the research objectives, the researcher created nine major categories of analysis which in turn consisted of sub-units of analysis. The creation of these categories is informed by three important

facts - that the categories are pertinent to the objectives of the study; the categories are functional; and the system of categories is manageable.

3.6 Operational Definitions

In order to capture the essence of the purposes of this research – which is to audit the quantum of environmental coverage and the value attached to environmental issues and also to analyze and identify the factors that influence environmental news coverage in the Nigerian press. It becomes necessary for the researcher to identify the variables that were used in generating data. Holsti (1969) calls this the operational definitions. These definitions are included in the nine categories discussed below, each with sub-categories (units) of analysis given in italics.

3.6.1 Frequency of Coverage

Since one of the reasons for undertaking this research is to determine the quantum of environmental coverage by the Nigerian press, it becomes pertinent that the frequency of coverage be analyzed to determine whether or not the environment is covered adequately from numerical point of view as compared to other news beats (Berelson, 1952).

3.6.2 Item Types

The second part of coding categorization dealt with general news types otherwise referred to as 'Item types'. In this study, item types were analyzed to highlight the weight of environmental issues covered by the newspapers. The reason behind this is that the weight of coverage is determined by the item type (Hasan, 2007;

Shaari, 1997; Maruakatat, 1991; Tran' 2014; Teklesilassie, 2015). For example, an issue that features as an editorial is considered very important given that editorials are usually written only on very important issues. The units of analysis include: *news, editorial, advertorial (supplement), feature, opinion/analysis, reader's comment, and cartoon*. News denotes stories that are events-centered irrespective of how they are framed. Otherwise called straight news with main intent of reporting events as they happened without any form of opinionating. News items will be compared to column articles in terms of frequency to determine the seriousness attached to environmental issues. This is based on the fact that column or in-depth articles carry more weight than straight news reports. Editorial refers to official statement of the newspaper usually found on the editorial page, otherwise called the stated opinion of the newspaper. Editorials are said to be written only on important issues. Thus, the number of editorials written on environmental issues will help the researcher to draw inference on how important the Nigerian press deems environmental issues. Advertorials are paid publications from organizations, companies, NGOs, adversarial groups on issues relating to the environment. Coding advertorials will help determine the involvement of mostly the private sector in environmental sustenance. Feature/opinion/analysis refers to in-depth, opinionated, more reflective, interpretive, investigative coverage of environmental issues other than reporting facts from event-centered news.

3.6.3 Issues Covered

Given that one of the objectives of the study is to determine the priorities given to different environmental issues, this category was constructed to analyze and code

different aspects of the environment to determine which amongst them enjoyed more priority than others. This categorization was based on earlier categories created by (Rubin & Sachs, 1970; MacGeachy, 1987; Maruakatat, 1991; Rooyen, 2006; Teklesilassie, 2015). The adopted categories were modified to suit the present needs of this study. Creation of these variables was also based on literature review that identified the variables as major environmental issues that confront Nigeria. These aspects of the environment coded include:

- **Pollution:** *pollution as used in this study includes stories relating to actions, processes and substances that make land, water and air dirty and not safe or suitable to use.*
- **Public sanitation:** *this denotes stories related to keeping environment clean and healthy through the provision of sewage system, clean water supply, and general hygiene and cleanliness of places.*
- **Environmental legislation:** *It is believed that environmental issues have attracted the attention of policymakers both at the local and international levels. Legislation as coded in this study includes contents that relate to legal, constitutional and judicial issues.*
- **International conventions:** *It is obvious that the environment has attracted considerable international attention which has led to myriads of international conventions on the environment (Hadler & Haller, 2011, Boykoff, 2009, International conventions are coded as contents on the environment emanating from different regions, global events and summits.*

- **Nature Conservation:** *stories coded under conservation include those that had to do with protecting, preserving and conserving the environment for improved quality of life of living things.*
- **Biodiversity:** *this includes stories related to environmental changes that led to extinction of species, and sustainability of biodiversity.*
- **Climate change/global warming:** *stories related to temperature of earth's climate system and its related effects were coded under climate change.*
- **Corporate green policies/action:** *these are stories emanating from corporate entities in relation to organizations, companies functioning without creating any negative impact on the environment.*
- **Deforestation:** *this includes stories that focused on conversion of forestlands to urban uses, farm lands or ranches.*
- **Desertification:** *this relates to stories that focus on overexploitation of soil by natural and human activities which leads to land degradation, aridity, loss of vegetation and wildlife.*
- **Waste disposal/management:** *these are stories that dwelt on removal, destruction or storage of damaged, used or other unwanted domestic, agricultural or industrial products and substances either in solid or liquid state.*
- **Nature preservation:** *coded under nature preservation are stories that focused on bioreserve, protected areas for wildlife, fauna, flora or features of geological or other special interest.*

3.6.4 Prominence

Prominence was analyzed to gain insight into how important the stories were. This is based on the fact that in newspapers, story placement determines how important the story is. Thus this categorization was meant to collect information relating to the attention or priority or value the media attach to environmental stories (Freyenberger, 2013; Maruakata, 1991; Hasan, 2007; Shaari, 1997; Teklesilassie, 2015). The units of analysis include: *page placement, Placement is used to denote the pages where environmental stories are placed. The pages include front, inside and back. Also coded to determine prominence were the positions of the stories on the pages – top, middle, and bottom* Usually the front page is considered the most important page of the newspaper, and therefore attracts only very important news stories (Teklesilassie, 2015; Hassan, 2007). Shaari (1997) writes that “stories are put on the front page for a dual purpose - because it is important and newsworthy, and to attract the readers’ attention like a headline does. Otherwise, the stories would be treated as normal and routine stories and would be placed in the inside pages” (p.130). Stories on the environment were analyzed in this regard to determine their placement in the selected newspapers as this helped the researcher in making inferences on the importance or value attached to the stories (Freyenberger, 2013). Apart from placement, story size (story hole) is also a determinant of how important a story is. Important stories are always allotted more news holes than less important stories. Photos and their sizes are equally important in proclaiming the importance of stories in newspapers, hence the need to probe if environmental stories are accompanied by photos.

3.6.5 Dateline

Local, regional/continental, international, wire/agency were coded in this category to determine the origin of environmental news. This helped the researcher find out if attention is given to local environmental issues when compared to global environmental issues (Teklesilassie, 2015; Marukatat, 1991; Leoffler, 1975; Rubin & Sachs, 1973). Local as used in this study indicates stories that originated from within Nigeria. Regional includes stories from West Africa and Africa, while International are stories from the rest of the world. Wire/agency refer to stories were sourced for international news agencies.

3.6.6 Sources/Main actors

Sources usually add value to media reports (Becker, 1967; Hasan, 2007; Tran, 2014; Teklesilassie, 2015). As this study strives to look at the value of the stories covered, and not just the quantity, it becomes incumbent on the researcher to analyze the sources of environmental news. The researcher examined the pattern of coverage of environmental issues through sourcing information from actors like government executives, lawmakers, environmental activists, industrialists, NGOs, and Advertisers so as to determine if sources of environmental information are dominated by government officials alone as opposed to voices of ordinary people. The variables to be coded include: *government officials, politicians, experts, environmental activists, NGOs*.

3.6.7 Subsidiary actors

The study intended to find out if reporters used multiple sources in reporting the environment. In most cases overdependence on government or official sources would imply not involving ordinary people like citizens and common people (Shaari, 1997; Tran, 2014; Teklesilassie, 2015). Given that the effects of environmental decay are borne by the common people, it becomes pertinent to find out if they are involved in the discussion and production of environmental news. *Citizens, unions, victims of disasters* are variables coded in this category.

3.6.8 News/Story Authors

This category focuses on the source of news in terms of gathering, packaging and publishing it. News written by reporters is byline news usually driven by events hence such news is known as straight news that is always bent on simply answering news questions. This type of news does not command much value. Investigative and interpretive reports written by beat reporters, experts or columnists, on the other hand are seen as value laden reports given that the reports are in-depth. The author-sources will be analyzed based on the following categories: *coverage, press releases, wire services, correspondents/reporters (by lines)* (Hasan, 2007; Media Coverage of Science and Technology in Africa, 2011).

3.6.9 Direction/Tone

This is yet another important category in coding. It was created to determine if environmental stories were reported positively or negatively. No predetermined scale, (e.g. Likert Scale) was used in determining the tone, rather the researcher used

labels and key words like critical, favorable, unfavorable *adversarial (negative)*, *supportive (positive)*, *indifferent (neutral)* to highlight the tone of coverage. The use of a predetermined scale could limit the researcher to code only what is available on the scale (Shaari, 1997; Hasan, 2007).

3.7 Qualitative Research Method: In-depth Interview

Given that content analysis alone cannot serve as the sole basis for claims about media contents on environmental issues in Nigeria, and that the researcher is using mixed methods in data collection, in-depth interview was therefore used to gather data on what influences media coverage of the environment by Nigerian journalists.

Interviews have been defined variously by different scholars. For instance, Glesne (1992) looks at interview as “oral exchanges involving at least two or more persons as interviewers and interviewees depending on circumstances at hand” (p.67). For a successful in-depth interview, the researcher adopted the model recommended by Berry (1999) which is probing, analytical, anticipatory, nondirective, active and alerting toward establishing good rapport.

In consonance with Berry (1999) the researcher used in-depth interview, to elicit information so as to achieve a thorough understanding of the interviewee’s point of view of the situation being discussed. Berry (1999) further clarifies that in-depth interview has to do with asking respondents open-ended questions, probing where and when necessary to collect information deemed important and necessary by the researcher. This is in agreement with Cook (2008), who believes that participants in

in-depth interview are usually encouraged and prompted to explain in detail about the issue under investigation. These strategies were applied in this study.

Boyce and Neal (2006) define in-depth interview as a qualitative research method that involves “conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation” (p.3). In this study, the researcher attempted to interview selected journalists in numbers that did not exceed four so as to gather detailed and expert information on what influences their coverage of the environment.

In a different perspective, Denzin (2005) is of the view that interview is a form of narrative in which respondents in research have ample opportunity to share experiences about themselves, and as well tell stories from which researchers can better understand the issues being studied. Precisely the in-depth interview will be used to understand why environmental reporters report the environment the way they do. This helped to support results from content analysis (See Appendix D for interview guide and Appendix E for interview technique).

There are different types of interviews as defined by Patton (2002) and Sukandar (2007). They include informal conversational interview, general interview guide, and standardized open-ended interview. The last type is close to the in-depth interview used in this study.

In-depth interview is apt in the present dispensation as it helped the researcher to describe or explain why situations exist - in this case why journalist cover the environment the way they do. The results of the in-depth interview helped in

examining and establishing the interrelationships among variables, and arrive at explanatory inferences (Wimmer & Dominick, 2006). For example, the relationship between editors/ newspaper owners and reporters in environmental news selection was examined to establish line of influence. There may be a possibility that reporters' stories do not make it to the news stand because they are nipped in the bud by higher authorities for "better" contents. Apart from looking at the line of influence in gathering and disseminating environmental news, this study also looked at other issues that affect environmental coverage like training and refresher courses, scientific background of environmental ecosystem, affiliation to bodies that provide vital kits and information for proper coverage of environment.

In-depth interview was used for data collection in regard to what influences Nigerian journalists in their coverage of environment because interpretative approach was used in data analysis. The main focus of interpretative research is to explore and understand human experiences comprehensively. Thus, interpretative research is employed in this study as Maykut and Morehouse (1994) posit, for in-depth analysis, participant observation, and collection of important or relevant information from the journalists to be interviewed in relation to environmental coverage. Furthermore, the data of qualitative research in most cases hinge on peoples' words and actions (Berry, 1999). Therefore, it requires methodologies that help researchers to obtain information through language and behavior. In-depth interview data was collected through written and audio-taped interviews (where possible) that would be transcribed where and when necessary for use in data analysis (Interview guide/protocol is attached as Appendix E).

In-depth interview of editors and reporters in this study aimed at obtaining first hand data regarding the factors (institutional and external) that they have to contend with in the construction or framing of environmental news. A review of some of the theoretical approaches upon which media roles in the coverage of important and controversial issues could be conceptualized, indicated that there are different sources of influence on news production both from within and outside of news media outlets.

Regardless of the presence of these influences, journalists themselves constitute a force to be reckoned with in news production. Given the cultural, ideological or even personal biases, journalists can have different reasons for their news selection. Nasser (1983) and Reese (2007) point out that journalists form part of a complex socio-cultural setting from which they cannot help injecting their personal, political and cultural biases in their reports and writings most of the time. In a related stance, Ukonu et al., (2012) believe that journalistic norms affect the way in which climate change news stories are reported. These scholars contend that such journalistic norms as objectivity, neutrality, impartiality, and balance that are seen as yard sticks to measure professional journalism may sometimes be an impediment to proper climate change reportage. They illustrated this by citing a survey of 636 articles from top four United States newspapers between 1988 and 2002 done by Boykoff and Boykoff (2004) in which it was revealed that most of the articles devoted almost an equal space to the small group of climate change antagonists as to the scientific mainstream view. Ukonu (2012) and his group contend that given that climate

change is real, it is a matter of distortion or rather imbalance to portray the topic as a controversy that deserves balance reportage from the opposing sides.

Further to the above argument, Idid, (2017), Reese (2007), Ukonu et al., (2012) and Tran (2014), insist that media reportage of events (environmental events inclusive) reflect the tussle among different stake holders/interests in the media. These interests may include cultural, religious, regional and national differences. They could also be shaped by political constraints or economic motives. This study intends to investigate how journalistic norms and other influences mentioned above impinge on environmental coverage. However, the influences of journalists' coverage of the environment cannot be determined by content analysis hence the use of in-depth interview.

Based on the afore-mentioned, it becomes pertinent to supplement content analysis of selected newspapers on environmental issues with an in-depth interview of journalists' attitudes and influences on environmental coverage. The fact that a news outlet devotes ample time and space to entertainment, for example, may not imply that the journalists are not interested in environmental issues. It could be a matter of workplace norm. The results from the in-depth interview generated additional data that augmented or supported those collected from content analysis, and thus helped the researcher in providing valid findings on the quantum of environmental coverage and influences on, or reasons for such coverage.

The use of in-depth interview in this study is advantageous as it helped in obtaining a comprehensive, detailed and primary data that can be easily analyzed (Saunders et

al., 2007). Despite the fact that face-to-face interview may be time consuming and expensive to conduct, yet it is desirable as the flow of primary data collection can be controlled and the possibility to cover issues in an in-depth manner is achievable. It is also very useful as it helped the researcher to get to the reality of the topic being studied which resides within those being interviewed (Holstein & Gubrium, 1995). In other words, while the content analysis is expected to yield quantitative data, the in-depth interviews are expected to produce information that explains why journalists react to the environment the way they do.

Demerits of the in-depth interview format include being expensive and time consuming (Denscombe, 2004), biased responses as a result of interviewer presence, lack of standardized presentation of questions, not allowing the respondent more privacy especially in the case of sensitive questions, and not enhancing the validity of the respondent to do some reflection or consultation of references about the answer (Emenyeonu, 1999). The researcher tried as much as possible to overcome the shortcomings of in-depth interview by, for example, providing a list of standard questions, which was followed, though not slavishly, during the interviews. No matter the weaknesses of in-depth interview, its advantages always placate. In consonance with Denscombe, (2004) in-depth interview, despite its disadvantages, is handy in this study as it helped the researcher to generate rich, detailed information that can be immediately validated.

The open-ended interview guide covering diverse aspects related to the research objectives was personally administered to respondents to ensure compliance with sampling procedure. The interview questions were pre-tested to determine its

strengths and weaknesses and were amended where necessary. The in-depth interview format helped in collecting data that could be easily analyzed as well as give the respondents' sufficient lee way to explain in some detail the currents that underpin their decisions on environmental coverage.

In conducting the interviews, the researcher bore in mind the key factors that affect interviewing process, like culture (Kaborga & Bertero, 2002), place, (Elwood & Martin, 2000), means of interview, and tools for the interview.

It is believed that studies employing interview methods ought to uphold some ethical values in relation to objectivity, reliability and validity so as to make the research rich. (Schamberger, 1997). The researcher demonstrated a sense of balance, fairness and honesty throughout the research period and most importantly while carrying out the in-depth interviews.

The researcher also used good questioning techniques (Berry 1999) to facilitate the interviewees' information so as to get rich information from them. The researcher adopted the interviewing techniques that are informed by literature developed by Berry (1999). See Appendix D for interview protocol and Appendix F for questioning process.

3.7.1 In-depth Interview Sampling Method

Sampling plays a vital role in the result of any given study. Sampling is used here to denote the number of respondents selected for the in-depth interview. Emphasis is therefore placed on good sampling method as the absence of one can be a major obstacle to the study. In the selection of sample for this study, the researcher's aim

was not to engage in Marshall (1996) approach which aims “to draw a representative sample from the population, so that the results of studied sample can then be generalized back to the population” (p.522). This is not the objective in selecting the respondents for the in-depth interview. Rather the researcher aimed to apply the qualitative research orientation identified by Marshall (1996). He identifies three broad categories of naturalistic sampling namely, the convenience, judgment and the theoretical models. Supporting this view, Smith (2000) contends that probability sampling is not common in content analytical studies hence he advocates for a non-probability sampling. Though Smith (2000) argues that non-probability sampling does not help the researcher to know the extent to which the sample is representative of the entire population, he believes that it is still desirable on the basis of convenience, that is, participants or materials are selected because they are easily available and would help generate data that lead to a solid conclusion. Thus, purposive sampling was used in sample selection for both content analysis and in-depth interview as it helped in generating relevant data that led to meaningful inferences in the study.

Also researchers like Marshall (1996) and Palys (2008) agree that informants or participants in research are not equally placed. According to them, some are more informed and articulate in terms of quality ideas and information than others, hence, researchers in such cases do not focus on the size, but rather on the richness of information or ideas that would be got from the selected participants in research.

Given the nature of this work, the researcher adopted the purposive sampling otherwise called judgmental sampling. The choice of this sampling method is based

on the knowledge of the nature of population and the purpose of the study (Marshall, 1996; Palys, 2008). The choice of purposive sampling was also informed by the fact that it aims at gaining a better understanding of the more regular patterns of behavior of the sample studied. In this case purposive sampling was used to measure the regular patterns of behavior of Nigerian journalists in relation to environmental coverage. This method is also used as it enabled the researcher to reach a targeted sample quickly, especially in situations where proportionality is not the main focus (Crossman, n.d; Marshall 1996; Palys, 2008). The targeted sample in this study (16 environmental journalists and one independent journalist) is selected because they meet certain characteristics, or they fit into a specific purpose or description, and will help to answer the research questions (Marshall, 1996).

3.7.2 In-depth Interview Sample Size

A sample of 17 environmental respondents comprising editors and reporters was drawn from print (newspaper) media establishments in Nigeria were purposively selected. This is based on the fact that largeness of number does not matter in qualitative studies; and that these journalists are better placed to provide informed and articulate responses on environmental coverage (Marshall, 1996; Palys, 2008).

In order to relate the results of the in-depth interview with those of the content analysis, it became necessary to ensure that the sample included respondents from the print media that were content analyzed. In addition, to finding out the quantity and quality of coverage they gave to the environment, it would add more value to such findings by exploring the context in which such coverage was made, in other words, the factors that influenced such coverage. Four journalists from each of the

four selected newspapers were drawn in the following proportion for the in-depth interview:

- 4 senior editors (one from each news outlet).
- 4 section editors (one from each news outlet).
- 8 reporters - environmental or science (2 from each news outlet).
- 1 independent journalist (one from independent news outlet).

Table of respondents' profile (table 4.16) is provided in the in-depth interview analysis framework. (Section4.3.1).

However, for the purpose of balance, and for the fact that the researcher feared the selected journalists may not objectively criticize their newspapers regarding their environmental policies, the researcher had to interview an independent journalist who worked in the capacity of environmental chief editor to see if he had a dissenting opinion. The total number of journalists interviewed is therefore 17.

The selection of this sample size was based on the position of Boyce and Neal, (2006, p.3) that in-depth interview as a qualitative research method involves “conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular idea, program or situation”.

The journalists and editors were chosen because they were believed to be in the best position to explain what actually happens in news selection and dissemination (Marshall, 1996; Palys, 2008). By virtue of their positions, these journalists and editors determine what news items are to be selected, hyped, and how they are primed. Hence, they play a major role as agenda setters, gate-keepers, and

intermediaries in the social construct of environmental news. The intent of selecting both journalists (reporters) and editors is not to measure the power interplay between them, but rather to complement each other in generation of relevant data. For example, editors will have a better insight regarding policies of their respective newspapers. The journalists and editors that were interviewed were drawn purposively and proportionally from Lagos and Abuja which are the two dominant centers for journalism in Nigeria. While the Lagos axis represents the south geo-political zone, Abuja represents the north geo-political zone. Also, these cities have the highest concentration of news outlets in Nigeria.

Further, the reason for choosing 17 journalists as sample for the in-depth interview stems from the fact that in purposive sampling, the researcher has a specific group in mind (Payls, 2008). In this case, newspaper journalists (environmental reporters and editors) and editors who helped the researcher to generate plausible data that helped answer the qualitative research questions and also helped meet the research objectives.

As with other qualitative researchers, the researcher was more interested in why particular people or groups do things in a particular way, and how their attitudes are constructed, as well as the role they play in dynamic processes within the organization. Payls (2008) further contends that research participants are not always created equal. He is of the view that an informed, articulate informant will often advance a research far better than any randomly selected sample of fifty. This is the strength of this sample size.

Selecting a good sample size for a research is somewhat problematic as there is no proved formula for this (Wimmer & Dominick, 2006). Sample size therefore depends on the nature of the research. The choice of sample, as Palys, (2008) suggests, depends on what the researcher wants to accomplish and what he or she wants to know and the appropriate strategy follows from that. Based on the foregoing arguments, and given that this is a qualitative inquiry to determine what influences press coverage of environmental issues in Nigeria, the researcher used purposive sampling in selecting the sample size for this study. Also the choice of this sample size is influenced by time consideration, and research method used for the study (Wimmer & Dominick, 2006).

3.7.3 Time Frame

The pre-interviews were held between 24 -30 November 2015. The interview questions were reviewed and refined after which the main interview took place from 15– 28 February 2016. The interviews were held in a private location such as at the office of the independent journalist in Lagos who was also interviewed. This was a good idea as the neutral place where the interview was conducted gave the journalists “some freedom” of expression and they felt their privacy was protected. The journalists From Abuja axis were interviewed in a neutral place as those from the Lagos axis.

3.7.4 Questioning Pattern

Given that this study employed sequential mixed methods, the interview questions were therefore based on findings from content analysis. This was done to gain a

deeper understanding of the journalists' perspectives in regard to the findings from content analysis (Kvale, 1996). In order to maintain a standardized method of questioning, a questionnaire that served as a guide was developed based on Labov's (1972) model of evaluating narrative. The questions elicited answers on factors that influenced coverage of environment in relation to Rees' (2007), and Reese and Shoemaker's (2014) hierarchy of influences in news production. Some questions were also posed to determine what other factors influence coverage other than the hierarchy of influences model.

3.7.5 Transcription of Interview

Given that the respondents vehemently refused to be recorded for security of job purposes, the researcher had to resort to transcribing their responses in a written format. This did not in any way alter or reduce the amount of information the respondents provided. As a matter fact, they were so taciturn that the researcher had to prompt them to provide reasonable answers. The hand-written transcription can be justified given that there is no standardized form of transcription of research interviews. Transcription depends rather on how reasonable information is and how such information is to be used (Kvale, 1996). Transcription was done verbatim. Use of shorthand was employed to ensure everything said was recorded. The researcher did not base transcription on spoken words only, rather he also recorded body expressions like (shrugs, biting of lips, longer silences etc.) and use of some local expressions and exclamations that added emphasis on what was said. Transcriptions were recorded and edited as soon as the interviews were over. Each interview lasted

between 40 to 60 minutes. A sample of the transcribed interview is attached as Appendix G.

3.7.6 In-depth Interview Data Analysis

Data emanating from the in-depth interview will be analyzed and presented based on the following parameters which will include other relevant questions and issues to be tackled elaborately during interviewing. The parameters (given below) will help in meeting the objectives of the study and were developed based on Labov's (1972) model of evaluating narrative where questions that elicited answers bothering on orientation of the news outlets; what complicates coverage; evaluation of coverage; and results of coverage will be analyzed. The parameters include:

- Impact of awareness, education, availability of relevant tools (handbooks), skills, and experience in reporting the environment.
- The impact of newspaper's/organizational policies/ institutional control in reporting the environment.
- What government has done in regulating the environment.
- The major focus or purpose of environmental reportage.
- The agenda setting role of the media on the environment and the degree of satisfaction in carrying out surveillance on the environment.
- The place of environmental stories among other story types and major obstacles to covering the environment.

- Access or links to bodies, institutions, organizations that initiate policies and regulate the environment as sources of environmental information

These parameters were developed based on Anders et al., (1998) views that dimensions that are expected to yield relevant information to answer research questions and meet research objectives should be chosen for analysis. Data that do not relate to any of these parameters will be analyzed individually. These parameters were also analyzed vis-a-vis the hierarchy of influences model of news production.

3.8 Conceptual Definitions

This section explains the meaning of the major terms used in this study. Writing on the need for operational definition, Bailey and Hacket (1997) argue that there is need to identify and define the major terms used in a study.

3.8.1 Environment

The term ‘environment’ has been defined variously by different people. For example, Buknall et al., (2000) define environment as “a natural resource base that provides sources (material energy and so forth) and performs ‘sink’ functions (such as absorbing pollution.” (p.4). They go on to say that environment may include the resources that people used to have in the past but no longer have them because they have been depleted or substituted by technology. The Environment in this study refers to the natural world, with particular reference to Nigeria, as affected by human activities.

3.8.2 Environmental Issues

It is pertinent at this stage to define what is meant by environmental issues as this will help streamline the contents that will be coded and those that will not. Environmental issues in this study refer to those mentioned earlier in the units of analysis. Identification of environmental issues to be coded will make for objectivity and reliability.

Buknall et al., (2000) define ‘environmental issues’ as those “concerned with public or semi-public good, such as an open-access air and watersheds, or common-property grazing land. Some aspects of the environment can also involve private goods such as air inside a house or workplace or household drinking water” (p.4).

Section 20 of the Constitution of the Federal Republic of Nigeria identifies some environmental issues, and makes it an objective and a priority for Nigerian State to improve and protect the air, land, water, forest, and wild life of Nigeria (Environmental Law Research Institute, n. d).

In this study, the term “environmental issues” refers to all the stories related to the all the variables coded under “issues covered”. They include pollution, public sanitation, environmental legislation, international environmental conventions, conservation, biodiversity, climate change, global warming, desertification, deforestation, nature preservation, hazardous chemicals, waste disposal, and corporate green policies. The operational definitions of these variables are given under section 3.10.4.

3.8.3 Environmental Coverage

Media has been credited to play major role in shaping public attitudes, behaviors and perceptions in relation to the environment by communicating relevant environmental information to the public (Luedcke & Boykoff, 2017). Newspapers, as identified by Mutiu et al., (2017) have different sections that cover a variety of human activities (including environmental issues). As used in this study, environmental coverage refers to the coverage and reportage of news and features that impact on the environment (Hasan, 2007) as reported in the newspapers.

3.8.4 Environmental News and Features

Hasan (2007, p.10) defines environmental news as “all stories on environmental matters, not just issue-based coverage”. In this study, environmental matters would include news, features, editorials, letters to the editor, cartoons that impact on the environment with special reference to environmental issues coded in this study (Buknall, 2000). These environmental news and features were streamlined based on Anders et al., (1998) assertion that dimensions and texts that are expected to produce relevant information to answer research questions and meet research objectives should be chosen for analysis.

3.8.5 Media/Press

The press in this study strictly refers to newspapers and those who work in the newspaper industry. The media generally refers to the various means of communication that are used in disseminating media contents. They include both

electronic and print media (broadcasting and narrowcasting media). In this study however, the researcher uses press/media to refer to the newspaper industry and the journalists that work in the industry.

3.9 Data Analysis Plan

This study employed sequential mixed methodology in generating data to answer the research questions. It implies therefore that content analysis will precede in-depth interview. Results from the content analysis will guide the researcher in formulating in-depth interview questions. Overall data emerging from both the content analysis and in-depth interview will be analyzed vis-à-vis the objectives of the study. The quantitative data will be subjected to appropriate statistical tests. The results will be tabulated in frequencies and percentages.

3.10 Summary of the Chapter

This chapter, as detailed as it is, could be called the engine that drives the whole study. The chapter gave detailed reasons for the choice of Nigeria as the setting of the study. It went further to explain all aspects of research methodology; justified the reasons for the methods or concepts adopted in the research design; provided merits and demerits of methods adopted; and discussed the panacea to the identified shortcomings in the research methods used in the study. With this the scene is thus set for data presentation and analysis.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.0 Introduction

This chapter focuses on data presentation and analysis. Given that mixed methods research design is used in this study, data presentation and analysis is therefore divided into two parts. Part one addresses data presentation and analysis on content analysis, while part two focuses on data presentation and analysis from in-depth interview. Mixed methods research design employs a combination of quantitative and qualitative approach. This method has gained acceptance following its strength in augmenting one method with another. So many published researches in the social and human sciences have used mixed methods to arrive at a logical conclusion of the problems investigated (Creswell, 2009). The framework used in data analysis for in-depth interview was also discussed.

4.1 Analysis Based on Categories

The categories analyzed were arrived at based on the study objectives. The intents were to measure frequency of coverage and values attached to environmental issues coverage; determine news sources, origin, story authors, and how the press prioritized environmental issues. There were no pre-determined categories as such categories would either limit or not fit the purpose of this study. As mentioned earlier these categories were developed based on the pre coding tests conducted, and pre-interview sessions with some Nigerians on what constitute major environmental issues in the country. In the data presentation, crosstabulation that provided the

summary of each category's data (general performance of all the newspapers) and also an in-depth analysis of each newspaper's performance in environmental issues coverage was used.

4.1.1 Frequency/Quantum of Coverage

Table 4.1
Frequency of coverage

	Frequency	Percentage
The Guardian	305	40.5
Daily Trust	140	18.5
Business Day	196	26.0
This Day	113	15.0
Total	754	100.0

Given that the first objective of this study is to gauge the quantum of environmental issues coverage in the Nigerian press, content was therefore coded and analyzed in this regard. All together a total of 754 stories were analyzed for the two-year study period from January 2013 to December 2014. The highest number of stories 305, representing about 40 percent was carried in the Guardian, followed by 196 stories (26 percent) from Business Day, and 140 stories (18.6 percent) from Daily Trust. The least number of stories totaling 113 (15 percent) was reported in This Day. That the Guardian outperformed the other newspapers in the number of environmental stories reported and in almost all the other categories studied goes to shows that it is truly the flagship of Nigerian newspapers as earlier indicated in the description of selected newspapers in chapter 3.

The table above shows the number of editions analyzed per newspaper and the corresponding number of stories. Altogether 368 editions were analyzed as against

the 384 originally slated for analysis. The missing editions were as a result of, in one or two cases poor archiving, and in other cases non-availability of environmental news in some editions – a case that happens when there are more paid political stories that environmental stories had to be dropped. The table indicates that 91 editions of the Guardian yielded 305 stories, 92 editions of Daily Trust came up with 140 stories, while 95 editions of Business Day produced 196 stories. This day trailed behind with 90 editions that produced 113 stories.

4.1.2 Editions and Stories Per Newspaper

Table 4.2

Number of editions and stories per newspaper

Paper ID	Number of editions analyzed	Percentage	Number of stories	Percentage
The Guardian	91	24.7	305	40.5
Daily Trust	92	25.0	140	18.5
Business Day	95	25.9	196	26.0
This Day	90	24.4	113	15.0
Total	368	100	754	100.0

Given that there was only this number of stories (754) for the two-year study period as compared to political or life style stories that yielded quadruple stories in the same newspapers within the same study period we could infer that frequency or quantum of environmental issues coverage is dismal. The reason behind the poverty of environmental coverage are legion but stems mainly from the fact that environmental issues are published only once a week by the newspapers analyzed. This leaves much to be desired. As observed during content analysis, stories bothering on politics, economy, entertainment, and the likes are published daily, while

environmental news is published once a week and would even be dropped, as gathered during in-depth interview, on a busy news day for political, lifestyle, economic news stories because they are seen as ‘money spinning’ contents.

Further reasons for the dismal performance of environmental news in comparison to other news beats have been blamed on the nature of environmental news, - an ‘item’ that no one is interested to ‘buy’. Thus, newspapers are only interested, as it seems, in publishing sellable stories. Put differently, publishers and journalists blame the paucity of environmental coverage on audiences not having interest in environmental news. As the reporters who were interviewed revealed, audiences were only interested in political stories, economic or entertainment stories. Hence it would be of no benefit to waste energy and scarce resources in venturing heavily into an area that no one would read. Environmental news is sellable depending on how the reporters package it. For example, they could be written from local and human interest angles to suit the needs of their audiences (Betts & Gibson, 2012; West et al., 2003). That there is need for environmental reporters to understand the environmental news needs of their audiences and serve them with such cannot be less true (Weigold, 2001; Rogers, 1999; Krimsky & Plough, 1998). This will be dealt with in details in the section of the in-depth interview.

In terms of number of editions analyzed per newspaper, 95 editions (25.9 percent) of Business Day were analyzed which yielded 196 news stories (26 percent of the total news stories), while the 92 editions (25 percent) of Daily Trust that were analyzed yielded 140 stories (18.5 percent). The Guardian and ThisDay had 91(24.7 percent) and 90 (24.4 percent) editions analyzed respectively. 305 stories representing 40.5

percent of the total news stories came from the 91 editions of the Guardian, while 90 editions of ThisDay yielded 113 stories (15 percent of the total news stories). Despite the fact that The Guardian had 91 editions as compared to Business Day (95 editions) and Daily Trust (92 editions), it (Guardian) still had a better coverage of environmental issues in terms of frequency or quantum of coverage.

4.1.3 Story/Item Type

Table 4.3
Story/Item type

	The Guardian % (f)	Daily Trust % (f)	Business Day % (f)	This Day % (f)	Total % (f)
News	99.0% (302)	85.0% (119)	98.5% (193)	97.3% (110)	96.0% (724)
Column	1.0% (3)	9.3% (13)	1.5% (3)	1.8% (2)	2.8% (21)
Editorial	0.0% (0)	5.0% (7)	0.0% (0)	0.9% (1)	1.1% (8)
Advertorial	0.0% (0)	0.7% (1)	0.0% (0)	0.0% (0)	0.1% (1)
Total	100.0% (305)	100.0% (140)	100.0% (196)	100.0% (113)	100.0% (754)

In order to meet the second objective of this study namely to evaluate the priority (value) given to environmental contents, item types was analyzed to find out the nature of environmental contents in terms of whether they were treated in a comprehensive, in-depth, interpretive and investigative manner or just treated as a straight news. It is expected that treating any news content in an in-depth manner would imply priority while doing otherwise would indicate lack of priority. Also, value attached to environmental contents could be measured by looking at how many

times or how often they featured as editorials as editorials are said to be written on crucial, pressing and important issues. Thus, the types of news stories analyzed were coded in the following variables – news, columns, editorials, and advertorials. It is pertinent to point out that columns include opinions, features and other articles that are not straight news. Table 4.3 shows that of the total 754 stories analyzed, 724 stories, representing 96 percent were news stories (straight news). This was followed by 21 stories (2.8 percent) recorded as column/article/analysis. There were only 8 (1.1 percent) editorials representing about one percent of the total stories analyzed throughout the two-year study period. Only one (0.1 percent) advertorial was published. This goes to show that environmental news is dependent on events and occurrences, meetings, conferences, and press releases which form the traditional sources for straight news stories. Thus it could be inferred that straight news coverage is the major means of covering and reporting environmental news in Nigeria. In other words, environmental reporting is based on events. That columns/articles/analysis attracted only 21 stories implies that environmental issues coverage lacked depth as there were not many (only a few) in-depth, analytical stories that are the core of environmental reporting. This cannot be divorced from the fact that most of the journalists covering the environmental beat are general reporters who lack knowledge and skills needed for proper interpretation and analysis of environmental issues (Teklesilassie, 2015; Hasan, 2007). To put it succinctly there was few or no environment columnists and the newspapers were not able to subscribe to articles from freelancers given their dwindling finances. Also, that only eight editorials relating to environmental issues were published during the study period speaks volumes in regard to how prominent environmental issues were

perceived in the Nigerian Press. It goes without saying that only important, valued, or prominent issues are considered for editorials. Environmental issues did not and do not enjoy this priority hence they were and are relegated to the background.

In comparing the newspapers, the analysis of frequency/percentage of coverage is gauged within each newspaper. Thus, of the 305 stories carried in the Guardian 302 were straight news stories (99 percent), three column stories (1 percent), and no news in both editorial and advertorial. Thus, despite the relative numerical value of the stories published in the Guardian, one could still argue that environmental stories were not considered important given that they were neither considered for editorial and only very few stories were in-depth. Daily Trust had a total of 140 news stories, out of which 119 were straight news (85 percent), 13 columns/in-depth stories (9.3 percent), seven editorial stories (5 percent), one advertorial (0.7 percent).

While the frequency of coverage in Daily Trust is too low (140 stories) compared to The Guardian (305 stories) yet it could be argued that Daily Trust gave prominence to environmental issues more than all the newspapers studied given the relative high number of in-depth stories and editorials it published. Business Day had a total of 193 straight news stories (98.5 percent), three in-depth/column stories (1.5 percent).

This Day had 110 straight news, two in-depth/column stories and one editorial.

Table 4.4
News placement (front, inside, back pages)

	The Guardian % (f)	Daily Trust % (f)	Business Day % (f)	This Day % (f)	Total % (f)
Front page	0.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.1% (1)
Inside page	99.7% (304)	100.0% (140)	100.0% (196)	100.0% (113)	99.9% (753)
Total	100.0% (305)	100.0% (138)	100.0% (196)	100.0% (113)	100.0% (754)

4.1.4 News Placement: (Front, Inside, Back Pages)

Further in trying to meet the second objective of the study, news placement was analyzed. News placement in the pages of the newspaper determines how prominent, important, and valuable the news is. Riaz (2008) argues that through selection and placement of news stories on pages of newspapers, "the reporters and the editors focus their attention and influence the public's perceptions of what are the most important issues of the day" (p.1). As with Riaz (2008) and Leff (2005) believes that downplaying of issues (news contents) by hiding them inside the newspapers or not prioritizing them will ultimately result in minimizing and misunderstanding the issue by the public. Freyenberger (2013) in line with Leff (2005) believes that page prominence of a news story has an enormous influence on the readers as it determines whether they are exposed to the story or not. Put the other way round, Freyenberger (2013) believes that "...page placement plays a major role in how prominent a story is to the reader." (p.38). All the above discussion seems to hold true in relation to environmental news stories. Table 4.4 indicates that of the 754 stories analyzed, a whopping 753 stories (99.9 percent) were carried in the inside pages, while only a paltry one story (0.1 percent) was on the front page. It is therefore very surprising that during the study period – January 2013 to December 2014, only one environmental news (0.3 percent) out of 305 stories in The Guardian as indicated in Table 4.4 made it to the front page. The remaining 304 stories (99.7 percent) were placed in the inside pages. All the other environmental news stories (100 percent) in the rest of the newspapers studied were placed in the inside pages. This goes to show that environmental news is not prioritized, it is not considered prominent or important to be published on the front page. This could also be a

pointer to how newspaper management and or ownership view the importance of environmental news in Nigeria. Media scholars believe strongly that the appearance of a news story in the inside pages of a newspaper is an indicator that the story is either insignificant or less important (Freyenberger, 2013; Cirino, 1971). Reasons for this treatment will be discussed in the qualitative part of data presentation where journalists who were interviewed bared their minds on why environmental news stories were not able to make it to front page or even considered important for editorial. Most of the stories that made it to the front page were rather related to government, politics or human-interest stories, or stories from the economy sector, or international relations (Uyo, 1996). These are said to be the stories that sell, that readers and the public are interested in. Put differently, public interest factor was responsible for the placement on environmental stories in the inside pages. Nigerians, according to the in-depth interview report, do not have interest in environmental stories; hence the stories are not given any form of priority. Shaari (1997) agrees that political and government stories dominate in news placement decisions (p.130).

4.1.5 News Placement: (Top, Middle, Bottom)

Table 4.5
News placement (top, middle, bottom)

	The Guardian % (f)	Daily Trust % (f)	Business Day% (f)	This Day % (f)	Total % (f)
Top	60.0% (183)	59.3% (83)	51.0% (100)	62.8% (71)	58.0% (437)
Middle	3.9% (12)	17.9% (25)	6.6% (13)	15.0% (17)	8.9% (67)

Table 4.5 Continued

Bottom	36.1% (110)	22.9% (32)	42.3% (83)	22.1% (25)	33.2% (250)
Total	100.0% (305)	100.0% (140)	100.0% (196)	100.0% (113)	100.0% (754)

Placement of news at the top, middle and bottom positions on the pages of newspaper also determine prominence of the news item. Tessier (2012) writes that page layout and the placement of stories within the layout bear from traditional media use of the inverted pyramid style where stories are arranged based on the order of importance. Tessier (2012) believes that placement of stories within the page layout helps in similar pyramidal placement of stories based on their importance. Ibrahim (2009) supports the above assertion when she argued that placement of content inside the newspaper matters to the reader in terms of significance and importance, hence such contents could be analyzed based on whether they are placed “top left, top right, middle or bottom of the page.” (p.91). Thus, stories placed at the top are said to be more important than stories placed at the bottom. Table 4.5 indicates that a total of 437 stories representing 58 percent were placed at the top, while bottom attracted 250 (33.2 percent) stories and middle 67 stories (8.9 percent). This result would have been more significant if environmental stories were mixed with other stories. But environmental stories were published in pages specified for environmental news only. However, news stories placed at the top were regarded as main or lead environmental news stories. Whereas others placed at the bottom were seen as supporting stories.

4.1.6 Graphics/Pictures

Table 4.6
Graphics/Pictures

	The Guardian % (f)	Daily Trust % (f)	Business Day % (f)	This Day % (f)	Total (376) % (f)
Picture	98.9% (182)	100.0% (36)	90.4% (123)	100.0% (35)	96.2% (6)
Graph	0.5% (1)	0.0% (0)	3.7% (5)	0.0% (0)	1.5% (9)
Artist impression	0.5% (1)	0.0% (0)	5.9% (8)	0.0% (0)	2.3% (376)
Total	100.0% (184)	100.0% (36)	100.0% (136)	100.0% (35)	100.0% (391)

The importance of pictures, graphs, and or artist impressions to news stories is enormous. They support, explain, and amplify the news stories where words fail. Abbas and Emenyeonu (2015) are of the view that pictures, graphs and illustrations are used by the press “as means of effects and prominence” (p.79). Thus the analysis of this variable is in order to address the second objective of this study. The 754 stories analyzed were accompanied with 376 pictures (96.2 percent compared to graphics and artists impressions) while nine artist impressions (2.3 percent) were used to illustrate stories, and six stories were with graphs (1.5 percent). What is stunning in this result is that of the 376 pictures used in the stories, none of them were pictures of the events, disasters or issues that were the subject of the news stories, rather they were pictures of people – especially government officials, or leaders of different organizations that deal with the environment. This is a misplaced priority. Pictures should help illustrate or tell the story and not just to create an

album of government officials. Of the 376 pictures that accompanied the 754 stories analyzed, The Guardian did better than the other newspapers in supporting stories with pictures as it used 182 pictures (98.9 percent), one graphics (0.5 percent) and one artist impression (0.5) to support its stories. This was followed by Business Day which augmented its stories with 123 pictures (90.4 percent), five graphics (3.7 percent), and eight artist impressions. Daily Trust and ThisDay carried 36 pictures (100 percent) and 35 pictures (100) respectively.

4.1.7 Issues Covered

Table 4.7
Issues Covered

	The Guardian % (f)	Daily Trust % (f)	Business Day% (f)	This Day % (f)	Total % (f)
Pollution	11.7% (35)	16.4% (23)	8.2% (16)	13.3% (15)	11.9% (89)
Public sanitation	4.0% (12)	6.4% (9)	6.1% (12)	1.8% (2)	4.7% (35)
Environmental legislation	13.3% (40)	12.1% (17)	18.4% (36)	24.8% (28)	16.2% (121)
International Environmental Conventions	9.0% (27)	3.6% (5)	7.7% (15)	8.8% (10)	7.6% (57)
Conservation	10.0% (30)	1.4% (2)	6.6% (13)	0.9% (1)	6.1% (46)
Biodiversity	4.0% (12)	0.0% (0)	1.0% (2)	1.8% (2)	2.1% (16)

Table 4.7 Continued

	32.3%	26.4%	28.6%	23.9%	29.0%
Climate change/Global Warming	32.3% (97)	26.4% (37)	28.6% (56)	23.9% (27)	29.0% (217)
Desertification	1.0% (3)	12.9% (18)	0.5% (1)	0.9% (1)	3.1% (23)
Deforestation	5.3% (16)	8.6% (12)	7.7% (15)	4.4% (5)	6.4% (48)
Nature preservation	1.7% (5)	0.0% (0)	3.1% (6)	1.8% (2)	1.7% (13)
Hazardous chemicals	4.3% (13)	6.4% (9)	4.1% (8)	7.1% (8)	5.1% (38)
Waste disposal	0.3% (1)	5.7% (8)	3.6% (7)	1.8% (2)	2.4% (18)
Corporate green policies	0.3% (1)	0.0% (0)	1.5% (3)	0.0% (0)	0.5% (4)
Other	2.7% (13)	0.0% (0)	3.1% (6)	8.8% (10)	3.2% (29)
Total	100.0% (305)	100.0% (140)	100.0% (196)	100.0% (113)	100.0% (754)

Environmental issues covered were categorized into 14 variables. This was done in order to identify the aspects of the environment that are prioritized and thus shade light on objective number 3 of this study. The variables analyzed under this category include pollution, public sanitation, environmental legislation, international environmental conventions, conservation, biodiversity, climate change/global warming, desertification, deforestation, nature preservation, hazardous chemicals, waste disposal, corporate green policies, and other. These variables were created based on the modified version of the Rooyen's (2002) typology used in studying

press coverage of science and technology. Further the creation of the variables was based on literature review that identified the variables as the major environmental issues that face Nigeria. It is pertinent to point out here that no study has yet done a comprehensive study of environmental issues coverage by the Nigerian press in terms of frequency and influences of coverage. The present attempt could therefore help future researchers with a predetermined variable when studying environmental issues coverage. The analysis of this category was carried out within issues covered and not within individual newspapers.

Table 4.7 above shows that climate change/global warming attracted the most coverage with 217 stories representing over 28 percent. This was followed by environmental legislation with 121 (16.2 percent) stories, pollution ranked third with 89 (11.9 percent) stories, followed by international environmental conventions with 57 (7.6 percent) stories. It is perplexing that climate change/global warming stories keep dominating in the environmental news coverage in the Nigerian press even when it is not directly a major environmental problem in Nigeria. The Nigerian press, as it were, does not want to be seen left out in the global media discourse of climate change championed by the western media whose countries are mostly responsible for global warming and are bearing the brunt therefrom. The Center for Science and Environment (2002) affirms that the developed countries started on the path of industrialization long before developing countries and have been emitting greenhouse gasses for a very long time without any form of control or restraint. The center argues that the developed countries are therefore responsible for the problem of global warming given their alarming historical emissions. It is on record that

China, United States, India, Russian Federation and Brazil are the worst five countries responsible for global warming (www.worldatlas.com). The issues that are inherent and pose serious problems to the Nigerian environment were the least covered. For example, waste disposal that has remained the bane of many cities, attracted only 18 stories, representing just two percent, while public sanitation, pollution, conservation, desertification, deforestation attracted 35 (4.6 percent), 89 (11.8 percent), 46 (6.1 percent), 23 (3.1 percent), and 48 (6.4 percent) stories respectively. The implication is that the global agenda on environment coverage is pursued by the Nigerian press at the detriment of local environmental agenda, if there was one. It is interesting to note that environmental legislation enjoyed relatively substantial coverage. This goes to show, according to the journalist interviewed, that the press performs its esteemed function of mounting surveillance on the environment, calling government to action for enactment of policies that regulate the environment. The story should not end here; the journalists should go further to ensure that the policies are implemented.

Given that one of the studies objectives is to determine the frequency of coverage of these major environmental issues in Nigeria, it becomes necessary to give an account of how each newspaper covered the issues within the study period. The researcher did not see it feasible to analyze all the 14 variables in this crosstabulation hence outstanding ones that would help realize the objectives of the study were analyzed.

Climate change/global warming as shown in table 4.7 can be said to be of top priority given that it had the lion's share of coverage in this category with 217 stories. This is despite the fact that this variable does not pose any immediate danger

to the Nigerian environment as compared to waste disposal, pollution, public sanitation, deforestation, and desertification that are locally generated problems of immense proportion. This call to question how much agenda the Nigerian press has set on environmental issues, especially on local environmental issues. Nonetheless, the Guardian had 97 (44.4 percent) stories, followed by 56 (25.8 percent) stories in Business Day, while Daily Trust and This Day had 37 (17.1 percent) and 27 (12.4 percent) stories respectively. The slant in coverage of environmental issues leans toward climate change/global warming.

Environmental legislation relatively garnered considerable attention (as compared to other variables). A total of 121 stories were on environmental legislation, with the Guardian and Business Day leading in coverage with 40 (33.1 percent) and 36 (29.8 percent) stories, while This Day and daily Trust had 28 (23.1 percent) and 17 (14.0 percent) stories.

Pollution attracted a total of 89 stories, Guardian ranked first in coverage with 35 stories (39.3 percent), followed by Daily Trust with 23 stories (25.8 percent), Business day and This Day had 16 (18.0 percent) and 15 (16.9 percent) stories respectively. It may not be out of place to say that Guardian had more stories on pollution given that it is a newspaper from the Lagos axis where most of the pollution takes place. But then it is still worrying that given the level of pollution in the Nigerian environment, only a dismal attention is paid to it (environment) by the press.

Deforestation had 48 stories. The Guardian reported 16 (33.3 percent), Business day 15 (31.3 percent), and Daily Trust and This day had 12 (25.0 percent) and five (10.4

percent) stories respectively. It would have been expected that stories relating to deforestation and desertification would have been on the high as it is man-made and one of the contributory factors to climate change. Perhaps this is one good example where climate change stories could be localized. Fighting deforestation would imply fighting global warming. But rather than focusing on such stories with local angles and human interest, reports focused more on climate change summits. The age long maxim that charity begins at home doesn't seem to be true here.

Conservation which is another prominent issue in the environmental discuss in Nigeria was also poorly covered by the press with only 46 stories. The Guardian dominated with 30 (65.2 percent) stories followed by Business Day with 13 (28.3 percent) stories. Daily Trust and This day had just two (4.3percent) and one (2.2 percent) stories respectively.

Public sanitation attracted very minimal attention as well with only 35 stories covered within the two-year study period. The Guardian and Business Day had 12 (34.3 percent) stories each, while Daily Trust and This Day had nine (25.7percent) and two (5.7 percent) stories respectively. One would have expected that coverage of public sanitation should have been high as it is one of the major environmental issues in Nigeria.

Desertification and waste disposal which are very serious problems that need special attention by the press were also dismally covered. While desertification had 23 stories (3.1 percent) waste disposal had a woeful 18 (2.4 percent). This is worrying given that waste disposal could be singly called the bane of good environment in Nigeria. It is like a hydra headed monster that produces pollution, poor sanitation,

and hazardous chemicals. A walk through most cities in Nigeria could help drive the lesson home. This call to question as to why the Nigerian press would under-hype such serious issues and hype climate change. One is not arguing that climate change is not happening, but rather that it should not be covered more prominently (even from a global perspective) than local issues that pose immediate danger and therefore deserve immediate and due attention. Climate change stories can be localized or given a local angle to address imminent environmental issues in Nigeria. This is why interpretive environmental journalism should be practiced in Nigeria.

From the above analyses, it could be observed that the newspapers did not have any slant or priority in covering major environmental issues confronting the country despite their geographical focus (North and South Axis). The newspapers in the north axis were expected to cover issues like desertification, and deforestation that are very common in the north, but this was not the case. This could be because the newspapers in the northern axis are headquartered in Abuja far away from the rural places where desertification and deforestation happen. It may not have been possible for the reporters to have access to these places; hence there were only few news stories on the said issues. Also, the Boko Haram insurgency in the northern axis may have deterred journalists from covering environmental issues in the area properly. If there was slant in covering environmental news, it could be said to be on climate change/global warming. Overall all the newspapers analyzed are national newspapers that may have the same news sources hence their news stories are without slant as far as local environmental issues are concerned.

4.1.8 Author/Source of News

Table 4.8
Author Source of News

	The Guardian % (f)	Daily Trust % (f)	Business Day % (f)	This Day % (f)	Total % (f)
Staff	96.4% (294)	92.9% (130)	85.1% (166)	99.1% (112)	93.2% (702)
Wire service	2.0% (6)	5.0% (7)	5.1% (10)	0.0% (0)	3.1% (23)
Press release	1.3% (4)	1.4% (2)	9.7% (19)	0.0% (0)	3.3% (25)
Government	0.3% (2)	0.7% (1)	0.0% (0)	0.0% (0)	0.3% (3)
Readers' letters	0.0% (0)	0.0% (0)	0.0% (0)	0.9% (1)	0.1% (1)

The study sought to find out how the Nigerian press sourced environmental news.

This is done to address objective no. 4 in this study. The variables coded and analyzed in other to meet this objective include news authorship, dateline, and news sources. In a study on Media Coverage of Science and Technology in Africa (2011, p.20) similar variable (news authorship) was analyzed to find out the “extent to which indigenous or local journalists were active in reporting about science and technology in their own countries”. Data collected in the present study indicated, as shown in table 4.8, that 702 stories, representing about 93 per cent were by-line stories. This is in agreement with the result generated in the item type category where about 723 stories (96 percent) were straight news. It would be expected that straight news would only be written by staff (by-line) of the newspapers. Press

releases, wire services ranked second and third with 25 (3.3 percent) and 23 (3.1 percent) stories respectively. It was gathered during the in-depth interview with the reporters that newspapers could not engage the services of freelancers or even subscribe heavily to wire services due to financial handicap; therefore, they solely depended on their reporters to cover and report environmental news. The reporters admitted that they made use of all resources at their disposal to report environmental news, including using published stories as news sources. This could be the reason why most of the international news stories were also by-lined rather than subscription from wire services, hence most stories dealt more on international issues like climate change rather than the pressing local stories.

Out of the 702 by-line news stories, The Guardian led with 294 stories (96.4 percent) followed by Business Day with 166 stories (85.1 percent). Daily Trust and Thisday followed suit with 130 stories (92.9 percent) and 112 stories (99.1 percent) respectively. Business Day subscribed the most to wire services with 10 stories (5.1 percent) followed by daily Trust with seven stories (5.0 percent) while The Guardian had six stories representing 2 percent. As could be seen in table 4.8, the low number of stories recorded in press releases, government, and readers' letters indicate lack of interest on environmental issues from both the private and public sectors.

4.1.9 Geographical Focus/Deadline

Table 4.9
Origin/Place of Story/Dateline

	The Guardian % (f)	Daily Trust % (f)	BusinessDa y % (f)	This Day % (f)	Total % (f)
Community	1.6% (5)	4.3% (6)	2.6% (5)	3.5% (4)	2.7% (20)
LGA	2.0% (6)	8.6% (12)	4.1% (8)	2.7% (3)	3.9% (29)
State	15.1% (46)	16.4% (23)	31.6% (62)	13.3% (15)	19.4% (146)
National	20.4% (62)	32.9% (46)	22.4% (44)	42.5% (48)	26.6% (200)
Federal Capital	1.3% (4)	1.4% (2)	0.0% (0)	0.9% (1)	0.9% (7)
Continental	12.2% (37)	5.7% (8)	4.1% (8)	5.3% (6)	7.8% (59)
Global/International	47.4% (144)	30.7% (43)	35.2% (69)	31.9% (36)	38.8% (293)
Total	100.0% (304)	100.0% (140)	100.0% (196)	100.0% (113)	100.0% (754)

The analysis on dateline category was done to find out where (place) environmental news came from. This was with the intent of finding out whether the newspapers preferred local news from the three tiers of government in Nigeria namely; federal, state, and local governments authorities (LGA), to international ones, and also to find out how the tiers of government fared in generating environmental news, given that they have roles to play at their respective levels to combat environmental decay. It has been observed that in most cases, especially in the developing world, environmental journalists underplay local environmental news, but rather hype

international ones. This is in agreement with Rubin and Sachs (1973) who believe that environmental reporting is like the concept of “Afghanistanism” which promotes the coverage of problems from other parts of the world but deals myopically with similar problems at the local front. Thus, apart from looking at the geographical focus from within, the study also sought to know how much international news attracted attention in the press.

From table 4.9, the overall number of stories from global/international focus stood at 293, representing about 39 percent. Out of these stories, The Guardian stood out with 144 stories (47.4 percent) followed by ThisDay with 69 stories (35.2 percent), while Daily trust and Business day had 43 (30.5) and 36 (31.9 percent) stories respectively. At the continental level, 57 (7.8 percent) stories were reported. From within Nigeria, 200 stories (26.5 percent) had National focus. The Guardian led in the national coverage with 62 stories (20.4 percent). ThisDay ranked second with 48 (44.2 percent) followed by Daily Trust with 46 (32.9 percent) and Business Day with 44 (22.4) stories. 146 (19.4 percent) stories were from the States. 29 (3.8 percent) stories came from the local governments while 20 came from the grass root level – the local communities. The Federal Capital Territory (FCT) attracted only seven stories, most probably because much attention is paid to get it (FCT) rid of pollution, garbage, urban decay, and thus as a clean city, there was nothing much to be written about it. Given that global environmental issues dominated coverage as seen in the table above, one could infer that local environmental issues were yet to attract top priority in the Nigerian press. However, it is interesting to note that environmental issues at the national and state levels were relatively covered well.

4.1.10 Sources Quoted: Main Actors

Table 4.10
Main Actors

	The Guardian	Daily Trust	Business Day	This Day	Total
	% (f)	% (f)	(f)	% (f)	% (f)
Government officials	29.6% (90)	45.0% (63)	31.6% (62)	44.2% (50)	35.2% (265)
Industry	1.6% (5)	1.4% (2)	4.1% (8)	5.3% (6)	2.8% (21)
Expert	65.1% (198)	44.3% (62)	56.6% (111)	48.7% (55)	56.6% (426)
Activist	3.2% (10)	8.6% (12)	6.1% (12)	0.9% (1)	4.6% (35)
Politicians	0.2% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.2% (2)
Other	0.3% (1)	0.0% (0)	1.5% (2)	0.9% (1)	0.8% (4)
Total	100.0% (304)	100.0% (140)	100.0% (196)	100.0% (113)	100.0% (753)

Analyzing sources quoted in news reports is crucial given that reporting stories with attribution is ethical and also gives credence to the story. It makes the story more authentic and believable. Journalists therefore depend on credible sources to a larger extent in reporting and legitimizing their stories. Hasan (2007, p.37) contends that “commonsensical understanding” that “society is bureaucratically structured” helps journalists to find news events. Fishman (1980) argues that this understanding “provides the journalists with a “map of knowers for newsworthy topics”. Sources of information are therefore selected by journalists through bureaucratic consciousness

based on hierarchy of credibility. It is widely believed that sources high on the rank know better because of their knowledge and position (Becker, 1967). This is not to say that those low on the rank are not to be used as sources. Over dependence or reliance on government/official/expert sources more than any other source at most times, creates imbalance in the news reports as views, opinions and perspectives from ordinary people are not sought. The story on pollution for example, is not complete if the reporter interviews a pollution expert or an official from the Ministry of Environment, without getting the perspective of the common citizen who lives in the locality that is polluted.

Table 4.10 on sources quoted, shows that information from experts (425 stories representing 56.6 percent) were used more than the other sources. It has to be pointed out that these experts are mostly from inter-governmental bodies like UN, UNEP. Official government sources quoted were 265, representing 35 per cent, while people from the industry, and activists quoted were 21 (2.6 percent) and 35 (4.4 percent) respectively. On how the newspapers fared in using sources in their stories, The Guardian was in the lead with 90 (26.6 percent) sources quotes out of the 265 official sources quoted. Daily Trust recorded 63 (45 percent) quotes, while Business Day and ThisDay had 62 (31.6 percent) and 50 (44.2) respectively. A total of 21 sources were from the Industry. Out of this, the Guardian had five sources (1.6 percent), daily trust had two ((1.4 percent), Business day had eight (4.1 percent), while This Day had six 5.3 percent). Expert sources quoted stood at 426. The Guardian had 198 (65.1 percent) experts quoted, followed by Business day with 111 (56.6 percent) sources. Daily Trust and This day had 62 (44.3 percent) and 55 (48.7

percent) expert sources quoted. It is pertinent to point out those experts included officials from organizations, like UN, UNEP, WHO and other prominent environmental organizations. Overall, the Guardian used more sources in reporting stories than the other newspapers analyzed. Thus, its contents could be said to be more authentic than the others. While it is commendable to use quotes from both official and expert sources, this needs to be extended to other people like activists and common people who may be relevant to the stories. Multiple sources enhance stories.

Overall it could be said that journalists depended heavily on official sources otherwise called main actors. The over dependence on official sources by reporters has been described by Hansen and Murdock, (1985) as general authority orientation. Thus, it is not out of place to say that over reliance on official sources or authoritative sources in news reporting is a common feature in the Nigerian Press. One major factor that has influenced this is that journalists may find it so easy and reliable to use the ‘packaged’ and authoritative information from government as this makes their stories more credible and helps them to beat deadline (Anderson, Petersen & David, 2005). This is in agreement with Fishman (1980) who contends that “journalists participate in upholding a normative order of authorized knowers in society...” (p.96). As with Fishman, Hall et al., (1978, p.258) opine that journalists tend to use accredited sources especially those with “institutional power, representative standing, or claims to exert knowledge”. It is perplexing that politicians who should ‘wield enough power’ and be at the forefront of the war against environmental degradation were found wanting with a dismal two featuring

as main actors/sources. This goes to show that environment is a no-go area for politicians in Nigeria. Little wonder then that environmental issues are not prominent in political party manifestos in Nigeria. If politicians were not interested in issues relating to the environment, that invariably explains the reason for the dearth of environmental reports. Environmental issues will attract the right type of coverage if politicians were to include them in their agenda. Put in a different way the more politicians, whose views are always sought by the press, talked about environmental issues, the more such issues are reported in the press.

Over reliance on official sources is further explained by Ginneken's (1998) and Dunwoody and Griffin's (1993) assertions that news is not just selected based on the experience and articulation of the journalists but from other sources that have the power in commanding journalists' attention on the stories that they (sources) want the public to read. Overdependence on these established sources like government sources, officials, experts, politicians have a huge influence in shaping news contents (Berkowitz, 1997; Gans, 1990; Sigal, 1986). Unfortunately, politicians in Nigeria do not contribute meaningfully to environmental discussions.

Conclusively, the frequency of sources quoted (788) as compared to the number of stories analyzed (754) indicates that the reporters did not include much multiple sources in their stories. This leaves much to be desired in the news stories as more sources make the stories balanced, stronger and more credible.

4.1.11 Subsidiary Actors

Table 4.11
Subsidiary Actors

	The Guardian % (f)	Daily Trust % (f)	Business Day % (f)	This Day % (f)	Total % (f)
Citizen	64.7% (11)	0.0% (0)	57.1% (8)	75.0% (6)	61.0% (25)
Union	5.9% (1)	100.0% (2)	28.6% (4)	0.0% (0)	17.1% (7)
Victims of disaster	29.4% (5)	0.0% (0)	14.3% (2)	25.0% (2)	22.0% (9)

Given that majority of news sources tended to come from a defined section whose intent is to influence news contents to their advantage (Berkowitz, 1997), it then behooves on the journalists to provide balance and fairness in their news coverage by using other sources like common people who are relevant to the news as sources (Friedman et al., 1986; Gans, 1990). This informed the decision to study this variable to find out how reporters relied on subsidiary actors as news sources.

Of the dismal 41 subsidiary actors featured in the 754 stories analyzed, 25 were citizens, followed by nine victims of disasters, while union members were seven. This again points to the fact that journalists do not depend on these subsidiary actors or common people for news. It justifies the claim earlier that there is an over reliance on main actors - officials or government sources as news sources. This finding is timely to emphasize Hannigan's (2006) assumption that it is the (common) people,

and not just the social structures or institutions or those that wield power that ought to construct environmental news.

From the point of use of multiple sources, the frequency of sources quoted (788 for both main and subsidiary actors) as compared to the number of stories analyzed (754) indicates that the reporters did not include a lot of multiple sources in their stories, otherwise the number of sources quoted would by far outweigh the number of stories analyzed. This leaves much to be desired in the news stories as more sources make the stories stronger and more credible. Single sources may have been used mostly because most of the news stories analyzed were event driven – straight news stories - where the reporters may have been constrained by the nature of events, and in a bid to beat deadlines, had to use single sources. It is therefore deductible that the use of multiple sources that bring in different shades of opinion that create balance in a news report, is not the norm in environmental news reporting in Nigeria.

A comparison of the newspapers uses of subsidiary sources in their environmental news contents indicated as seen in table 4.11 that out of the twenty-five stories (61 percent) under citizens as subsidiary actors, The Guardian had 11(64.7 percent) citizens contribute to its stories, Business Day and ThisDay had eight (57.1 percent) and six (75 percent) respectively. A dismal total of nine victims of disasters featured as subsidiary actors in the newspapers studied. This goes to show that the newspapers distanced common people from their reports. Thus, they failed to give their stories a touch of human angle. It is not enough, for example, to report a statement from a government official that deforestation is caused by indiscriminate

activities (over logging of forests) of common people without finding out from the common people the reason behind their actions. When common people are interviewed to know their views, they automatically become news sources. On the other hand, that subsidiary actors were very few in environmental stories carried in the four newspapers analyzed points to the inability of the press to address people oriented environmental issues. If this were to be the case, probably subsidiary actors would have featured prominently in environmental stories as reporters would have no other option but to interview them.

4.1.12 Direction/Tone

Table 4.12
Direction/Tone

	The Guardian % (f)	Daily Trust % (f)	Business Day % (f)	This Day % (f)	Total % (f)
Unfavourable	83.5% (255)	83.3% (117)	74.0% (145)	65.5% (74)	78.3% (591)
Favourable	16.5% (50)	16.7% (23)	26.0% (51)	34.5% (39)	21.7% (163)

Tone is used to depict the stances, views and perspectives on controversial issues. It is about the choice of words and the structuring of messages in a given way as to suggest meaning to the audience. This is related to framing which aims to select and organize messages in certain ways as to highlight some aspects of the issue in order to promote specific interpretation/evaluation, or solution (Biswas & Kim 2016; McCombs 2005; Entman 2004; Goffman (1974). While proponents of any given

issues are positive in their arguments, opponents usually criticize the issues at stake, while yet others will find a middle ground between the opposing sides. Thus in analyzing the tone of environmental stories it was gathered that 591 stories representing about 79 percent, were positive, while 163 (21 percent) stories were negative (unfavorable). There were no neutral stories. Overall all the newspapers studied could be said to be pro-environment given that the number of stories recorded under ‘positive tone’ far outweigh those recorded under ‘negative tone’.

However, one wonders if environmental issues were controversial to warrant favorable or unfavorable tones. Environmental issues raised in this study are real. No journalist or activists or government officials could argue that climate change is not happening, that the air, land and the waters are not being polluted, that the cities are not littered with garbage, or that government is not facing problems with waste management, urban management. Thus, the researcher was critical with the issue of unfavorable tone of the stories. On a closer look, what is considered unfavorable was based on language. For example “*Kwakwanso blames huge health bill on ignorance...*” the key word ‘blames’ depicts negativity, while the story itself was trying to raise awareness on how to lead better lives within a clean, healthy environment.

Thus, it could be inferred that almost all the stories reported on the environment were positive. Even when journalists *frown* at government’s inactivity to promulgate laws or initiate policies that would protect the environment, such stories should not be seen as negative or unfavorable, but rather the opposite given that they were

written to call government to action. The only time stories would be deemed negative would be when they were against combating environmental woes.

Some examples of phrases and sentences taken from the newspapers analyzed to indicate tone/direction are given below:

How slums are born; Noise angers Ikoyi residents; FG to train forest guards for conservation; Lead in paints endangers lives; Canadian erosion control solutions can help us; Kenya's shift to green economy to start soon; Biodiversity can improve adaptation...; Mallam pledges support to forestry; World Toilet Day: Gender equality and dignity; Nigeria reviews 23-year-old national policy on environment; More investments in climate change adaptation.

4.1.13 Pattern of Coverage

One of the objectives of the study is to ascertain whether there is a discernible pattern of environmental reporting in the Nigerian press in order to ascertain whether or not adequate agenda is set on environmental issues. The researcher therefore had to look at whether environmental reporting is seasonal or provoked by environmental events or not. To meet this objective the researcher had to look at the coverage per year and per month within study period.

Data generated in this regard as shown in table 4.13 below suggest that there is no discernible pattern of environmental coverage. In 2013, a total of 360 (47.7 percent) environmental stories were carried in the four newspapers studied, while 394 stories (52.3 percent) were carried in the same newspapers in 2014. Table 4.13 below indicates that of the 754 stories analysed for two years, the Guardian had 145 (47.5

percent) stories in 2013 and 160 (52.5 percent) stories in 2014. Daily Trust came up with 68 stories (48.6 percent) in 2013 and 72 (51.4 percent) stories in 2014. Business day reported 91 stories (46.4 percent) in 2013 and 105 (53.6 percent) in 2014, while This Day carried 56 (49.6 percent) stories in 2013 and 57 (50.4 percent) in 2014. When the total number of stories in 2013 is compared to that of 2014, it was found that a total of 34 extra stories were carried in 2014 ($394 - 360 = 34$). This is not so much as to suggest that environmental events or activities influenced coverage.

Table 4.13
Coverage per year across newspapers

	The Guardian	Daily Trust	Business Day	This Day	Total
	% (f)	% (f)	% (f)	% (f)	% (f)
2013	47.5% (145)	48.6% (68)	46.4% (91)	49.6% (56)	47.7% (360)
2014	52.5% (160)	51.4% (72)	53.6% (105)	50.4% (57)	52.3% (394)
Total	100.0% (305)	100.0% (140)	100.0% (196)	100.0% (113)	100.0% (754)

Regarding months, Table 4.14 below explains the frequency of coverage of environmental issues per newspaper per month. The table shows that the highest number of stories in 2013 was recorded in November (34 stories/9.4 percent) while the lowest number of stories in the same year was recorded in May (24 stories/6.7 percent). In 2014 the highest number of stories (39) was recorded in December representing 9.9 percent while the lowest was recorded in January (25 stories representing 6.3 percent). Data in table 4.14 also shows that there is no discernible

pattern of coverage given that there is little or no difference in the number of stories covered in the different months of the years covered.

Table 4.14
News coverage by month and year

	2013 % (f)	2014 % (f)	Total % (f)
January	7.2% (26)	6.3% (25)	6.8% (51)
February	8.3% (30)	8.4% (33)	8.4% (63)
March	8.6% (31)	8.4% (33)	8.5% (64)
April	9.2% (33)	6.6% (26)	7.8% (59)
May	6.7% (24)	8.6% (34)	7.7% (58)
June	8.1% (29)	8.6% (34)	8.4% (63)
July	9.2% (33)	8.4% (33)	8.8% (66)
August	7.8% (28)	9.1% (36)	8.5% (64)
September	8.9% (32)	8.6% (34)	8.8% (66)
October	8.9% (32)	9.4% (37)	9.2% (69)
November	9.4% (34)	7.6% (30)	8.5% (64)
December	7.8% (28)	9.9% (39)	8.9% (67)
Total	100.0% (360)	100.0% (394)	100.0% (754)

Given that sequential mixed methodology is used in this study where data analysis from content analysis informed in-depth interview questions, it may be pertinent at

this juncture to map some results from content analysis that needed to be investigated further in the in-depth interview. This as expected would help in validating overall results of the study.

1. In terms of quantum of coverage, it was found that generally there was poverty of environmental news coverage. There is need to investigate why this obtains and this could only be done through in-depth interview.
2. Results in the item type indicated that most of the news items covered were straight news. It becomes necessary to look at the credentials of those who report environmental news in terms of whether they are qualified, professional and experienced reporters or general reporters. It is believed that professional reporters will do interpretive, in-depth, and investigative coverage of environmental issues more than general reporters.
3. The result from content analysis also indicated that environmental news was not given due priority – environmental news hardly enjoyed prime pages, were not considered for editorial and environmental news was published once a week. There is need to clarify why this happens through the in-depth interview.
4. Issues covered was dominated by climate change /global warming when there were more pressing local issues. The reasons why this happens will be given during in-depth interview with journalists.
5. Dateline of stories were mainly from the global, national and state levels. There is need to know why Local Governments and rural communities lagged behind.

The investigation of these issues that emanated from content analysis results marks the beginning of the meeting point (mixing) of the two methodologies where content analysis results paved the way for in-depth interview data and analysis as presented below.

4.2 Data Analysis of In-depth-Interview

4.2.1 In-depth Interview Analytical Framework

One of the cardinal reasons for embarking on this study is to determine what influences environmental journalists in Nigeria in covering the environment the way they do. It's not just enough to say that journalists cover or don't cover the environment appropriately merely by looking at the quantum of coverage, it is rather of utmost importance to find out what lies behind such coverage. Thus, it becomes necessary to look into what influences the behavior and performances of journalists in relation to environmental news production. These influences have been identified by media scholars and they range from political, economic, social and cultural environments that the media function in. McQuail (1992) summed up these influences as the field of social forces in which the media is usually at the receiving end of so many sources that wield power in news production. The extent to which these influences affect the Nigerian press in reporting environmental news is one of the major reasons for undertaking this study.

It has been identified that journalists depend on a lot of factors while selecting their sources of information. Barrat (1996) contends that influences in news production would include: audience, 'real' world and ideological environment, state and legal

systems, media technology, ownership and control, organizational, working and professional expertise. Other factors according to Anderson, Petersen, and David (2005) include professionalism, existing knowledge of an issue, availability of contacts in the field, and pressures from the industry. Potent sources of materials for journalists include news conferences and press releases, meetings, journals and interviews and investigations. But unfortunately as Anderson, Petersen and David (2005, p.192) contend, “.... journalists often do not have time, means or expertise to seek verification of facts.... and are sometimes overly reliant on pre-packaged information over which they have little control”. This could be said to be the case of environmental coverage in the Nigerian press.

On the other hand journalists, themselves believe that environmental reportage is shaped by lots of factors ranging from level of comprehension of environmental issues, limited space and time allotted to environmental issues, news format requirements, control from editors and publishers, policy initiatives on environment, what the audiences need, dramatic and novel occurrences, and controversy. Again, Anderson, Petersen and David (2005) argue that these factors influence journalists in writing stories that readers may find interesting, and could also be a source of distorting or misinterpreting environmental stories.

In sum Shoemaker and Reese (2014) hierarchy of influences model in news production is similar to, and supports Gans (1979) and Gitlin (1980) findings, in their different studies of what influences news content that a variety of factors that can be categorized into the following approaches were hugely responsible for media contents. They include:

- a. The mirror approaches
- b. The organizational routines approach
- c. The journalist-centered approach
- d. The external influence approaches

The mirror approach suggests that the media are just channels of information as they are neutral and gather and disseminate social reality to audiences. Thus, it is believed that content depicts social reality with little or no distortion. To support this, Reese (2007) Borman (1978), and Renfro (1979) found that media represent events and people based on true occurrence. Reese (2007) further contends that lack of distortion is “defended in self-serving attempts by professionals to argue the accuracy of their work...” (p.32) However, it is found that journalists’ conceptions of which people or events are newsworthy become the bane of representativeness of news content. Hence political issues may be seen as more newsworthy than environmental news.

On the organizational routine approach, content is seen to be determined by media routines. Studies by communication scholars like Shoemaker and Reese (2014), Shoemaker and Vos (2009), Cook (2005), Livingstone and Bennet (2003), Tuchman (1978), Giltin (1980), and Fishman (1980), indicate that news organization cultures and routines determine how stories are selected, written and published. Such routines as deadlines, story holes/quotas, news sources (Scacco et al., 2016) and the conventional pyramid structure of news writing are organizational procedures that perhaps outweigh the constraints imposed by audience needs and interests.

It is also believed that journalist's attitudes, socialization, beliefs, and values impact on stories they select and write (Shoemaker and Reese, 2014). This is in consonance with the argument by Livingstone and Bennet (2003) that journalistic routines and values influence content. This reasserts an earlier observation by Paletz and Entman (1981) that "internal logic of media organizations and personnel" determine news contents. It is worth mentioning here that the type of training journalists received or receive help in shaping their news taste. Journalists who are well rounded in a given beat would always select relevant news items and interpret and write them well. That is to say that beat reporters do better stories on specialized topics like environment other than when they are handled by general reporters. While experience gained on the job can help a general reporter do a good job on environmental reporting yet a journalist who specializes in environmental journalism would always do a better job.

The external influences-centered approach emphasizes that media contents are determined by social and institutional forces like ownership, advertisers, technology, culture and audience (Scacco et al., 2016; Singer, 2014; Owen, 2013). It's often said that media contents reflect the wishes of those who own or finance the media (Holocomb, 2014; Nguyen, 2008; Altschull, 1984; McQuail, 1992). We could add here that contents do not just reflect the wishes of those who own and finance the media, but to a larger extent audience needs. This seems to support one argument put forward by reporters interviewed regarding the paucity of environmental issues coverage – that the audiences do not have interest in environmental news. If this is true, it could be because the journalists do not cater for the needs of their audiences. Environmental reporters should, as Weigold, (2001) Rogers, (1999), and Krimsky

and Plough (1998) suggest, understand the environmental news needs of their audiences and feed them with the same.

Consequently, the framework for analyzing and reporting the results of this study (in-depth interview) was based on Reese and Shoemaker (2014) hierarchy of influences model. Gan's (1979) model and other relevant news production models were also referred to in the analysis.

Reese and Shoemaker (2014) hierarchy of influences model has been discussed in literature review (Principle of news production section) and is summarized as follows:

- Individual: the selection of news content is influenced by individual news professionals.
- Routines: selection of content is influenced by the norms of selection that have evolved within the organization which is in turn influenced by norms of selection in mass communication.
- Organizational: Content selection is affected by group decision making in a given setting.
- Social institution: Content is determined by factors like markets, audiences, advertisers, and interest groups.
- Social system: Ideologies or social systems of societies influence content (Keith (2011)).

As said before, in-depth interview was used to investigate what or who influences journalists while covering the environment. Sixteen relevant journalists representing

the four newspapers studied gave in-depth feedback on issues relating to influences on environmental coverage in the Nigerian Press. The insight of one independent journalist was sought to counter the responses got form journalists chosen for the in-depth interview. This brought the total number of respondents to 17. The responses from the interviewees have helped the researcher to gain an understanding on the perception and understanding of environmental journalists in regard to how they are influenced in reporting and possibly shaping environmental contents.

A number of themes were derived from the interview in line with the research objectives, and these themes have provided this researcher with a framework for the presentation and analysis of ‘what influences journalists on environmental coverage in Nigeria’. These themes were presented in conjunction with the hierarchy of influences model of news production.

The interviews yielded qualitative information that explained why and how environmental issues are covered in the Nigerian press. All together 17 journalists, four from each newspaper studied, and one independent journalist were interviewed. These journalists were selected based on their portfolios as environmental news reporters, or editors. In the course of the interviews the researcher faced some challenging problem – getting the journalists to talk. This stemmed from the fact that they wanted to protect themselves and their jobs and therefore had to dance to the tunes of their pipers – owners and financiers of their respective newspapers. The newspapers studied are all privately owned, the journalists, as it were, had to respect the ideologies of those who own and finance their newspapers. The only condition on which the interviewees could respond to questions was on anonymity.

Consequently, in order not to put the respondents in danger of being demoted or losing their jobs, and in keeping to ethics of protecting sources of interviews, or “whistle blowers” as it were, the analysis is limited to quotations where necessary without attributions (mentioning names, or affiliations, unless where it is extremely necessary). The researcher however, had the opportunity to talk to one independent journalist who did not belong to the newspapers studied. The idea was to get alternative information on some issues or to get information where the journalists interviewed were tacit. His views on some of the interview questions were somewhat at variance with what was obtained from respondents of the in-depth interview. These independent views will be highlighted where needed to drive home the true picture or at least to ensure balance.

Furthermore, it is pertinent to mention at this juncture that the mixed methodology used in this study is sequential – implying that content analysis was conducted first and based on the findings of content analysis, the in-depth interview followed suit to address some of the issues raised in content analysis. Content analysis results identified poverty of environmental coverage, dominance of official sources in reporting environmental news, dominance of climate change news as news topic. Based on this, the interview questions were formulated to shade more light on the issues identified in content analysis. The method of questioning was adapted from Labov’s (1972) model of evaluating narrative where questions were asked to elicit answers bothering on orientation of the news outlets; what complicates coverage; evaluation of coverage; and results of coverage.

One essential element of all interviews is the verbal interaction between the interviewer/s and the interviewee/s. Hitchcock (1989, p.79) stresses that “central to the interview is the issue of asking questions and this is often achieved in qualitative research through conversational encounters”. Consequently, it became important for the researcher to familiarize himself with questioning techniques before conducting the interviews. Interview techniques informed by literature is attached as Appendix E.

4.3 Results and Analysis

In order to meet the objectives of this study, the analysis of the in-depth interview was based on the forces that affect or influence environmental reporting. As mentioned earlier the researcher was guided in the analysis by Labov's (1972) model of evaluating narrative. Questions were asked to generate information that helped answer the qualitative research questions as well as meet research objectives.

The themes that were analyzed were treated in common, unless where there was need to analyze them independently among the newspapers studied. In other words, similar responses were not repeated. Responses that stand out will always be included in the analysis. Effort was made to give a fair representation of responses of journalists from all the newspapers studied. Table showing profile of journalists interviewed is presented below.

Table 4.16
Profile of Journalists interviewed

Informant ID	Designation	Newspaper	Education	Experience/number of years	Beat
Informant 1	State Correspondent	This Day	B.Sc. (Mass Comm.)	2/2	General reporter/Environment
Informant 2	Reporter	This Day	MA (Comm.)	6/5	GR/Environment
Informant 3	Senior Reporter	This Day	Dip. Journalism	5/3	GR/Environment
Informant 4	Editor property and Environ	This Day	B.Sc. (Mass Comm.)	11/6	Writing and Editing
Informant 5	Reporter	Guardian	Dip. Journalism (Environmental reporting)	3/3	Environment
Informant 6	Reporter	Guardian	B.Sc. (Mass Comm.)	5/5	GR/Environment
Informant 7	Senior Reporter	Guardian	M.Sc. (Comm.)	7/7	GR/Environment
Informant 8	Head Environmental Desk	Guardian	B.A. (Comm. Arts)	10/6	Editing Environmental news
Informant 9	Environmental Correspondent	Daily Trust	Dip. Journalism	4/3	GR/Environment
Informant 10	Environmental Reporter	Daily Trust	OND (Journalism)	6/3	GR/Environment
Informant 11	Environmental Reporter	Daily Trust	B.Sc. (Mass Comm.)	4/3	GR/Environment
Informant 12	Environmental Editor	Daily Trust	B.Sc. (Comm. Technology)	6/4	Editing Environment/Technology

Table 4.16 Continued

Informant 13	Property/Environment Editor	Business Day	B.A	8/10	Property/Environment Editor
Informant 14	Multimedia news/Environment	Business Day	PGD	1/2	GR
Informant 15	Correspondent	Business Day	HND	5	GR/Environment
Informant 16	Asst. Editor	Business Day	M.A	7/2	Property/Environment
Informant 17 (Independent)	CEO Economic News Associates *Former editor at Business Day.	Nigerian Catholic Reporter	M.A	35 years' experience in journalism	Publisher

Table 4.16 above shows that, in terms of education/qualification, eight of the journalists interviewed are bachelor degree holders in mass communication/communication, while four have diploma degrees in journalism, three have master degrees, while one has post-graduate diploma. It's worth mentioning that only one of the journalists (diploma journalism) majored and specialized in Environmental Journalism. The other journalists are general reporters who claimed to have gained expertise in environmental reporting through the number of years they have covered the environmental beat. The number of years of experiences of the journalists range from two to eleven, while their years of experience in covering environmental news range from one to eight years. 7/2 in the experience column means that the journalist has seven years' experience as a journalist and two years' experience in environmental reporting. Thus, the individual journalist's approach (Reese & Shoemaker, (2014) and journalist centered approach (Gan, 1979) that harp on

media personnel as a factor in news production applies here- unfortunately in a negative way. The fact that almost all the journalists who were interviewed were not specialized reporters but rather general reporters was responsible for most of the news items reported as straight news and not in-depth news. Thus, the apparent lack of professional journalists to cover environmental news affected what they selected as, and how they packaged them as environmental news. This justifies the assertion of Pintak and Ginges (2008) that the narrative challenge posed by the complex nature of environmental issues is heightened by lack of professional journalists who should have the expertise knowledge, skills, and capacity to frame environmental news in an attractive and understandable way.

4.3.1 Getting to Report the Environment

Responding to the question on how they got to report the environment which was posed to elicit response to orientation of journalists in Labov's (1972) model of evaluating narrative, almost all of them cited reasons of redeployment, desk restructuring, posting, and re-posting.

“I was redeployed to report the environment”.

“I started reporting the environment as a result of desk restructuring”

One respondent seemed to summarize all the answers when he said:

“I was simply posted to report the environment, even though the zeal wasn’t there in the beginning, I started liking the beat despite its complexity”. (Informant 15)

Only one respondent indicated that he reports the environment because of interest and specialization.

“I have a Diploma in Environmental Journalism. That was why I was assigned to report the environment. I have a huge interest in reporting the environment. This was why I specialized in environmental journalism. I hope to stay on the beat for a longer period as the beat is evolving and looks promising”. (Informant 5)

From the foregoing it could be seen that only one of the respondents was posted to report the environment as a result of specializing in environmental journalism. This implies that there is huge lack of specialization in environmental beat which is a direct consequence in the lack of specialized knowledge of environmental issues and the competence to cover them. This is in agreement with a study on Media Coverage of Science and Technology in Africa (2011) where it was found that media houses in Africa have not done much to improve the individual capacity of journalists to give science informed coverage. The implication of dearth and or paucity of qualified environmental reporters is so much evident in the content analysis where most of the issues analyzed were categorized as straight news. This is because environmental reporters, because of their qualification, and or experience, lack the required skill and capacity to do in-depth analysis on environmental issues. Thus the individual journalist's centered approach (Reese & Shoemaker 2014) played a huge role in what was selected as environmental news and how it was packaged. Given that there is apparent lack of knowledge, expertise, skills and capacity to frame environmental

news in proper perspectives, it may be right for this researcher to argue that elaboration of agenda setting on environmental issues is lacking in the coverage of environmental issues in the Nigerian press.

4.3.2 Impact of Awareness, Education, Skills and Experience in Reporting Environmental Issues

Under this parameter, the following questions were posed to the journalists: How long have you been reporting the environment? Do environmental reporters possess the required skills, knowledge and awareness to report the environment? Does your newspaper provide refresher courses/updates for environmental journalists? Do you have access to environmental reporting handbook as a guide to report the environment?

The journalists were common in saying that they are reasonably aware of environmental issues given that they have worked on the beat for a considerable number of years. One of them aptly said, and this summarizes the feedback from other respondents:

“I now have strong grip and versatile background knowledge of environmental issues on Nigeria based on my experience and number of years on the job. It is said that practice makes for perfection; this is exactly my situation in environment reporting”. (Informant 12)

While the journalists may have garnered experience in reporting the environment because of the number of years they have reported the environment, they still lack

the expertise to report the environment properly as most of their reports were straight news stories lacking in both investigation and interpretation which are the core of environmental reporting. The advocacy ingredient was lacking in their reports. The lack of good background on environmental stories implies that the reporters were not able to treat the environment as an ecosystem in their reports as they did not, in most cases, link environmental stories to other socio-political issues in society. Thus, environmental reporters in Nigeria are yet to identify with the belief of scholars like Boykoff et al., (2008), Berglez (2011), Hansen (2011), and Cottle (2009) who posit that given the complexity and interconnectedness of environmental issues, their understanding and coverage by journalists should go beyond the particular environmental issue to include background information that extends to other societal issues.

Regarding education, most of them are bachelor degree holders, with a few as diploma and master degree holders. However, only one of them specialized in environmental journalism. This leaves much to be desired if environmental news were to be properly analyzed and reported in the right proportion. Environmental reporting is one of those complex beats that needs specialized reporters rather than general reporters. Journalists' inability to report the environment properly has been identified by Stocking (1999) to be caused by ignorance, lack of education, and inexperience. For environmental reporting to generate interest commensurate to its importance, then it has to enlist journalists who specialize in environmental journalism (environmental beat reporters). The impact of journalists' lack of knowledge in covering the environment is captured by Hasan (2007) who argues that

“as a result (of lack of knowledge) they became experts in nothing and consequently they frame environmental news as to what they understand which sometimes could misdirect the content. Hence knowledge is important for the journalists to recognize and to understand the issue” (p.141).

Responding to the issue of importance of education/knowledge in covering the beat the reporters admitted that it is crucial to have good knowledge in reporting the environment and that in some cases they were constrained in covering the environment by lack of knowledge.

“Yes, I agree that environmental issues are sometimes complex and beyond a layman’s understanding. This is a major obstacle in putting environmental stories to right contexts. When faced with such situations I try to find explanations from experts but deadline pressures militate against this hence we go to press with what is available”. (Informant 10)

It could then be affirmed that journalists’ inability to understand environmental issues and put them into contexts or link them to other societal issues leads them to generally present environmental stories as straight news rather than interpretive or investigative stories that inform and educate the public and possibly persuade them to relate well to the environment.

Where environmental journalism graduates are not on ground to report environment, then it becomes necessary to ensure that the general reporters who report the

environment are given refresher courses/updates from time to time. But this is way too far from reality. Most of the journalists interviewed reported that they hardly receive any refresher courses. Most of them replied to the question on whether or not they receive refresher courses thus: ‘not specifically’, ‘not specific but only for editorial staff’, ‘every journalist is retrained once in a while’ (general reporting training). A handful of them agreed that their newspapers provide refresher courses not specifically for environmental reporting but for general reporting. Confirming this, one journalist bluntly asserted that “...there is no special training for environmental journalists”.

“Refresher courses are not a priority in Nigeria, whenever they are organized, they are not specifically for environmental reporters, but for general reporters or in some cases for editorial staff only. The reason for not conducting refresher course may be because organizing a refresher course for a beat that doesn’t sell may be counterproductive”. (Informant 13)

On the impact of such refresher courses they agreed in unison that it helps in ‘capacity building’, ‘raising expertise’, ‘getting updates and new reporting ideas’, broadening ones expertise and mastery of the sector’.,

“Refresher courses no doubt helps us to stay updated, improve our expertise in reporting environment and most importantly it helps us stay upfront on new environmental issues”. (Informant 16)

Given that refresher courses are a sine-qua-non-for proper environmental reportage, it becomes absolutely necessary for environmental journalists to be updated through refresher courses, attendance of relevant conferences and meets, especially where environmental reporters' backgrounds are not deeply rooted in environmental journalism as in the case of general reporters. This is in agreement with Kim (1977) who, as it were, advised that it is important to teach journalists how to explain science (environmental issues) including "definition, examples, and analogy" (p.81). This could be achieved through formal school training and refresher courses (Mutiu et al., 2017).

4.3.3 Impact of Newspapers/Organizations' Policies/Institutional Control

As stated earlier media contents are influenced by social and institutional forces. Put differently the wishes of those who own or finance the media determine and influence media contents (Shoemaker & Reese, 2014; Cook, 2005; Altschull, 1984; McQuail, 1992). These owners, so to say, force journalists to shoehorn stories into whatever frame they (owners) preconceive. This stifles opinion and content. In other words, this limits reporting process which in turn affects news quality. In other situations what is published could also be driven by events (Livingstone & Bennet, 2003) that are perceived by theorists as news worthy. Shoemaker and Reese (2014), Reese (2007), and older studies done by Galtung and Ruge (1965) for instance, argue that such elements as organization's policies, news genre and societal culture exert a lot of influence on media content. In order to determine the impact of institutional control on environmental reportage, respondents were asked such questions as 'what is the impact of institutional control on environmental coverage? How do the

policies of your organization affect environmental coverage? Does your newspaper have clear policies or interest in covering the environment? Most of the reporters claimed that they faced frustration when they didn't have a free hand to report the environment (without being influenced one way or the other).

“There are some stories that can be stopped by your superiors due to interest. There are no clear policies as on daily basis, all stories are scattered on specified pages unless a particular story is strategic as to attract small space in the front page. Organization's policies in reporting environment sometimes weaken the morale of the journalists”. (Informant 3)

One respondent said that there was no control over what is reported as long as the truth is reported. Another reporter claimed that control is positive as it is “about getting the best and reporting the truth” (Informant 9). Yet other respondents said that institutional control sometimes come in form of influencing facts and figures to sooth interest. On interest and ideologies of the newspapers, the respondents responded that environmental news from, and affecting certain areas is preferred to news from other places. They argued that this should not be mistaken as proximity in news selection as its main intent is to project news from the respective regions at the expense of much more relevant news from other regions. This claim however seems to vary from content analysis result where it was found that the newspapers studied did not have any slants in coverage as per geographical focus. Slant lent much

weight on climate change coverage. It was also gathered that the organization's policies on environment were geared toward attracting advertisements.

"There is positive impact as environmental agencies and firms use the opportunity to place announcements and adverts, this is very important to us because no newspaper can survive without adverts especially these days that the economy is bad". (Informant 4)

Regarding control exerted by external influences including advertisers or sponsors of the newspapers, almost all the journalists interviewed remained tacit on this. I had to talk an independent journalist who agreed that environmental stories will not sell the newspapers if they were not major disasters or major government policy or major infraction by oil companies and businesses. He argued that what is worrying is that when there are such major infractions from oil companies and businesses, they use PR and 'Brown Envelopes' to keep the stories off the front pages. 'Brown envelopes' are illegal ways to placate or bribe journalists in Nigeria from publishing controversial stories. The independent journalists went on to say:

"These oil majors are heavy advertisers in newspapers and no editor or publisher can afford offending them. It may interest you to know that many of the senior editors and environmental correspondents are on the payroll of these oil companies". (Informant 17)

Others, in literal understanding of the question, understood policies in terms of setting particular days and pages to report environmental news. Environmental editors and their assistants, who, because of their positions, were pressed for more information regarding the policies of their newspapers on environmental coverage, could not provide substantial answers different from those of the reporters. From the foregoing, there doesn't seem to be a strong policy on environmental coverage in newspaper outlets in Nigeria, given that environmental journalism is yet to find its footing in the Nigerian press. The assertion that environmental reporting is hindered by external pressure holds true (Hansen, 2011; Friedman, 2004; Boykoff, 2009; Russell, 2006). This result also supports the findings of the study done by Department of Journalism and Communication, Makerere University (2011) that the media in Africa do not have explicit policies and guidelines that inform the coverage of science and technology – including environmental issues.

Apart from the lack of good policies regarding environmental coverage, a major reason for dearth of environmental coverage in Nigeria is the preference of other news genres like politics, economy and entertainment to environmental issues (Tagbo, 2010). The reasons for this preference are based on the fact that media contents are driven by market factors, especially in the present times of dwindling media finances. This will be explored later in discussions of findings. Thus, both organizational and social institution levels in the hierarchy of influences model played huge roles in under reporting environmental issues in the Nigerian press as good policies are not available, and those that are available are not pro-environment.

4.3.4 Knowledge of Environmental Legislation and Government Regulations

One of the objectives of this study is to ascertain the attitudes of the three tiers of government in Nigeria regarding safeguarding the environment. Questions raised under the above parameter were posed to meet this objective. Governments have an onerous responsibility to protect their respective environments. This they do by promulgating and enforcing relevant laws. Journalists on their part must have a good knowledge of these laws and have access or links with organizations, institutions, (governmental or non-governmental) that initiate relevant environmental policies so as to report them well. It is the responsibility of the journalists to create awareness on such laws and policies. On whether the Nigerian government has done much in regulating the environment, almost all the journalists interviewed were quick to admit that government was not found wanting in promulgating or enacting environmental laws. They agreed that the laws are there, but the major problem is that of implementing, enforcing or monitoring the laws. They reacted in the following ways:

“There are good laws but implementation is not total.

The laws are there but implementation is very weak.”

(Informant 5).

Others believe that it takes government ages to make environmental laws and ages again to implement them. One respondent argued that government hasn't done enough as “available laws are not well implemented” (Informant 6). In the same vein, another respondent said that government hasn't done much as it would take

“public outcry for certain laws to be in place” (Informant 10). One reporter summed it up like this:

“It is not about making the laws, it’s about implementing them. Many bodies like FEPA, EIA, have been created in the past to enact laws to regulate the environment. Presently NASREA is the body charged with environmental regulation in Nigeria. These bodies no doubt make the relevant laws, but do they have the capacity to implement the laws?” (Informant 14)

The journalists claimed that they have good knowledge of environmental laws. But when viewed critically this seemed distant from the truth as they could not substantiate their claims of knowledge of environmental laws. They were of the view that having access to relevant bodies like ministry of environment, and environmental agencies both at the local and international levels served to improve their knowledge of environmental laws and policies. Given that non-implementation of enacted laws affect environment negatively, (Yang & Percival, 2009; UN Country Report, 2002; ARD Report, 2002; Adelegan, 2004; Olekesusi, 1987; Nasidi et al., 2009; Nwifo, 2010) it becomes necessary that the press mounts adequate campaign to ensure that adequate laws are enacted and implemented.

4.3.5 Major Focus of Environmental Reportage and Impediments to Coverage

Responding to what forms the focus of their environmental reportage, the journalists interviewed were of the view that they reported the environment generally with the intent to inform, educate or mobilize the populace on crucial environmental issues. They agreed also that their newspapers did not pay any particular attention to any aspect of environmental issues like pollution, climate change, bio diversity, waste management, and desertification. However, the Guardian newspaper that combines property and environment as a beat was found to have interest in property development as well. One respondent from the Guardian had this to say:

“The purpose, policies of Guardian in property and reportage include to educate, inform and set agenda for companies. We focus more on business angle of environmental issues”. (Informant 8)

Another respondent pointed out that through:

“Our critical coverage of environmental issues, we call authorities to action to initiate policies on the environment. With our reports, we try to influence and provide necessary information and background for policy makers”. (Informant 5)

On the issue of what impedes their coverage of environmental issues in Nigeria, the common answer was that environmental news did not have economic value hence readers did not value it. One respondent said that “environment is a field that lacks

any form of business a journalist can do" (Informant 4). Echoing this assertion more aptly, another respondent said:

"Nigerians or readers do not cherish it (environmental news) but they are more interested in reading about money issues or politics. People are more interested in reading banking/finance, sports, entertainment, employment issues, and politics, so reports on environment do not really make front page to draw attention". (Informant 15)

Probed further on why there is little environmental coverage, one respondent asked:

"What editor or reporter and which reader would prefer an environmental news to a story on Chibok girls? (Boko Haram insurgency). Or a story on ethnic clashes, or a story on high cost of living? It is such news that feeds the press mill not environment, and that is the kind of news Nigerians read". (Informant 12)

The institutional level in the hierarchy of influences approach where contents are determined by such factors as market forces, audiences and advertisers was detrimental in covering the environment. The prevailing social system also played a role in under-reporting the environment. It is not just enough to say that environmental news does not attract audiences; rather environmental news has to be

crafted in a way that arouses readers' interest. This is why environmental reporters have to have good background knowledge of environmental issues so that they can write and link environmental stories to other societal issues so as to capture audiences' attention. Masterton (1992) is of the view that before any information is considered as news it must be of interest, timely, and clear. In Masterton's (1992) words, for information to be treated as news, it has to "hold interest for a substantial number of people...it must be new or newly available...and it must be information which is clearly understandable to recipients" (p.12). This seems so true given that news is like a perishable commodity that can only be put on the stall for sale when there is good demand. But the question is: are environmental stories packaged in such away is to attract good demand? It has often been said that for an event or issue to be news it has to be newsworthy, be of interest and appeal to a large number of people. It has to have significance so to say (Galtung & Ruge, 1965; O'Shaughnessy & Stadler, 2008). Based on the foregoing one would be tempted to justify one of the findings of this study – namely that environmental coverage is one of the areas that is given little consideration by the media based on the fact that there is no audience interest, or that it is a beat that is difficult to both the journalists and the audiences. This is not however true given that environmental stories were not simply packaged to suit the audiences they were intended for. For example, a story on climate change will be more meaningful to a local audience if it focuses on how climate change impacts them. The audiences will always relate to news they could utilize.

Further, lack of environmental issues coverage is also driven by what Allan (2004) called news/information commoditization and commercialization – where news has

to have a buyer. This again points to the role the institutional level of hierarchy of influences approach played in the coverage of environmental issues in the Nigerian press. Market forces, adverts, and audience considerations seem to be the norm in selecting and packaging environmental news in the Nigerian press. Thus, the excuse advanced by the journalists, in regard to limited coverage of environmental issues, is that the more difficult a beat like environment is, the fewer consumers it attracts. Thus, because of the ‘un-marketability’ of environmental stories, some of the newspapers studied did not publish environmental news on certain days reserved for environment. It was gathered that this usually happens when these newspapers have more adverts or paid political stories. Thus, environmental stories are dropped in preference to the fund-generating stories. One respondent remarked:

“Because of the dwindling economy which affects newspapers badly, every news organization will jump to any financial prospect including adverts. That is why any dry news will be dropped during advert boom like election periods when we get so many sponsored messages and adverts from politicians and political parties”. (Informant 1)

Labeling environmental beat, a ‘hard-sell’ is a typical case of calling a dog a bad name just to hang it. With proper education, exposure, experience, tools and motivation, environmental journalists can find environmental stories exciting and write them in ways that attract the public’s interest even more than the traditional/dominant news like politics, wars, corruption and terrorism.

Further on the impediments of environmental coverage, other respondents pointed to lack of access to places of environmental events especially in rural locations. The prevailing social system – lack of infrastructures like good roads, inadequate transportation system, and corruption that seem to be a way of life also played roles in under-reporting the environment. The feedback from the journalists interviewed support this assertion:

“Access to remote areas where environmental news breaks are a major concern in covering environmental issues. In some cases, accessible roads are not just there especially in places like the Niger Delta where most of environmental pollution in Nigeria happens as a result of oil drill or other rural communities where environmental news breaks. Limited access to where an incident took place limits getting first-hand information on the incident”. (Informant 6)

Another respondent said that:

“It is difficult to go to certain places to cover the environment because of security reasons. Some places in the north are a no-go area because of the menace of Boko Haram. In such situations, environmental issues emanating from such insecure places are not covered”.
(Informant 9)

This may explain the reason why there were few environmental stories from content analysis whose datelines were rural communities. Majority of the stories were from the state capitals and cities where the newspapers studied had offices.

Another major obstacle to covering environmental issues in Nigeria is the nonchalant attitude of both private and public officials to give relevant information needed to write detailed environmental stories. Sometimes government, according to the journalists, does not pay any attention to issues raised.

“Government hardly gives immediate attention to issues raised. Officials always hoard information to protect their interest. These officials are very economical with words, especially when it comes to facts and figures. Sometimes there is lack of information on critical issues when needed. Delay in release of information on facts and figures of issues impedes report. Apart from this, it is very difficult to expose erring firms as they are being protected by certain powers”. (Informant 16)

The independent journalist this researcher spoke to highlights the fact that most of the newspapers are on the pay roll of some of the big organizations that pollute the environment. When this is the case, it becomes impossible for the newspapers to criticize erring firms/organizations.

The above discussions go to show how difficult it is to get information from official environmental sources on sensitive issues relating to the environment, or to even expose corrupt officials or firms. Herman and Chomsky (1988) espoused that media are established for profit, and that advertising is a major source of income. They believe also that media reliance on experts or power brokers as sources of information play major roles as news filters and therefore are formidable in determining what gets covered in the media. In the case of this study advertisers exert a lot of influence on environmental contents. It is also apparent that what feeds the media mills in Nigeria in regard to sensitive environmental issues is mostly the morsels that fall from the ‘dining tables’ of officials or the so-called power brokers. No wonder environmental issues coverage is very lean. This confirms the findings of previous research that the routinized relationship between journalists and government sources is one on the reasons for limited environmental coverage (Sachsman, 1999; Miller & Reichert, 2000; Paskey & Steward, 2012). What is worrying is not the source relationship between journalists and government, but rather that such arrangement makes it possible for reporters to be less investigative and critical of official claims from government (Gamson & Modigliani, 1989). This also confirms what Hasan (2007) affirmed that information from established sources are cut to fit the news templates of the press which apparently is lacking in alternative sources. Further Bell (1989) and Hasan (2007) argue that packaged and available stories (from routinized sources) may be selected rather than a better newsworthy story (from subsidiary sources) that needs to be studied, researched and written from the bottom up such as environmental story. Independent sources,

freelancing, and investigative journalism should be utilized to counter this as well as balance stories.

4.3.6 Prominence Attached to Environmental Issues

In order to meet the research objective that sought to identify the degree of prominence (value) attached to environmental news, respondents were asked if they were satisfied with the level of environmental coverage and if environmental beat enjoyed the same prominence as other news genres like politics, entertainment, and or war/terrorism, some of the respondents answered in the affirmative.

“With the nature of environmental news, I can say

that it is favorably covered compared to other news

types. I know that more can be done in terms of

number of environmental stories and their

placements, but remember that emphasis is on

news that sells. It may not be proper therefore to

compare environmental news to political news”.

(Informant 7)

This claim that environmental news is favorably covered in comparison to other news types doesn't seem to correspond to the result of content analysis. In the first place reporting, environmental issues only once in a week is itself a whistle blower to the dearth of environmental issues coverage in the Nigerian Press. This is a far cry from what is expected when compared to other issues that dominate coverage on a daily basis (politics, wars, economy). Second, the fact that environmental issues

reports, as claimed by one respondent, and as supported by content analysis finding, do not make front pages most of the time, points to the fact that they are far much lagging behind in coverage. It is very perplexing that environmental stories hardly made it to the front page, or considered strong enough for editorials in all the newspapers studied. From the result of content analysis, only one story made it to the front page, while there were only eight editorials for the two-year study period. However, one respondent was bold and honest enough to say that:

“Environmental issues do not enjoy the same prominence as other beats due to observed perception of readers. Sometimes environmental stories are given prominence only when they are so important, which happens rarely. In other cases, they are not given prominence due to preference of money spinning beats like finance and politics”. (Informant 3)

They had a mixed reaction while responding to how satisfied they were with environmental coverage.

“Under the circumstances I find myself in terms of work routine, control and resources at my disposal I can say that the environment is well covered. But more can be done to give the environment a better coverage. For example, deadlines could be extended, more spaces allotted to the beat and longer stories could be written, also it could appear on front pages more and

more, and access can be provided to reach the remote areas where stories happen so that more environmental stories can be reported". (Informant 5)

Based on this it could be argued that both routines and organizational approaches in the hierarchy of influences model mitigated against proper environmental news coverage. The routinized content selection and group decision making process were responsible for environmental news coverage adopting the same pyramid style used in writing other story genres. This doesn't augur well for environmental stories given their complex nature. The non-placement of environmental news on the front page is also as a result of organizational decision. Also, content is influenced by social institutions where contents were affected by factors like markets, audiences, advertisers and interest groups. Informant 3 was of the view that environmental news does not enjoy priority due to observed perception of readers (lack of interest). Informant 7 harps that emphasis on news selection is based on those contents that sell – implying that environmental news doesn't sell the newspaper hence audiences and market forces were considered in not selecting or prioritizing environmental contents. The above argument also holds true on the issues discussed immediately below.

On whether they have regular pages for environmental news, they confirmed that environmental issues are reported just once in a week on regular pages. This is quite unlike other news genres like politics, entertainment, war, that are reported on a daily basis. This is an indicator that environmental stories do not enjoy the same priorities given to other news types. One respondent regretted that:

“...though stories are scheduled once in week but in some cases stories sent are not always published on time given that they could be delayed for publication when the day’s news holes allotted to environmental issues are full”. (Informant 9)

In some other cases as discussed earlier, environmental news stories are dropped or shelved to accommodate paid political stories especially during election periods. However, the availability of regular pages for environmental news is a step in the right direction and should be consolidated.

On the agenda setting role of the media in relation to environmental protection and preservation, they responded that they are upbeat by always:

“Informing, educating, mobilizing and sensitizing the people on crucial environmental issues. In some cases, we use environmental reports to call government to action in enacting laws and regulations pertaining to the environment”. (Informant 12)

Probed further on other ways to achieve ample agenda setting on environmental news, one of the respondents said that it could be done by frequent coverage, page placement, editorials and sizeable news holes allocated to environmental stories. In his words:

“Awareness on the environment can be achieved through adequate coverage, investigative reports,

editorials, front page placements, large spaces for stories. But this unfortunately does not happen for obvious reason that environment news does not appeal". (Informant 5)

The fact that environmental stories are yet to enjoy front-page placement or editorial status, and or in-depth coverage in Nigerian newspapers, lay bare the argument that there is much to be done in setting the deserved agenda commensurate to the environment. The argument that peoples' lack of appetite for environmental news as the reason for dearth of environmental coverage does not hold water any more. Studies done in the West have shown that audiences are very much interested in environmental issues more than they are in issues relating to crime, immigration, drug use which surprisingly dominate media coverage (Riffken, 2014). This was simply because such environmental news stories were tailored to suit the readers they were meant for. If such studies were conducted in Nigeria, it is believed that most Nigerians would be much more interested in their environment as well. One of such environmental issues that most of them would be interested in would be waste management which leads to other rampaging issues like pollution, urbanization, public sanitation, and sicknesses. Citizens are constantly complaining about the rot and decay in towns and cities, even in capital cities of most of the states in Nigeria, and yet newspapers report these authorities who seem to sit on these heaps of refuse and rubbish to discuss issues like ratification of international environmental treaties that have little or nothing to do with the citizens.

Elsewhere it is believed that authorities misuse budgetary allocations to the environment (S.L. Edu Memorial Lecture, 2009). This could be a topic that environmental reporters could explore to hold power to account and obviously it will attract readers' attention. By investigating such issue, the environmental reporter will be linking the environment to both the economy and politics. But unfortunately, the ability of environmental reporters to see and understand the environment as an ecosystem and package environmental news with that understanding is lacking. Thus it supports the findings of scholars that coverage of environment runs short of the interconnectedness of environmental issues (Boykoff et al., 2008; Berglez, 2011). It also emphasizes the need to pluralize (Lindenfeld et al., 2012) and diversify environmental discourse in the media (Hansen, 2011).

4.3.7 Prioritizing Climate Change/Global warming

One outstanding issue the researcher needed to verify was why climate change news dominated coverage. The journalists could not give any substantial reasons that justify the dominance. Most of the journalists interviewed simply said that "climate change is trending and is currently affecting some parts of the country". Other journalists who were also interviewed said they were "influenced in the coverage of climate issues by the global media, where climate change issues are the order of the day". But the independent journalists the researcher spoke to had this to say:

"Frankly speaking over reliance on climate change news is a misplaced priority. There are other pressing issues in Nigeria that could be reported. Honestly, Nigerians up till tomorrow do not know what climate

change is. The only reason why it is reported mostly is because some agencies like UNDP, UNEP, and Ministry of Environment started pumping money into climate change workshops and seminars where journalists were tipped to cover the topic”.

(Independent Informant 17)

Thus, the assertion credited to Rubin and Sachs (1973) who argue that environmental reporting is like the concept of “Afghanistanism” which promotes the coverage of problems from other parts of the world but deals myopically with similar and pressing problems at the local front supports this finding. The dominance of climate change news could also be attributed to the globalization of the news media which has made it possible for environmental issues like climate change to go beyond temporal and spatial borders (Boykoff et al., 2008; Berglez, 2011; Olausson, 2009). This explains why most of the climate change news stories analyzed in the selected newspapers were sourced from abroad.

4.3.8 Sources of environmental information and implications

The sources of environmental information and its implications was approached from three perspectives. First, the researcher looked at the sources of information used by the journalists to ascertain whether they are from government officials, environmental experts, ordinary citizens or NGOs. Second, the researcher looked at the origin of the stories in terms of dateline/geographical focus so as to ascertain where majority of environmental news emanated from. The third focus was on the

source of the story to determine how the stories were authored (by line, columnist, and subscription) Findings were compared to those of content analysis to see if there are any discrepancies

In looking at the sources of environmental information, we need to make clear which sources journalists rely on and which ones they value most. Generally, the journalists who were interviewed relied more on official information, but tended to value investigative reporting sources more. Unfortunately, investigative reporting is not practiced. One of the respondents argued:

“Because environmental news is most times complex, and though it is good for stories to be written from a variety of sources, but because of constraints, then it becomes necessary to get official perspectives to the story as this will put the story in proper perspective, authenticate it and save time in meeting deadlines”.

(Informant 11)

The statement above shows that journalists interviewed in this study may deliberately rely on information from official sources as they are already packaged. Rather than going out to look for sources, journalists seem too lazy around waiting for prepackaged information. This does not go well for investigative report where perspectives need to be challenged, and hidden information gets uncovered. The complexity of environmental news should not be a prohibiting factor. PIEC (2015, p. 101) advices that there are “resources available to journalists and news organizations

that help to break down these sometimes-dense issues and make them relatable to the average news consumer...”

The journalists interviewed mentioned that government sources, corporate sources, agencies, press releases, news briefings, interview of experts were categorized as official sources. These sources formed the bulk of sources on environmental issues. This corresponds with data from content analysis where official sources dominated subsidiary sources. It also aligns with the findings of studies conducted by scholars like Lacy and Coulson, (2000), Rubin and Sachs, (1973), Smith, (1993), that traditional or official sources criticized by researchers and scholars have continued to dominate in shaping and influencing the news about important public issue.

It is pertinent to note that the newspapers analyzed did not make good use of multiple sources. Multiple sources were used in few reports only, single sources were preferred. The reason for the single sources used in reporting environmental news could be because environmental issues stories come from coverage of news events, and as such reporters may be constrained in regard to the number of sources to include in the report. This would not be the case if the reports were feature or investigative stories.

Bylines, breaking news, and subscription to wire services were used by the newspapers regarding who authored the stories. For instance, bylined stories far outweighed subscription to wire services, and breaking news, the journalists interviewed revealed that they depended so much on both breaking news and wire services for environmental news. Bylined stories in most cases were expected to be from local environmental incidents. But during data analysis on contents of

newspapers, it was observed that many international stories were bylined stories as well. It was emphasized by respondents that they got sources from many quarters, including international stories, and had to rewrite the stories to bear their names as the authors. This could help shade light on why climate change news featured prominently as bylined stories when they should have been subscribed news.

“We hardly subscribe to wire services, we rather use them as part of our secondary news sources. I get news ideas from breaking news and wire services and attribute them in the text of the news but such news bear my name as the writer”. (Informant 12)

Other reasons why journalists depend on official sources cannot be farfetched. Government sources, agencies, experts are always handy to provide steady flow and authentic information. It will therefore be a waste of money and resources to engage in searching for alternative sources for the stories when information is readily available. This is even reasonable for newspapers that lack resources to cater for their journalists as is the case with the journalists interviewed in this study. Hasan (2007) and Murdock (1974) further argue that work pressures and deadlines force journalists to accept packaged information from officials with little or no inputs to such contents. In such cases, the journalists, as Hall et al., (1981) put it, just “reproduce the definitions of the powerful” by accepting packaged information. Carlson (2009) believes that the way journalists collect news and who their sources are, are of immense importance given that it exposes the underpinning assumption of social legitimacy and dominance in news. Ungar (2014) contend that editors usually

depend on political elites for most of their political contents, thus Goldenberg (1978) criticizes journalists for accepting and relying on official information which forces the journalists to adopt and publish the officials' version of the story. Given that information flow, in this model, is one directional – in what Schelsinger (1990) called movement from 'power center to media', it becomes only normal that these 'definitions' that come from power centers be challenged by the journalists before publishing them for the purpose of accuracy and balance. In other words journalists, as a matter of fact, must try to balance their information before they go to press otherwise they will only be involved in regurgitating official information. However in a different tone, Hall et al., (1978) argue that the regurgitative nature of journalists in "reproducing the definitions of the powerful" is not always true as the media become secondary definers of information by selecting relevant information from the raw materials sent by officials. This seems to be in agreement with Sachsman, (1999) who contends that journalists usually have, and are loyal to their own news values, and that they (journalists) set their own environmental agenda rather than depending on the value judgment of their sources. Thus this study replicates previous findings on journalists' overdependence on government or official sources of news given that the status quo still obtains. This study argues that there is need to blend official sources with ordinary sources who, in most cases, are affected by environmental decadence. This will also bring about use of multiple sources in the stories reported and thus enhance the authenticity of the stories, and the much deserved dissent opinions other than the much orchestrated government/official opinions.

Given that environmental journalism is complex and technical like other science beats, scholars like Greenberg et al., (1989) are vehement in criticizing environmental journalists that employ the same usual traditional news values used in writing other news stories. This is a lesson for environmental journalists in Nigeria. While they (journalists) accept official sources, they should know that such sources need to be challenged for balance by seeking alternative or dissenting sources, and the journalists should also know that given the nature of environmental stories, they should not be treated the same way as other simple stories in relation to the values used in selecting and writing them. Otherwise the audiences will continue to witness the same straight news reports on environmental issues. A policy change that allows investigative, interpretive reporting and environmental advocacy is direly needed in this direction.

On the issue of journalists' dependence on breaking news and subscription to or resorting to wire services/agencies as news sources, it goes to show that the Nigerian press advances the environmental agenda setting of the West and the western media where most of the breaking news come from, and who purportedly own most of the global wire services. It may not be perplexing then why environmental issues are tackled from global angle rather than from a local angle. The issue of proximity as a news value does not seem to be considered in the coverage of environmental issues in the Nigerian press. Thus, major local environmental issues like waste management, desertification, poor urbanization, pollution, public sanitation, may be denied space in the newspapers in preference to probably climate change issue which is on the western media global agenda. The over reliance on wire reports mostly

from the west, despite the fact that it has helped to advance environmental coverage in the press, has meant or resulted in the denial of reporting original local stories with strong Nigerian context and human-interest angles. Environmental reporting in the Nigerian press thus sounds utopic as such reports sourced from wire services are mere amplifications of the western media agenda on the environment rather than a local agenda that would promote needed debates and discussions. In this case the Nigerian press can be said to have failed in setting substantial, proper, people oriented media agenda on the environment. The press, as it were, sit on the heaps of smelly refuse dumps that are polluting 'local' air; relegate poor urban planning to the background, and neglect uncontrolled logging so as to address climate change issue emanating from developed countries. This idea of not reporting the environment from a pressing local or national angle, may have prompted researchers like Krimsky and Plough, (1988), Rogers, (1999) and Weigold, (2001) to sound a warning, as it were, that environmental reporters must as a matter of fact should understand the needs of their audiences and feed them with such needs. Rather than blaming audiences as not having interest in environmental stories, reporters should focus more on local (relatable) environmental issues that make sense to their audiences rather than jumping on the popular international bandwagon to report global environmental events that may not have any relevance to their home audience. The above discussion is timely for environmental journalists in Nigeria. Environmental journalists in Nigeria should emulate their counterparts in the West where journalists are purported to focus on specific local environmental issues (Betts & Gibson, 2012; West et al., 2003).

4.3.9 Availability of Tools

The question raised in this section becomes very necessary as it tried to go beyond the five media-centric hierarchy of influences (Reese & Shoemaker, 2014) to suggest other factors that may impact on environmental coverage in Nigeria. Thus this is part of re-evaluating the hierarchy of influences model in order to enhance it. This becomes a theoretical contribution of this study as it suggests further ways that enhance the hierarchy of influences model in the production on environmental news content. One of the tools that are essential to proper coverage of environmental coverage is environmental handbook.

Handbooks come in handy in any area of reportage. But this doesn't seem to be the case for environmental journalism in Nigeria. Responding to whether they have access to environmental reporting handbooks to aid reporting environmental issues meaningfully, they were quick to reply that 'environmental handbooks are not popular in Nigeria', handouts that aid reporting are given sometimes at conferences', 'our training in refresher courses are enough', '...no handbook in Nigerian journalism'.

"There are no environmental reporting handbooks in Nigeria. Usually we receive handouts during environmental conferences. This isn't usually enough but we make use of what we have. It will be helpful if such handbooks are introduced to environmental journalism in Nigeria as they will help us in reporting the environment in a proper manner". (Informant 2)

One of the respondents captured the scene of reporting in the Nigerian Press when he said that:

“Nigerian journalists don’t work with handbook(s)

because we are trained to report any beat”. (Informant

12)

The import of handbooks in reporting beats, environment inclusive, cannot be underestimated. The intent of environmental handbooks is “to give journalists accurate information on environmental issues and ideas on how to research and write environmental stories that are both interesting and balanced” (Rademakers, 2004, p.52). It is believed that handbooks on the subject will give tips, definitions and other relevant information necessary for reporting the environment.

Taken as a whole, reporting the environment isn’t just about writing about current issues and trends on the environment, or valuing timeliness, speed, simplicity and clarity, it rather goes deeper to explain the repercussions and implications such trends will have in both the social and political realms (Goodfield, 1981; Nelkin, 1995; Boykoff, 2009; Hansen, 2011). Lack of innovation and knowledge on environmental issues remain the bane of environmental reporting. Tagbo, (2010) argues that “very few African journalists or their editors have a good understanding of the science that is at the heart of many climate change stories” (p.36). Therefore, the coverage of deep underlying issues of environment (Smith, 2000) can only be a reality with proper education, experience and availability of tools(Smith, 2000). There are so many environmental associations, academic, nonprofit, independent organizations that support environmental journalists by producing relevant contents

that could be shared between news organizations at no charges (free). Environmental reporters can benefit from these associations. This will be discussed more in the section of professional associations that provide expertise and support for proper environmental coverage.

4.3.10 Access to Regulators of Laws and Policies on Environment

Environmental journalists' access to institutions and organizations that initiate environmental laws and policies is also undertaken in order to probe what happens beyond the hierarchy of influences approach. One of the ingredients to reporting any beat properly is to have links or access to institutions, bodies or organizations relevant to the beat as journalists will benefit from expert information from such organizations. The journalists interviewed said they have links with environmental bodies and agencies like UNDP, UNEP, WHO, Nigerian Environment Society (NES), Ministry of Environment, National Environmental Standards and Regulation Enforcement Agency (NASREA).

On how access to such bodies has influenced their environmental reports, they responded lack of access to environmental bodies definitely hamper their reporting as in most cases they cannot subscribe needed information from such bodies to write up their stories.

“...not having access to environmental bodies makes your report inconclusive as you are not able to get relevant information from experts. If you don't have access to the organizations, you can't have good

background information on issues and this may deter you from being detailed in your report". (Informant 4)

Another respondent reacted this way:

"The implication of not having access includes poor and unverified information, scanty news report, and lack of facts. Access helps in building good background of stories, and deepens originality and authenticity of your report. No access means your story will lack official and expert details and positions of authorities on issues, this can make your story unbelievable". (Informant 8)

It has to be pointed out that other than having links to the institutions or organizations mentioned above, none of the respondents mentioned any links to major journalists' associations like the Society of Environmental Journalists (SEJ) which is "an educational membership organization of news professionals that offer comprehensive set of resources including annual and regional conferences, skills, and issues training, publications, awards to outstanding journalists, story project grants, mentoring, Freedom of Information Act coaching, and a friendly peer-to-peer global network with unparalleled expertise, ready to help on deadline" (PIEC, 2015). Environmental journalists in Nigeria will do well to subscribe to membership of this all-encompassing environment society – SEJ. The benefits of belonging to such an organization are enormous as seen above.

Also the Earth Journalism Network (EJN) is active in creating environmental journalists networks in developing countries, building the capacities of the journalists through training, workshops and development of training materials, provision of grants, and creating data mapping platforms. Their overall aim is to work with environmental journalists in developing countries towards innovating and finding ways to solve the most pressing issues of the environment. Another organization worth subscribing to by environmental journalists in Nigeria is the Project for Improved Environmental Coverage (PIEC) which collaborates with environmental stakeholders and develops materials that aid environmental journalists in understanding and covering environmental issues in a much improved way. This becomes desirable given that up to date there are no traceable handbooks on environmental reporting for journalists covering the environment in Nigeria. Membership to such organizations as mentioned above help journalists do a better job about the environment. This is amply emphasized by UNEP (2010) when it pointed out that environmental networks encourage and facilitate environmental information sharing by organizing workshops that focus on environmental reporting. Such workshops enhance capacity of environmental reporters in handling new environmental challenges. Rademakers (2004), in agreement, believes that environmental network improves the quality, accuracy and visibility of environmental reporting which invariably promotes public understanding of environmental issues.

4.3.11 Events that Encourage Environmental Journalists

Further to ascertaining what happens beyond the hierarchy of influences model in news production, the researcher looked at how events /awards that encourage environmental journalists influenced their coverage of environmental issues.

Excellence, success, and sustainability of any endeavor are driven by healthy competition. Where there is no competition, no prize to be won, employees of organizations do not have motivation or zeal to excel and therefore do their jobs lackadaisically, whereas competition will always keep them on their feet to achieve a competitive edge over rivalries. Thus, it is expected that events or activities to celebrate and honor outstanding environmental reporters will bear a lot of influence on the journalists' quest to cover the environment appropriately. Asked if there were such events to celebrate environmental journalists and the impacts of such events on covering the environment, the journalists cited the Nigerian Media Merit Awards (NMMA) as the umbrella event that celebrates the work of outstanding journalists from different news beats.

“Well there is Nigerian Media Merit Awards (NMMA)

and it has prize for best environmental reporter. As for its impact, it motivates and encourages reporters to work hard as there is compensation for hard work”.

(Informant 8)

Another respondent had this to say on the same question:

“There is a yearly media award for environmental reporters called Ken Sarowiwa Award given under the

auspices of Nigerian Media Merits Award. The award helps in capacity building for environmental reporters". (Informant 1)

Another respondent was of the view that the common media award - NMMA is not enough to promote excellence in environmental journalism. He was of the view that there should be a special, independent event to celebrate outstanding journalists who have shown extra zeal in the profession.

"There is nothing special for environment reporters save for the NMMA awards for all journalists. There

has to be a special award for environment reporters given the huge importance attached to it by the world.

Such award will improve journalists' work on environmental issues; it will energize them to do more". (Informant 15)

While it is important to have national awards to celebrate outstanding environmental journalists, none of the journalists discussed environmental awards beyond Nigeria. The journalists should not limit themselves to local or national organizations and events that honor environmental journalists. There are such international organizations, events and or awards for environmental journalists who have proved their worth in the coverage of environment. Such awards include Young Environmental Journalists Award Africa sponsored by UNEP, International Environment Journalism Prize sponsored by SEJ, Earth Journalism Network's (EJN) grants to environmental journalists in developing countries. These awards are given

to best environmental stories, which imply that for Nigerian environmental journalists to be recognized in these awards, they have to go beyond the straight news report and go into in-depth, investigative coverage. For example, every year the three tiers of government in Nigeria propose and adopt a reasonable budget for environmental protection in general and urban waste management specifically. But the cities, with some few exceptions, are reduced to garbage cities. Environmental journalists could investigate this to find out what happens to the money budgeted for urban waste management. Their findings could lead to a better management for cleaner and healthier cities and communities. They could also harp on the implications of climate change to local farmers for example, and come up with reports on what could be done to abate such implications. They could look at the relationship between over logging, deforestation and climate change and explain what is to be done by both leadership and followership to curtail deforestation that leads to climate change/global warming.

4.4 Summary

From the foregoing analyses of data from both content analysis and in-depth interview on the influences of environmental coverage, it could be concluded first in regard to content analysis, that environmental coverage was dismal. Within the two years period of study, 754 stories were reported on the environment as compared to 5,278 for political stories believed to have been reported within the same time frame. Also environmental news was not given any form of prominence. Environmental news was mostly event-driven and therefore lacked in-depth representation which is the core of environmental journalism given the complexity of environmental issues.

Also there over reliance on the traditional official news sources at the detriment of common sources. It was also gathered that other local environmental issues were relegated to the background in preference to climate change issues albeit not as pressing as the downplayed local environmental issues.

On the in-depth interview front it could be concluded that the five hierarchy of influences model (Reese & Shoemaker, 2014) contributed negatively in the poor coverage of environmental issues. Thus to reverse the trend, environmental journalists need adequate background knowledge about the environment as an ecosystem so as to create relatable environmental stories that are linked to other aspects of the society. This will create the much needed demand for environmental stories. The claim that environmental stories are complex and unsellable are obsolete and expresses the need for journalists' proper education and acquisition of relevant knowledge that will enable them cover the environment properly. Thus there is need to do more on interpretive and investigative reporting rather than dwelling most of the time on events driven coverage of the environment.

Other major impediments to environmental coverage identified in the analysis include dwindling economy that forces newspapers to drop environmental news in preference to money spinning news types; lack of access to places of environmental events.

Also environmental news reports do not include variety of sources and this does not augur well for proper coverage as the ordinary citizens who bear most of the brunt of environmental decadence are not involved in environmental news construction.

CHAPTER FIVE

DISCUSSION OF RESULTS AND CONCLUSION

5.0 Introduction

This chapter discusses the findings of the study. It also briefly addresses the implications of the research findings from the theoretical, methodological and managerial perspectives. It goes further to make recommendations based on the findings. The chapter comes to an end with summary of the whole thesis and then conclusion.

5.1 Issues and Influences of Environment Coverage

The intent of this study is to find out how much attention the Nigerian press pays to environmental issues. This was prompted by the state of the environment in Nigeria which could be said to be so much on the brink of collapse as a result of mainly man-made and, in a few cases, natural disasters that confront the environment (Popoola, 2014). It has been identified that lack of information and awareness and proper behavior toward the mother earth are the bane of environmental degradation (Teklesilassie, 2015). Consequently, the media should play a prominent role in disseminating information and creating awareness about environmental sustainability.

In order to find answers to questions posed by this study, the researcher embarked on both quantitative data collection that would help shed light on the quantum of environmental issues coverage, and also a qualitative data collection that will explain what influences journalists in covering the environment the way they do. Thus,

content analysis of four Nigerian elite newspapers was undertaken to generate quantitative data, while an in-depth interview was conducted among 17 journalists from the selected newspapers including those at the editorial positions, to find out what prompts them in reporting the environment adequately or inadequately. Research questions and study objectives were set as a road map of the study, and data emanating from content analysis and in-depth interview are used in answering the research questions.

The reports below are the findings and discussions on findings of this study based on results from quantitative and qualitative data analysis. The findings are presented in such a way as to provide answers to the study's research questions as well as meet the study objectives. Tangible discussions have been provided while presenting both the quantitative and qualitative data in chapter four. Such discussions will not be repeated in this chapter.

5.1.1 Frequency of Environmental Coverage

This study finds that there was only a dismal coverage of environmental issues in the Nigerian press based on the following: within the two-year study period the four newspapers that were content analyzed covered only 754 stories as compared to 5,278 for political stories believed to have been reported within the same time frame, under the same circumstances save that politics was reported on a daily basis in multiple pages. The fact that environmental issues were reported once a week, and in some cases the stories had to be dropped in favor of the so-called money spinning beats points to inadequacy of environmental coverage. Apart from lack of experience, lack of tools and resources, institutional pressures, and complexity of the

beat that account for dearth of environmental coverage, it has to be pointed out that environmental issues seem to be overshadowed by more pressing issues to the public. Tagbo (2010) and Nwabueze et al., (2015) contend strongly that the political landscape of many an African country, which in most cases are turbulent, is responsible for the type of attention paid to environmental issues in the press. While media in the developed countries focused on environmental coverage without being bothered with paying attention to turbulent political, religious, or economic issues, the media in Africa were, and are still preoccupied with covering such pressing issues like coups, shrinking economy, corruption, religious intolerance, ethnic bigotry ad terrorism. These issues will always be of priority on the scale of preference of news needs of the citizens. As Tagbo (2010) rightly pointed out, some Nigerians live on one dollar per day, despite the fact the country earned more than \$500 billion from oil revenue in the last five decades. Such poverty-stricken Nigerians who make up a third of the population may only use news that addresses their daily need. Thus, it is not out of place to say that news is consumed in some cases based on utility “The power struggle, lack of accountability and weak institutional structure” as Nwbueze et al., (2015) opine, “are more visible and pressing issues in most African countries and these issues dominate news stories” (p.176). One of the respondents in the in-depth interview observed that editors, reporters and even readers would prefer news stories on Chibok girls (Boko Haram insurgency), ethnic clashes or high cost of living to environmental news that doesn’t relate to them.

5.1.2 Value Attached to Environmental News

The fact that environmental issues were reported once a week, and in some cases the stories had to be dropped to accommodate beats or contents that spin money is a huge testimony that environmental coverage is not valued. Data from content analysis indicated that there were very few columns/articles as compared to breaking or straight news stories (724 stories out of 754 stories was just straight news coverage, while in-depth stories and editorials garnered 21 and eight stories respectively). This implies that there were no priorities for in-depth, analytical, interpretive and or investigative stories on the environment. Thus, it could be inferred that environmental coverage lacked value. In terms of page placement, only one story made it to the front page. In terms of frequency of quantitative coverage, the number of stories covered and the number of days they are covered, are far from what is required if environmental stories were to assume their rightful place when compared to other beats. Qualitatively, the study also finds that the Nigerian press did not attach value, importance or prominence to environmental news, this is avidly supported by the fact that there was only one front page news, and eight editorials during the study period. Front page news and editorials are usually reserved for news considered important. That there was hardly any front page environmental news, and only a woeful eight editorials on environmental issues spells out the value the Nigerian press attaches to the environment. Environmental issues can only be considered for front page placement or editorial if, as Aniegbum (2010) rightly said, there was “a strong local, political and economic dimension to it, which is rarely the case” (p.176).

5.1.3 Priority of Environmental Issues

This study finds that despite the numerous pressing local environmental issues in Nigeria like waste management, pollution, desertification, nature conservation just to mention these few, the Nigerian press, as indicated in data from content analysis, still gives excess priority to coverage of climate change/global warming issue which, in normal circumstances, should not take precedence over the aforementioned issues. Climate change should be reported alongside other environmental issues. Some examples that suggest the prevalence of other major environmental issues in Nigeria include a report by Punch Newspaper in 2006 that:

Human induced deforestation may be accidental such as in the case of forests adversely affected by acid rain.

Improperly applied logging, fuel wood collection, fire management of grazing can also lead to unintentional deforestation (Punch, March 26, 2008).

A study by Poopola (2014) has this to say on deforestation:

Nigeria probably has the world's highest deforestation rate of primary forests today, having lost more than half of its primary forests in the last five years. United Nations Environmental Programme, (UNEP) in 2006 estimated that annual deforestation in Nigeria covers 663,000ha with an annual national deforestation rate of 0.76%...

Suleiman (2009), writing in the Daily Trust quotes the then Minister of Environment Mr. John Odey as saying:

Poor environmental sanitation in our country is characterized by the presence of heaps of refuse in cities, indiscriminate disposal of solid and other waste, blocked drains, overgrown weeds and poor food sanitation... Despite efforts by government to improve public health and quality of life, basic health challenges have remained high due to poor sanitation attitude among our people.

A report by ThisDay (March 13, 2010) in Poopola (2014) gives the following reasons for weather changes in Nigeria:

...These changes that have been occurring in Nigeria weather are: the gradual loss of the mangrove forest in the Niger delta; the then overflow of Lagos bar beach; the increase of the intensity of the sun in the southern Nigeria. These are as a result of the industrial pollution of industries, carbon monoxide coming out of cars, mining and exploration of oil from land.

Dr Suomi Sakai, UNICEF's Country Representative and Chief Ambassador in Nigeria once said: (<http://www.nairaland.com>)

It is estimated that about 33 million Nigerians defecate in the open, depositing about 1.7m tonnes of faeces into the environment annually. This development had resulted in a high level of contamination of the environment in which garbage and faeces often find their way into water resources.

The list of prevalent environmental woes in Nigeria is legion. The few examples above suffice. Climate change is only part of the environmental problems and should be treated as part and not a whole of Nigeria's environmental problems.

Thus, the study is of the opinion that by prioritizing climate change/global warming, the Nigerian press does not cover the needs of its local audiences. Yet there is a claim by the press that environment is not reported because people are not interested in the beat. Conversely, the Nigerian press purports, supports, and advances global media agenda on the environment to the neglect of local environmental issues. This is in agreement with Rubin and Sachs (1973) who believe that environmental reporting is like the concept of "Afghanistanism" which promotes the coverage of problems from other parts of the world but deals myopically with similar problems at the local front.

The prioritization of climate change issues over other pressing environmental issues by the global press may have led The Project for Improved Environmental Coverage (PIEC) to conduct a survey on 295 environmental professionals who were asked to place twenty-two broad environmental topics in order of importance on a scale from 1 -10, where 10 represents the issue that poses an urgent need to be addressed.

(PIEC, 2014) The table below highlights how environmental issues were rated in order of importance by the experts pooled by PIEC.

Table 5.1 *Continue*

Crucial Environmental Issues Ranked in Order of Importance

Rank	Category Area	Env. Experts Average Value
1	Climate Change	8.88
2	Fresh Water Quality/Scarcity	8.20
3	Energy Issues	8.05
4	Public/Political Will to Address Env. Issues	7.87
5	Ocean Health	7.70
6	Agriculture/Food Systems/ Food security	7.60
7	Environmental Literacy	7.58
8	Overconsumption	7.56
9	Environmental Health	7.48
10	Environmental policy/Government	7.47
11	Deforestation/Habitat Loss	7.44
12	Biodiversity	7.31
13	Sustainable Community Design/Planning	7.07
14	Land Use/Land Use Change	7.06
15	Air Pollution	7.04
16	Environmental Justice	6.91
17	Transitioning to a Green Economy/Green Jobs	6.79
18	Transportation	6.72
19	Accurately Valuing Ecosystem Services	6.55
20	Environmental Disasters/Refugees	6.46
21	Technologies solution to Environmental Problems	6.38
22	Environmental Impacts of Military Security	5.44

Source: Project for Improved Environmental Coverage (2014)

From the above table, it is observed that climate change was ranked as the most critical environmental concern. This is not perplexing as the respondents were from the west where climate change was rampant. But it is very interesting to note that there is a close call as one goes down the list. There is no sudden drop-off in the ratings. In some cases what separates each issue from the other is about less than a point. This amply indicates that there are other crucial environmental issues that

deserve frequent and prioritized coverage. Frequent and prioritized coverage should not be reserved for climate change only.

If environmental experts in Nigeria (or Africa at large) were surveyed on the same issue, there is a probability that they would have included other local environmental issues on the list of crucial issues to be covered frequently. Nonetheless, the above data was used to elaborate the need to diversify environmental issues coverage. Thus, the data or information above can be helpful to journalists in broadening or expanding their coverage of environmental issues beyond climate change or global warming.

Unfortunately, the study recorded a low coverage of the main environmental woes that beseech Nigerians, namely – public sanitation, conservation, waste disposal and management. This confirms the findings of Nwabueze et al., (2015) in their study on climate change issues coverage, that “articles in the selected newspapers dealt more with international dimensions/scenario and gave very little or no Nigerian Context.” (p.180). It is true that the more Nigerian newspapers ‘nigerianized’ environment stories, the more people would crave for them (Umeji, 2010). This particular finding where major local environmental issues are downplayed is in stark contrast to the norm elsewhere, especially in developed countries. West et al., (2003) for example, surveyed journalists in the West regarding how they prioritized environmental issues and found that they focused mostly on specific local environmental issues than the global environmental concerns.

This study also finds that environmental legislation drew considerable attention from the Nigerian press. This is a positive point given that the press needed to create

awareness on environmental legislation or call government to action in terms of enacting and implementing laws that will help safeguard the environment. Nonetheless, the major bane to environmental legislation has to do with monitoring and implementing legislation. This is where the press needs to pick up steam.

5.1.4 Author Source of Environmental News

The study finds that environmental news stories were not sourced from columnists or experts who could do detailed or in-depth analysis on environmental stories. Rather most of the stories as indicated in data from content analysis showed that 724 stories out of the total 754 stories were straight news stories, and therefore byline stories (See table 4.8). The implication is that environmental issues coverage was only reported based on answering the 5Ws and H news questions. This could be because most of the journalists covering the environment are general reporters and may not have the relevant skills, tools, expertise and exposure to understand and explain issues relating to the environment. It is one thing to report the environment, and another thing to explain the environment. The latter is the core of environmental reporting given its complexity (Tran, 2014).

5.1.5 Sources Quoted

The study finds that there was overdependence on official sources at the detriment of subsidiary sources. Data from content analysis (see tables 4.10 and 4.11) on major actors and subsidiary actors' categories indicate that a whopping number of main actors (753) were quoted as news sources as compared to the dismal 41 subsidiary actors quoted. There is, thus, a huge imbalance in the number of main and subsidiary

actors quoted. Arguably quotes from both official and expert sources are necessary to authenticate and support news stories; this however, needs to be extended to common people who may be relevant to the stories. Including more subsidiary sources would imply using multiple sources which enhance stories the more.

5.1.6 Dominant Depiction of the Attitude of the Three Tiers of Government in Nigeria

There is reason to believe that the federal government pays relative attention to environmental issues with adequate legislation on environmental issues, as claimed by the journalists interviewed. This is in agreement with data from content analysis where environmental legislation was ranked second in the issues covered category (table 4.7). The government's commitment to environment is also expressed through participation in international and local environmental conventions, and being signatory to treaties that emanate from such conventions. But this seems to be on paper only as there is little or nothing done to implement, monitor, and sustain such laws and treaties at the local level. That there are also local environmental conventions where the three tiers of government in Nigeria form alliance to fight environmental decadence points to positive attitude of government toward the environment. But practical commitment seems to be lacking. For example, the budgetary allocation to the Ministry of Environment in the past decade averaged less than 0.2 percent of the Federal budget. (S.L. Edu Memorial Lecture, 2009). This is dismal to make any meaningful contribution in rectifying the gigantic environmental malfunction in Nigeria. It is also on record, as revealed in the above lecture, that two percent of the Federation Account is specified to be spent on intervention programs

on the environment between the federal and state governments, but there is no information as to how this resource is disbursed and spent. Yet environmental reporters claim that environmental beat is dry. This is one example of how environment can be politicized – probing government spending on environment related issues.

From the number of stories recorded in regard to story dateline category of content analysis, the study is well placed to suggest that the National and State coverage of environmental issues were relatively good. However, the Local Government Authorities (LGA), and the Communities – at the grass root level were dismally covered. While the efforts at the National and State levels of coverage are relatively commended, much needs to be done to cover the grass-roots properly. That environmental issues are relatively covered at the national and state levels implies that environmental issues and events usually take place and generate more controversies at the mentioned levels. This could also be because the newspapers studied maintained offices and reporters in the federal and state capitals. The dismal coverage at the local government and community levels may be because of lack of access to these places; hence access should be extended to the rural areas to encourage adequate coverage.

5.1.7 Pattern of Coverage (Seasonal or Not)

Given the pattern of coverage of environmental issues in terms of frequency of coverage per year/ per month, the study finds that there is little or no difference in the stories covered over the two-year study period. Data from content analysis (see tables 4.13 and 4.14) also show that there is no discernible pattern of coverage given

that there is little or no difference in the number of stories covered in the different months of the years covered.

That a local or international environmental activity/event did not have any influence on the number of stories published establishes that environmental stories would not even peak during ‘prime time’, which invariably shows lack of interest in the beat. The reverse could be the case in other beats. The number of stories that are published on the environment is determined rather by the number of pages dedicated to the environment once in a week, and how busy the news day is. On a busy news day, environmental stories may be dropped for more money yielding stories. The reason for investigating this category was to find out if environmental issues stories soared during international or local environmental events or not. Unfortunately, to show how environmental issues were perceived by the Nigerian press, not even such events would create a peak for environmental coverage. Given this prognosis, it could be argued that the Nigerian press remained stunted in regard to environmental news coverage and therefore did not set enough agenda on environmental issues.

5.2 Discussions on Qualitative Research Findings

Discussions on results from in-depth interview were written based on study objectives in most of the cases and in some other cases based on issues that emanated from content analysis results that were further investigated in the in-depth interview. Also, results were written in adherence to Labov’s (1972) process of evaluating narrative in order to provide answers to in-depth interview questions that bothered on orientation of news outlets; what complicates coverage, evaluation of coverage and results of coverage.

5.2.1 Impact of Hierarchy of Influences Model on Environmental Issues Coverage

Overall the five levels in the hierarchy of influences model namely individual (professional journalist), routines, organizational approach, institutional, and social forces (Reese & Shoemaker, 2014) have continued to affect the production of news contents. However, in the context of environmental news, they have contributed negatively in the poor coverage of environmental issues. This has already been pointed out in the discussions bordering on content analysis research findings. In this section of analysis, the impact of the hierarchy of influences model in covering environmental issues will also be highlighted as deemed necessary.

5.2.2 Impact of Ownership and Media Organizations' Policies on Coverage

To understand the reasons behind ownership influences, newspaper policies and challenges faced by reporters in covering environmental news, we need to bring into perspective the fact that newspapers are a business venture and as such are expected to make profits to stay afloat. This was the case of Nigerian newspapers which were reported to be one of the most vibrant in Africa (Aliagan, 2015). This was based on the facts that newspaper circulation in Nigeria in the 1980's stood at an enviable number of two million copies per day (Igwe, 2004), and there were no challenges from any competition as experienced today with the advent of new media. In 1986 however circulation started to go down drastically due to the then Federal Government's policy to introduce the Structural Adjustment Programme (SAP) aimed at ameliorating economic hardship in Nigeria. But rather than improve, the

economy went from bad to worse and affected virtually all hues of businesses including newspapers. Aliagan (2015) states that the hyperinflation created by SAP meant that newspapering in Nigeria became difficult to manage and sustain. He also argued that “with the coming of SAP, the middle class, a potential newspaper reading class, disappeared...” (p.10). This invariably led to decreasing demand of newspapers. Thus, this marked the beginning of the strain in newsprint business in Nigeria. Based on the decline of newspaper demands, decrease of circulation and revenue, newspaper organizations had to find a way to survive and stay in the gloomy market. One such ways was to publish on demand. As Scacco (2015) points out, a focus on profit can influence news organizations to change contents or make different editorial decisions.

Apart from bad economy that has continued to hold sway, the emergence of the internet (new media that has created such platforms like online newspapers, blogs, citizen journalism), implied a plethora of alternative news sources that challenged the mainstream newspapers, became not just available but most sought after by the news audiences. The migration of audiences from newspapers to online sources further reduced readership, circulation, and revenue. Online newspapering and its impacts was not only experienced in Nigeria, but in different parts of the world (Gunter, 2003). It was because of this that newspapers in Nigeria launched and maintained online versions of their respective newspapers (Aliagan, 2015). The foregoing prognosis serves to establish the major finding of this study that news content choices are based on contents that will help the newspapers to sell so as to stay in the market in the face of dwindling financial resources. This is more vivid in

Nigeria where the state of the economy does not augur well for newspaper business. Therefore, that environmental contents were not among the favored contents in the Nigerian press could be viewed and understood from the above discussion. Environmental contents were simply labeled unsalable, by the journalists interviewed, because the Nigerian readers did not seem to have interest in environmental news. The assertion by Masterton (1992, p.11) that for information to become news, it must “hold interest for a substantial number of people...” is justified. Environmental issues in Nigeria seems to be reported in line with Down’s (1972) theory of Issue of Attention Cycle – where it is believed that certain issues would peak in the ranking of social agenda, sustained at this level for a given period of time, then downgrade and finally fade away. The only time that environmental issues coverage in the Nigerian picked up steam and was sustained in media agenda was way back in 1988 when Saint Antuan - an Italian company - dumped a highly toxic and radioactive waste in Nigeria. With this incident both the government and the press woke up to the clarion call to promulgate laws to protect the Nigerian environment; and the press began mounting serious surveillance on the environment (The National Mirror, 2012).

The post toxic waste dump years in Nigeria has continued to record drastic drop in media coverage of environmental issues. Environmental stories are currently events driven, and in most cases reduced to a straight news report which fades away the next day. This form of coverage is similar to what Gans, (1990) calls a random eruption of events which in most cases is reduced to a routine procedure. In his study of the progression of environmental coverage, Neuzil (2008) identifies two stages in

the coverage of environmental issues. The first stage involves covering the environment as only part of disaster or corporate misdeeds, while the second stage includes when environmental beats have been established firmly as a result of the huge attention focused on the environment. Environmental reporters in Nigeria, unfortunately, seem to be in the first stage of this progression model.

The study further finds that media ownership and media organizations themselves have direct negative effect on environmental coverage in the Nigerian press. First, that there is a policy to report environmental stories just once a week, that editorial boards of the newspapers did not see it fit to place environmental stories on the front pages of their newspapers, or write sizeable editorials on the environment, and that environmental stories would be dropped on a busy news day in preference to paid coverage, are an indication of how media ownership and media organizations stifle environmental coverage. Second, the journalists interviewed on this issue affirmed that they faced frustration when they did not have free hands to report the environment without being influenced one way or the other. These journalists may come up, for example, with a negative story on pollution from an oil company, but newspaper management may not publish this story given that their newspaper is illicitly on the pay list of the oil company or such company may advertise heavily in the newspaper.

Also, editors may be a formidable challenge given that they may not be interested in environmental stories, or be educated about them, thus they only emphasize on stories that enhance their publication's marketability (LaFollette, 1990). This supports the assertion of Willis and Okunde (1979) that advertising, consumers and

marketable contents are what news organizations require to make any beat relevant. Thus, it could be argued that external influences approach (Gans 1979) and the larger social system, the fifth hierarchy in Reese and Shoemaker's (2014) influence model contributed negatively in the coverage of environmental issues by the Nigerian press. The poverty of environmental contents recorded in this study was based on social and institutional factors like ownership, advertisers, audiences, and the prevailing culture. This confirms the fact that media contents reflect the wishes of those who own or finance them (Scacco et al., 2016; Singer, 2014; Holcomb, 2014; Owen, 2013; Nguyen, 2008).

5.2.3 Organization's (Newspaper's) Policy on Environment Coverage

The study finds that there are no streamlined policies the press uses in covering the environment. What may be called policy is the intention to stifle environmental coverage by any means. The obvious ones are dedicating one or two pages once in a week for publishing environment news; not considering environmental stories for front page or editorial except once in a blue moon. Another major policy of the newspapers was to attract advertisements. This could explain the reason why environmental stories are dropped in preference to money spinning contents. As one of the respondents in the in-depth interview pointed out Guardian combines property with environment in a bid to make the beat marketable.

5.2.4 Goals/Objectives of Coverage

The study finds that the major intents of the newspapers in reporting the environment are to inform, educate, and mobilize the citizens on crucial environmental issues,

hence the newspapers did not intentionally prioritize any particular environmental issues. It was only the Guardian that added or focused on the business angle of environmental issues. Educating, informing and mobilizing citizens on crucial environmental issues would be better achieved with informed, analyzed and interpretive stories other than straight news stories or event centered stories (Gamson & Modigliani, 1989; Einsiedel & Coughlan, 1993; Soroka et al., 2009). The press should also expose irregularities as practiced by some organizations and big companies. Accepting “brown envelopes” from big companies whose activities are contrary to a sustainable environment should be eschewed by the press.

5.2.5 Major Challenges of Environment Coverage

Challenges that affect environmental coverage are legion, but we will sum them up here based on data collected and analyzed. Lack of qualified environmental reporters is a major challenge. All the journalists interviewed in the in-depth interview, except one, are general reporters. They do not have the skills and capacity, education and experience to analyze environmental stories. This explains why majority of the environmental stories analyzed were straight news stories. This is not what environmental reporting should be. The journalist centered approach (Gans 1979) and individual level (Reese & Shoemaker, 2014) played a negative role here as well. The orientation and news judgments of news gatekeepers are vital in selecting the right news and presenting it in an understandable manner. This was not the case with environmental news reporters in Nigeria hence the prevalence of merely straight news that may not have relevance to environmental news needs of the Nigerian audiences. Nelkin (1995) and Hamilton, (1991) strongly argue that environmental

reporting is not just about publishing current issues, and trends, but rather it should include what effects or repercussions they will have in society. In reporting a current issue like global warming, the contention of environmental reporters should not just be on conventions or ratification of treaties, but rather on impact of global warming on citizens. For example, Umeji (2010), and Nwabueze et al., (2015) explain that some Northern Nigerian states that are dependent of agriculture for livelihood, have experienced poor harvest in the past years due to irregular rainfall. Rather than embarking on the utopic coverage of climate change from the capitals of nations where climate change conventions are held, reporters could educate and inform farmers about what to do in the face of this problem. This localizes the story and makes it 'marketable' as the local farmers will find such localized stories useful and handy.

As with Nelkin, Nwabueze, et al., (2015) believe that the media must set agenda and shape public's understanding of environmental issues, its politics and how they impact people. Thus, that environmental stories are not analyzed and put into the right perspective for readers to understand makes them a hard nut to crack. Masterton (1992) advises that for information to be considered news, it must be clear and understandable to the recipients. The reason why environmental contents are poorly covered, in the opinion of Rademakers (2004), is that environmental journalists seem to wear different hats, in the sense that they are engaged in reporting business, politics, science and other beats. This denies them the expertise needed to put environmental stories into context. Thus, the capacity to deal with novel

environmental issues qualitatively, accurately, and make them visible is lacking in environmental journalists (UNEP, 2010; Rademakers, 2004).

Apart from the above, the reporters do not have tools like handbooks to help them in their reports, they are not sent to relevant refresher courses to get them upfront with latest information on how to report the environment. Also, the reporters do not have accesses to, in most cases, good roads, transportation (helicopters), technologies, that could expedite coverage. And the journalists interviewed indicated that they faced serious challenge in not getting relevant information from both private and public officials on issues relating to sensitive environmental issues. Other challenges include the fact that environmental issues coverage is mainly driven by events. As Teklesilassie (2015) asserts, "This sensationalism-driven news style is ill equipped to report on longer term environmental stories." (No page). Another impediment to environmental issues coverage is the fact that environmental reporters have to adapt to the traditional news writing method in reporting the beat. There are also the issues of space allocation, and deadline pressures. Berglez (2011) is of the view that using institutionalized or standard journalistic practices as seen in breaking news stories, (if it bleeds it leads kind of stories) and trying to balance conflicting perspectives do not augur well for environmental reporting. These are 'routine and organizational' factors in the hierarchy of influences model (Reese & Shoemaker, 2014) that have affected coverage negatively. This is in line with Bueno (2007) in Lima et al. (2015) who strongly advocates that environmental journalism should come up with its own ethos (style) despite the fact that it may share part of its DNA with other types of journalism (p.235). To report environment appropriately, environmental reporters

need to have, as Teklesilassie (2015) puts it, "both outstanding scientific understanding of environmental issues and journalistic skills."

5.2.6 Impact of External Influences on Environmental Coverage

To some extent this study can affirm that environmental coverage by the Nigerian press is affected by external influences. What with the bulk of the coverage focusing on climate change/global warming to the neglect, as pointed out earlier, of local environmental issues. There is a preference to pursue global media agenda on environment to local agenda. This is in agreement with Zhu et al. (1993), and Soroka (2012) who believe that the media would in most cases influence public salience when issues were international and unobtrusive in nature.

It could also be argued that there are external influences as seen in the policies of the owners of the newspapers. These policies may not be explicitly expressed, but they have direct consequences on environmental coverage. It's not about the reporter covering an environmental event, it's about whether such coverage would be published or given a substantial space or a prime placement. Who, for example, decides why environmental stories should be dropped for paid political stories? Pressure from advertisers or financiers of the newspapers also constitutes external influence. As earlier pointed out, some of the reporters of newspapers in Nigeria are said to be illicitly on the pay roll of many multi-national corporations (MNCs). It becomes very difficult for such newspapers to expose these MNC's when they go against the environment. This finding corresponds to an assertion by Ekanem (2003, p.207) that "...in most cases economic consideration usually overrides editorial judgment in Nigeria. In several cases, it has been revealed that editors authorized

replacement of science page with advertisement paid for at the closing hours of production...”

5.2.7 Environmental Reporters, Policy Makers, Associations, and Tools that Enhance Good Coverage

Apart from the media-centered influences on environmental news coverage in the Nigerian press as discussed earlier, this study had the intention to re-examine the sociology of news production theory in order to find out other factors that influence news content production other than those posited in Reese and Shoemaker's (2014) hierarchy of influences model. The study finds that lack of relationships between environmental reporters and environmental bodies and policy makers, lack of tools like handbooks and other kits, absence of awards for excellence to environmental journalists, and lack of access to associations or organizations that provide journalists with training and resources for proper coverage of environmental issues contributed in no small way to the poor coverage of environmental issues in the Nigerian press. Thus, this researcher argues that to motivate, support and build the capacity of environmental journalists, there should be a very good rapport between environmental reporters and organizations, agencies, and groups that are pro-environment. These bodies would play a handy role in providing expert information and materials that would help the reporters to do excellent reporting on the environment, but unfortunately this does not obtain. The journalists interviewed indicated that they have links with agencies like UNDP, UNEP, and Nigerian Environment Society (NES). In as much as it is good to have links with these bodies, it is not enough for journalists to generate expertise to report the environment. The

journalists should also have links with major journalists' associations that focus on the environment. These include Society of Environmental Journalists (SEJ), Project for Improved Environmental Coverage (PIEC), African Network of Environmental Journalists, Earth Journalism network, just to mention these four. These organizations are famed for providing comprehensive resources that help journalists in understanding and reporting the environment properly. Compared to the west, it could be said that environmental journalists know the value and implications of belonging to such associations like SEJ and PIEC. For example, SEJ membership in the United States alone stood at 1400 as against ANEJ that drew only 700 members across Africa (Fahn, 2011). The above discussions have been presented to provide answers to research questions and meet research objectives.

It was found that lack of tools like environmental handbooks have had adverse effects on coverage of environmental issues in the Nigerian press. Thus, the need to develop specific environmental handbook to aid environmental journalists in Nigeria to report the environment properly, cannot be over flogged. Such handbooks will provide journalists with accurate and adequate information on how to research and write environmental stories that are interesting, balanced, understandable and relatable to the intended audiences. Such handbooks would provide definitions of environmental concepts, give tips and other relevant information that are vital in reporting the environment. The creation of such handbooks becomes even more necessary as it will support most of the environmental journalists who lack innovation and knowledge of environmental issues.

Since motivation drives excellence in any endeavor, it is therefore recommended that for environmental issues to be covered properly, environmental journalists should be duly rewarded. Events where exceptional environmental journalists will be honored should be established as this will bear a lot of influence on journalists' efforts to cover the environment properly. While such events could be emphasized locally, newspaper organizations/environmental journalists should also be part of international organizations or events that celebrate environmental journalists who have exceptionally proved their worth in the coverage of environmental issues. To be recognized for these awards imply that journalists must go beyond the event driven stories, which unfortunately forms the bulk of environmental coverage in Nigeria, to in-depth, investigative and interpretive stories which are the core of environmental news stories.

5.3 Implication of Research Findings

This study intends to expand existing body of knowledge in environmental journalism – especially environmental issues coverage. In doing so it contributes to knowledge in three dimensions – theoretically, methodologically and managerially. This bears from the fact that the study examined some environmental theme seen from the perspectives of journalism hence the study could be seen as an intersection between two areas of knowledge – environment and journalism. Thus, the approach was based on specific coverage, a set of news, and a group of social actors (Lima et al., 2015) which were analyzed to come up with an empirical interface. The interface was subcategorized into the following based on Lima (2015) typology.

1. News analysis – which includes environmental issues/themes that were analyzed based on contents, mapping of sources, and identifying frameworks.
2. Coverage of events – analysis of coverage of all types of environmental events
3. Mediatic Visibility - looked at the issues related to priority placements, like editorials, front page; news hole.
4. Journalistic practices – focused on routines of environmental journalists from the profession point of view; social role of journalism; relationship with news sources, and news selection criteria.

The remaining part of this section will discuss the contributions of the study briefly.

5.3.1 Theoretical Implication

The theoretical contributions of this study are in three dimensions. First, it extends and tests theory /current knowledge or scholarship on the topic, secondly it provides a better understanding of the concept of environment, and thirdly it establishes or replicates previous studies.

In the first instance, this study has advanced current knowledge/scholarship by providing additional insights in how environmental issues are selected and presented.

The sociology of news production which is the bedrock of this study has been found to be both restrictive and also empowering in the construct of environmental contents. For example, the power of the media to tell people what to think about as illustrated in agenda setting role of the media, (Reese, 2007) is enabling, while the

fact that there are behind-the-scene powers (news sources) that set media agenda is restrictive. It has been highlighted in previous studies that there is poverty of environmental news (Nitz & West, 2004; Fischer 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015; Ukonu et al. 2010; Batta et al. 2013; Oso, 2006; Galadimma, 2006; Nwabueze, 2007; Motei et al., 2008) but without any insights why such poverty of coverage obtains. The present study extends current knowledge by probing into what informed or influenced the reported poverty of environmental coverage.

While there is exponential research on environmental issues coverage, there are only a few sociological explanations in regard to coverage of environmental issues by journalist, especially in the Nigerian case. This study is therefore an attempt to bridge the gap between practice-based studies of environmental reportage (Stamm et al., 2000; Liebler & Bendix, 1996; Nitz & West, 2004; Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas & Emenyeonu, 2015; Ukonu et al., 2010; Batta et al., 2013; Oso, 2006; Galadimma, 2006; Nwabueze, 2007; Motei et al., 2008) and those that reflected on general sociological journalism studies (Hess, 1996; Reese, 2003; 2007; Schudson, 2003). This was done by providing a comprehensive quantum of environmental issues coverage, and a systematical account of the sociological factors that impinge on how journalists cover environmental issues with special reference to Nigeria.

Further it has been observed that sociology of news production theory has been sparsely applied to environmental issues coverage. Most of the past studies that used the theory focused mainly on conflict-related issues (Hanitzsh & Hoxza, 2014),

peace journalism (Wolfsfeld, 1997), war coverage (Vandevoordt, 2017), political economy of foreign news (Herman & Chomsky, 1998). The present study has extended the frontiers of sociology of news production to the field of environmental journalism in order to explain how and why Nigerian journalists cover the environment the way they do.

However, few studies that were done on environmental news production focused on sociological explanations of news coverage in relation to source influence on journalistic decisions in news production (Ericson, et al., 1991; Carlson, 2009). Consequently, there seems to be replication or recycling of research based on how journalists determine sources based on “social dominance and legitimacy” (Anderson, 2017, p. 2). To change this status quo, Anderson (2017) argues that there is need for a “major rethinking of early media-centric approaches to examining journalist/source relations...” (p.1). This study advanced on the prevalent social dominance and legitimacy in news sourcing by establishing the influence of global media as a network that environmental reporters (especially those from developing countries) source their information from. Also, this study went beyond the factors that affect news production as defined by Reese and Shoemaker (2014) hierarchy of influences approach and ascertained other factors that impinged on news production, especially in Nigeria.

Further, most of the previous studies that dwelt on environmental issues coverage employed agenda setting or framing as their major theoretical frameworks (Stamm et al., 2000; Liebler & Bendix, 1996; Nitz & West, 2004; Fischer, 2013; Fahey, 2013; Adel, 2013; Al Foor, 2013; Okunlola, 1996; Uyo, 1996; Hassan, 2007; Abbas &

Emenyeonu, 2015; Ukonu et al., 2010; Batta et al., 2013; Oso, 2006; Galadimma, 2006; Nwabueze, 2007; Motei et al., 2008). Theoretically the present study is an advancement on past studies as it uses sociology of news production theory (hierarchy of influences model) to determine the level of agenda setting on environmental issues.

There is no doubt that the hierarchy of influences model has helped to explain the factors that influence news contents, however this researcher re-examined the hierarchy of influences model to suggest ways to improve it by ascertaining other issues or factors that may influence environmental news content production beyond the five hierarchy of influences espoused by Reese and Shoemaker (2014).

The sociology of news production was examined in this study in regard to whether or not it has helped environmental journalists in covering environmental issues adequately or rather set enough agenda on environmental issues. In doing so for example, this study looked at the agenda setting role of the media on environmental issues as it determines the measure of coverage on environmental issues (Teklesilassie, 2015). While agenda setting implies that the media chooses what people think about (Reese, 2007), this study went further to find out who sets agenda for the media. In applying this theory in regard to what influences media contents, it was found that the five-traditional hierarchy of influences namely “individual, routines, organizational, extramedia (institutional), and ideological (sociocultural)” still obtains (Shoemaker & Reese, 2014; Shoemaker & Vos, 2009; Reese, 2007).

However, it was found that these social factors were not pertinent or did not play major roles in determining environmental news contents, rather the dwindling national economy and media globalization were considered critical or played major roles in shaping environmental contents. This is exemplified by the fact that most studies on environmental issues centered on climate change (Ukonu et al., 2010; Carlton et al., 2015; Tandoc & Eng, 2017; Lineman et al., 2015; Thrumalaiah & Aram, 2017) which is a major focus of global media. Also, as seen in the content analysis result of this study, the main category of environmental issues covered by the Nigerian press is climate change despite the fact that there were more local pressing issues. This development is a direct consequence of overdependence on the global/western media for news. Given that major world events are subscribed by media in the developing world from dominating media in the developed world, and given that journalism research has gone beyond national boundaries (Reese, 2007), this study is of the view that media/national economy, and media globalization should be considered major factors in Shoemaker and Rees (2014) hierarchy of influences model in all types of media contents including environmental news. This is in agreement with Shoemaker and Cohen (2006) who believe that news has achieved some commonalities across nations. This study has, therefore, set the pace for future researches bothering of environmental issues, not just to look at the frequency of environmental coverage, they should also look into what influenced the production of such frequency of coverage, and in doing so, such researches should be cautious in regard to recycling the traditional hierarchy of influences model.

In re-examining Reese and Shoemaker (2014) hierarchy of influences model, the study finds that emphasis on influences of environmental issues coverage should not be based or focused on the five levels of influences espoused by Reese and Shoemaker (2014) as these influences militated against coverage. The study finds that emphasis and focus should be on the following:

- a. Availability of tools that aid coverage, for example, environmental handbooks. Detailed discussion on the impact of handbooks on the proper coverage of environmental issues was presented in section 4.3.9.
- b. Access to institutions that initiate relevant environmental laws and policies. Discussion on this issue was presented in section 4.3.10.
- c. Events that celebrate and encourage environmental journalists in their work, for example, awards. This was discussed in section 4.3.11.

Thus, this study has set the pace in providing alternative sources of influences in environmental news production other than those promoted by Reese and Shoemaker (2014). Future researchers could capitalize on these sources of influences suggested by this study in conducting studies bothering on the influences of environmental news coverage.

While previous studies have made contributions in relation to grasping journalistic procedures in covering the environment, such studies failed to include the theoretical concepts of coverage of environmental news (Tran, 2014). This supports the views of O'Donnell and Rice (2008) that conceptualization of environmental coverage studies remains an area not so well covered given that previous studies focused on specific topics like climate change, pollution, and biotechnology thus providing a

weak or narrow scope or a partial background/overview which does not address a general theoretical concept of covering environmental news. Even at that, such studies as above did not look into the media sociology frame and its implications.

This study also provided a better understanding of the environment with the view to help journalists to present environmental issues as an ecosystem that is interrelated and not isolated. Presently most environmental issues are treated in isolation of each other, (especially in the Nigerian press) thus neglecting the ecosystem nature of the environment. To illustrate the interconnectedness of environment to society, Al Gore – a major advocate for climate change said at the 2017 International Government and Communication Forum (IGCF) Sharjah, UAE, that “A massive drought (effect of climate change) in Russia in 2012 caused Russia to withdraw its grains from the international markets. This led to skyrocketing prices of grains and allied grain products in the international market. This was felt more in developing countries that depended more on importation of grain from the West. In Algeria, it was so intense that one of the citizens had to set himself ablaze rather than continue to live without bread. This marked the genesis of Arab Spring… (Gore, 2017). This confirms the views of Environmental Protection Agency in Ethiopia (EPA, 2008, in Teklesilassie, 2015) that environmental degradation (especially climate change) is closely associated with drought, food insecurity and poor farm productivity. Thus, the need to report environmental issues (especially in the Nigerian press) form a multi-dimensional angle was highlighted in this study

Finally, this study has replicated existing studies and advanced existing knowledge on environmental issues coverage. In consonance with many previous studies (Batta

et al., 2013; Adelekan, 2009; Ukonu et al., 2010; Tagbo, 2010; Okoro et al., 2010; Ogunjinmi 2013), this study has concluded that environmental issues are treated myopically compared to the magnitude of attention they deserve, but unlike the above studies that did little or nothing to find out why such situation obtains, this study advances the theory of news production by probing into what influences environmental news contents. Thus, this study has replicated previous research findings and has gone a step further to provide insights lacking in previous studies.

5.3.2 Methodological Implication

Methodologically, this study has advanced methodologies used in previous studies in many ways. First and foremost, previous studies dwelt mostly on frequency of environmental issues coverage. This implied that what they focused on was the numerical aspect of coverage, hence the prevalent method of study was content analysis. There was little or no attempt to probe into what contributed to what or who influenced environmental coverage. This study has therefore improved the status quo by employing sequential mixed methods in investigating press coverage of environmental issues in Nigeria.

Secondly, the methods of study employed by previous studies (Ukonu et al., 2010; Abbas & Emenyeonu, 2015; Carlton et al., 2015; Tandoc & Eng, 2017) only provided sparse information with regard to how the studies were carried out. There was little or no description/elaboration regarding the reasons or rationales for the chosen methodologies (Manzur, 1998; Gavin et al., 2011; Ungar, 2008; Brossard et al., 2004; Das et al., 2009). This may be because of the nature of such studies or the spaces allotted for their publications. The present study gave a detailed, in-depth and

standard explanation of how the research was carried out. This may serve the methodology needs of future researchers in the field of environmental journalism.

Thirdly, the probe into what shapes environmental contents further provides a distinct and a deeper insight in regard to how and why environmental journalists represent the environment the way they do. While this study does not question the validity of previous studies that centered on numerical content analysis, it however reduces the prevalence of such “quantity laden studies” and emphasizes on qualitative aspect by employing methodologies that emphasize quantity and quality. The qualitative aspect of this study provided insights relating to the reasons why environmental issues are not adequately covered. The mixed method approach used in this study is distinct/novel and therefore an advancement on the previous methodologies employed by previous researchers on topics related to the present study.

5.3.3 Managerial Implication

Regarding the managerial contribution, this study offers practical contributions to media practitioners – reporters, editors, media management team, the public and the private sectors in regard to how to conduct ‘businesses’ relating to environment and environmental journalism, especially as it relates to environmental issues coverage. Environmental reporters have been provided with adequate information regarding what to do to cover environmental issues properly. For example, literature is provided on the need for environmental handbooks and subscription to environmental bodies and associations that provide handy materials that aid and support environmental coverage. Editors and media management team have been

provided also with adequate literature on the implications of not coming up with good/feasible and functional policies relating to environmental coverage. For example, the idea of influencing content through media routines, (Reese, 2007) like pyramiding contents and keeping to the traditional deadline, do not work well with environmental stories. Policies should reflect the distinct nature of the beat, by granting reporters enough time to investigate and report stories in an in-depth manner. It was highlighted that environmental reporters should also be properly educated in reporting the environment. This cannot be done without Environmental Journalism schools that will train environmental reporters, and in other cases conduct workshops and refresher courses where environmental journalists would update on current issues relating to the environment,

The responsibilities of both the private and the public sectors in creating a sustainable environment are also discussed. Given that Government or the powers that be is seen as the chief security officer of the environment, it must, as such, be pro-active on environmental concerns. Promulgation and enforcement of environmental laws is one sure way to sustain the environment. The Ministry of Environment and other bodies that focus on the environment have been called upon to not pay lip-service to environmental policies by politicizing them. Given that they are the dominant sources (official sources) of environmental news as the result of this study indicates, it behooves on them to provide objective environmental information when called upon by journalists. Furthermore, policy makers like the Ministry of Education need to see the urgent need to create curricula relating to environmental sustenance in schools so as to educate, inform and mobilize students

to imbibe the right attitude toward the environment. This should also be more meaningfully extended beyond the classrooms to other parts of the society so as to get everyone to bear the right attitude toward the environment. The National System of Innovation and Diffusion of Innovation which works to modify and diffuse behavior (Freeman, 1995) should be actively involved in getting populace to be environmentally friendly. This should be done in tandem with the media given that they (media) are said to influence values, attitudes, thoughts and public actions (Panos, 2007) The synergy and the integration of the public and the private sectors and the media in creating innovations that sustain environment by mobilizing and persuading the public to live in harmony with the environment has been highlighted in this study as a sine-qua-non in managing the environment.

Failure for reporters, media management, government, organizations and citizens to heed to the findings and recommendations of this study will further reduce the quantity and quality of environmental issues coverage and the environment, invariably, will plunge deep into decadence.

Overall this study becomes useful as it has contributed in the following dimensions:

- Explored, re-examined, and added knowledge to the theoretical progression of the influences of news production theory.
- Serves as a reference point to environmental researchers in regard to methodological progression in conducting research on environmental news coverage.
- Serves as a reference point to journalists in relation to how to cover environmental issues in a proper and informed manner.

- Useful to media managers in relation to creating viable policies that will enable proper coverage of environmental issues.

5.4 Limitations and Future Research

5.4.1 Limitations of the Study

Limitations of this study are looked at from both the content analysis and in-depth interview angles. From the content analysis perspective, the limitations of the study stemmed from the researcher's inability to content analyze the entire population of the newspapers in the time frame selected for this study. However, the samples that were analyzed were chosen (composite week method) in such a way as to make for fair representation and generalizations. Also, limitations to this study arose from researcher's inability to widen the scope of the study by including more newspapers or other media like radio and television news bulletins and programs on environment due to lack of access and time frame. The problems encountered in the process of the content analysis had to do with finding the hard copies of the newspapers in one location. Archiving system of hard copies of newspapers in Nigeria is a far cry from what is required. This problem delayed the progress of the study. The researcher had to wait until the four newspapers were located with the specific periods they were needed. We had to go to different locations where the newspapers were available for the content analysis.

As for the in-depth interview the limitation lay in the fact that there were not so many journalists who specialized in environmental journalism. Thus, the researcher had to include general beat reporters who also cover the environment. This did not

make much difference in the quality of information sought given that most of them have good experience in reporting the environment based on the number of years they have covered the environment.

Another limitation was the reluctance of the journalists to talk. They were rather taciturn in some aspects of the interview. They were protecting themselves from their proprietors, they had to be tipped to talk and the researcher was only able to get their responses on the condition of anonymity. Based on the fact that the researcher feared they may not be objective enough in answering some questions, the researcher resorted to probing, and had to enlist one independent journalist for the purpose of balancing responses from respondents.

Originally the researcher scheduled to interview senior personnel like editors in the newspapers selected to get vital information especially on the policies of the newspapers in relation to environmental news production, but they were 'so busy' that they had to assign some other senior reporters to talk to the researcher. However, questions bothering especially on newspaper policies were sent before the interview dates for the editors to provide their answers to their representatives.

Time consumption and financial implications also played roles in the limitation of this study. Despite the challenges encountered in the process of the in-depth interview, the deeper insights that were generated from it were enough compensation.

5.4.2 Direction for Future Research

One of the limitations of this study was the researcher's inability to widen the scope of the study by including more newspapers or other media like radio and television news bulletins and programs on environment due to lack of access and time frame. Future studies on the topic could be extended to television, radio and possibly magazines.

It has been observed that digital media have changed the way newspapers organize and produce news (Scacco et al., 2015). News coverage in the mainstream media has been overtaken by the overwhelming digital media. The success, profitability, and audience command enjoyed by the traditional media over the years have been displaced by the emergence of digital media (Emenyeonu, 2017). Social media has therefore become a potent alternative in the coverage and dissemination of news. Given that social media has gained much impetus as a preferred medium of news dissemination, it may sound interesting to study environmental news coverage in the social media platform to determine if environmental issues are given prominent coverage quantitatively and qualitatively. In other words, future studies could compare environmental news coverage online and in the traditional print medium.

In studying environmental issues coverage in the social media platform, future researchers could revisit the gatekeeping and agenda setting theories to determine their usefulness in news production given that news selection is no more the prerogative of journalists as seen in the traditional media. Audiences are seen to play huge roles in news selection as they email news contents to others, respond to news

stories, and submit digital news contents (Scacco et al., 2015; Singer 2014; Owen, 2013).

Attitudinal studies could also be initiated to gauge the behavior of the citizens toward the environment. This is given that environmental consciousness is determined by attitudes and behavior toward the environment (Tantawi et al., 2009). Also as the independent journalist interviewed in the in-depth interview (Informant 17) argued, most Nigerians do not know what climate change is, and as a result they may not bear the right attitude/behavior toward environmental issues especially as it relates to climate change.

Environmental legislation (locally, regionally and internationally) and its implication in sustaining the environment could also be explored as what are available at the moment are literatures that present the litany of environmental enactments in Nigeria.

5.4.3 Recommendations

Based on the findings of this study, the researcher makes the following recommendations to media organizations, government, and policy makers for the proper coverage of environmental issues in the Nigerian press.

In the first place, there is need to have qualified, experienced and knowledgeable environmental reporters. This becomes necessary given that the complexity and interconnected nature of the beat can only be handled by specialized reporters who have thorough back ground knowledge of the issues at stake and how to link them to related issues, thus emphasizing the environment as an ecosystem. For this to take

place there is need to establish environmental journalism schools in colleges and universities in Nigeria. At least there could be a center of excellence in environmental journalism in one or two universities across the country where environmental journalists could be groomed and produced. This is also possible across Africa. As pointed out in chapter two, schools of environmental journalism have been operational in the West since 1990. These schools produce qualified environmental journalists, which has promoted professionalism and expertise in coverage of environmental issues. No wonder that the bulk of environment as reported in the Nigerian and other African media “are culled from the adequate, systematic coverage of issues by the Western media and foreign institutions.” (Nwabueze et al., 2015). Journalists who will graduate from, or be trained in the proposed school(s) of environmental journalism, no doubt, will be better placed to do better environmental stories than general reporters. The proposed environmental journalism schools would also be relevant in organizing refresher courses, workshops, lectures for practicing journalists. The era of mediocrity will be replaced with an era of professional environmental journalists. This will no doubt improve the frequency of environmental coverage quantitatively and qualitatively and thereby place environmental issues coverage in its rightful place among other beats.

Also, resource books/tools need to be developed. This becomes necessary and urgent given that most of the reporters have little competence in covering the environment. A resource or handbook on environmental reporting will be handy as it will be a reference tool for the journalists - providing them with concepts, definitions, evaluations and analysis of environmental terms and issues. Such handbooks would

also provide relevant sources that environmental journalists could contact for interviews, and or explanations of complex environmental issues. The resource book will provide tips and guidelines on how to cover the environment. Experienced journalists and university professors and environmental professionals can work as a team to produce the proposed handbook, written specifically for the Nigerian, African environments.

Apart from handbooks, environmental journalists need to have access or links to substantial and relevant environmental bodies like SEJ, PIEC as these organizations are famed for providing comprehensive resources that help journalists in understanding and reporting the environment properly. Belonging to such organizations as mentioned above would supplement environmental resource books.

Given that there was official/government source dominance in reporting environmental news, this study recommends that this should not be the norm. Environmental journalists should diversify their sources to authenticate and balance their stories, and give them different angles and perspectives other than those of government officials. Common or ordinary people should also have a say in the news of the day. That news is about famous and elite people does not strictly apply in environmental beat. In Nigeria, most of the environmental woes are borne by common people. They should therefore be part of the environmental news construct.

Photographs or graphics that accompany the stories should be about the issues discussed and not just pictures of officials. The essence of using photographs in stories should not be abused - either to fill space or to please government officials.

Photographs should be used for the purpose of illustrating the stories they

accompany and thus help the audiences in making the most meaning out of the stories.

Further on the way forward, newspapers should develop good policies that are geared toward encouraging a better environmental coverage. This could be in form of hiring and retaining dedicated, experienced and qualified environmental reporters and editors; pooling resources with other news organizations to ensure depth and quality coverage; creating and sustaining a vibrant environment section or segment; prioritizing environmental stories by making them lead stories and placing them on the front pages as well as considering them for editorials. Also, constraints relating to space, adhering to news writing format (inverted pyramid) should be abolished if environmental stories were to be treated in-depth as required.

Environmental journalists should know the needs of their audiences. Rather than “Afghanistanizing” environmental news stories in Nigeria by prioritizing foreign environmental news, especially climate change/global warming, journalists and their news organizations could focus on local environmental stories that their audiences would find meaningful, one they could relate to. This is the only way environmental stories could become intriguing, enterprising and thus marketable enough to attract the attention of readers. One is not clamoring for a blanket ban on climate change coverage by the Nigerian press, but rather the concern is how should a report on climate change be approached so as to appeal to and attract the local people? The local farmer, for example, does not want to know how many countries have ratified a climate change deal, he rather wants to know how climate change will affect him – will it lead to drought or over flooding? If it leads to drought for example, what will

be the economic and social implications for the larger society? This is what is meant by putting environmental stories into local context and linking the different aspects that make up the environment as an ecosystem.

Also, there is need for newspapers to cooperate with organizations that could sponsor environmental coverage. Banks and other corporate organizations are recommended. Other organizations that have contributed much to the environmental decadence should be avoided as they may influence newspapers from not reporting negative activities from their companies that harm the environment. As mentioned earlier in the results of the in-depth interview analysis, one independent journalist interviewed (Informant 17) revealed that some newspapers do not report environmental menaces from oil companies because such newspapers are on the pay roll of the oil companies. Finding sponsors would alleviate the problem of financial resources as it will go a long way in taking care of reporters' kits, extra work time, and even training and re-training of environmental reporters locally or abroad. This will bring about some degree of financial independence which will help promote objective editorial judgment in what is published or not. Financial dependence on sponsors can force news organizations to make differing editorial decisions (Scacco et al., 2015).

Despite the exponential level of environmental decadence in Nigeria, it is worrying that the Nigerian press has not paid considerable attention to environmental issues. It is therefore pertinent for the Nigerian press to put in place a strong and viable environmental agenda. Government should be held accountable, and called to carry out its responsibilities and obligations pertaining to safeguarding the environment.

Politicians should be encouraged to be active in environmental issues; environment should be prioritized in politics. Currently the quality and quantity of environmental issues coverage by the media is not strong enough to drive the desired public discourse on the issues. The press can set such agenda by frequent pungent reports and editorials on environmental issues. The fact that media function as opinion shapers should also be true when it comes to environmental issues.

There should be adequate compensation for outstanding environmental journalists. This should be within and outside the newspaper organizations, and both at the local and international levels. Thus, there should be events and awards that celebrate the hard work of environmental journalists. Newspaper organizations should support their environmental journalists to subscribe to membership of such organizations or bodies that celebrate environmental journalists at the national, continental and international levels. It is highly recommended that the Chief S.L Edu Memorial Lecture on the Environment, which attracts the cream of environment stakeholders in Nigeria, consider honoring outstanding environmental journalists as part of the event.

Given that most of the states in Nigeria have failed in waste disposal, waste management, and general environmental cleanliness, it is recommended that government introduces new regulations that mandate citizens to be active in cleaning up their environment. This has to go with orientating the citizens on the need for proper waste disposal; and adequate cleanliness of their surroundings. In other words, there is need for innovation and diffusion of adoption and adaptation to green culture. This type of program worked well during a military junta regime in Nigeria

when every last Saturday of the month was declared environmental clean-up day. This was productive as Nigerians took to the challenge and created clean environments. This culture was not sustained hence a law should be enacted in the present democratic dispensation to revive that practice.

Government and other environmental policy makers should ensure that relevant laws are enacted and that such laws are implemented and sustained. Governments and policy makers should also maintain an open-door policy or an enabling environment that will help or enable environmental journalists to gather relevant environmental information for dissemination to the audiences. See section 5.3.3 (Managerial implication) for more discussions relating to government and policy makers.

Media both print and electronic should launch and sustain positive environmental campaigns that encourage both the private and public sectors to help in sustaining the environment by planting trees, and flowers, and not engaging in such activities that create environmental decay. The media should call on authorities to provide enabling environments – socially, economically that will help citizens behave responsibly toward the environment.

5.5 Summary and Conclusion

The major reason for undertaking this study is two pronged, first is to probe into how much attention the Nigerian press pays to environmental issues with the intent to provide answers to reasons for adequate or inadequate coverage. Second, the study seeks to look at the underlying factors that influence journalists in covering the environment the way they do, hence the topic ‘Issues and Influences on

Environmental Coverage by the Nigerian Press.' Thus, the study combines two methodologies namely content analysis of selected newspapers and in-depth interview of journalists from the selected newspapers - that would help the researcher do justice to the topic under investigation. The use of multiple methods was informed by the simple fact that neither content analysis nor in-depth interview could independently provide comprehensive answers to how and why environmental journalists cover environmental issues. Sequential triangulation was therefore employed to provide, first, answers to the frequency and style of coverage, then followed by reasons for such frequency and style of coverage.

The sociology of news production theory was chosen as the framework for the study, as issues related to news contents are directly linked to production process in which there seems to be a plethora of influences on journalists and invariably what is published. Shoemaker and Reese (2014), Reese (2009) and McQuail (1992) believe that in the process of producing contents for newspapers, the media are usually at the receiving end of a number of people who wield power. These power wielders include audiences' needs, world and ideological environment, state and legal systems, media technology, ownership and control, organizational, working and professional expertise. The press may be subjected to some or all of these influences. This study sought to find out the degree of influence the power wielders and other influencers exerted on environmental journalists in producing environmental contents.

The study used extensive literature review to find out what has been done in relation to environmental coverage from a global perspective and then narrowed it down to

Nigeria. This was with the view to find gaps in literature and filling such gaps through the present study. One major gap found from literatures reviewed is the fact that most studies done on environmental coverage in Nigeria dwelt more on climate change or global warming, other environmental issues were relegated to the background. Thus, the major thrust of environmental issues coverage studies was on the frequency of coverage climate change. No study had yet sought to find out the influences, the reason(s) for adequacy or inadequacy of environmental issues coverage in the Nigerian press. This is the gap that the present study fills, and that is what makes it worthwhile.

As mentioned earlier, this study employed two methodologies – qualitative and quantitative inquiries to determine frequency and influences of coverage. These methods were so helpful in eliciting information that helped provide answers to the research questions and meet the objectives of the study, they are however without limitations.

Apart from the weaknesses of these methodologies as discussed in chapter three, other limitations were inherent in the places and situations where this study was carried out. First the researcher encountered a major setback in locating the newspapers and editions needed for the content analysis. The researcher had to wait for a very long time before the editions of the newspapers were located and made available. In some cases, one or two editions were missing. The numbers missing were however too minimal to affect the result of the study. Thus, in conducting this kind of study in the future, the researcher recommends use of online newspapers where the required number of editions could be retrieved easily. Thus, the lack of

proper archiving of newspapers affected the timeline of this study. Second, the journalists and editors selected for the in-depth interview were kind of taciturn. They were protecting themselves from their proprietors, they had to be tipped to talk and the researcher was only able to get their responses on the condition of anonymity. The researcher felt that they did not feel free enough to answer questions as honest as they could, and therefore had to ask a few independent journalists some questions to balance those got from the selected journalists. Given the nature of this study, the researcher recommends that the result of the study is a strong indicator to how environmental journalism is done in the Nigerian press. This study is also limited in the sense that it focused only on print media. Electronic media was not covered. Thus, future studies could combine both print and electronic media coverage of environmental issues in the Nigerian media.

Studying the news production process in the selected newspapers of the Nigerian press has helped shed light on what influences environmental journalists in producing environmental contents and has invariably helped this researcher to make inferences and recommendations for a better coverage of environmental issues in the Nigerian press. To recapitulate, some of the challenges that inhibit environmental coverage in Nigeria include: journalists' lack of education, experience, qualification, overdependence on government/official sources of news; organizational and ownership control, pressure from sponsors or advertisers, following the traditional news format in writing environmental news, prioritizing international environmental issues to local ones, policies that allow for publication of environmental news once a week, among others. These inhibitions have helped the researcher in making

recommendations that are believed, when implemented, will place environmental issues coverage in the Nigerian press in its rightful place.

Overall this study found that environmental issues coverage in Nigeria is woeful. Environmental coverage is yet to find its proper footing in the Nigerian press. This is as a result of other pressing problems like hard biting economic quagmire, Boko Haram Insurgency, inter-tribal clashes, bad polity, and lack of essential amenities that make life meaningful. The number of environmental stories published within the two-year study period, the non-placement of environmental stories on the front pages, the non-consideration of environmental issues for editorials, and the fact that bulk of the environmental stories were just straight news that lacked in-depth analysis and explanations are avid reasons that substantiate the claim that environmental issues coverage is dismal and woeful.

Conclusively, the need for proper environmental coverage cannot be overemphasized. It is established that environmental issues coverage in the press is a major source of public information and awareness about environmental issues. Unfortunately, research continues to indicate that environmental news gets a dismal 1 percent of headlines (Miller & Pollack, 2013). The need to reverse this trend is one of the reasons for undertaking this study.

Environmental challenges facing Nigeria are enormous. They are a direct consequence of a combination of factors ranging from uninformed, indiscriminate interactions with nature; lack of awareness on how to relate to the environment; government's inaction in regard to initiating substantial policies, laws and monitoring and implementation of same, to media's inability to raise and sustain

environmental agenda that could spark public debate commensurate with the magnitude of the environmental problems. PIEC (2015) opines that it is basically in the public's interest to have citizens properly informed about how their activities or actions affect the environment. The best way to achieve this is through improved coverage in the news media.

It may suffice here to recapitulate some of the major environmental woes facing the nation so as to drive home the point that environmental problems in Nigeria are mainly anthropogenic, not natural, and that with the right response from the media, the government and citizens, these problems could be addressed. The major environmental concerns include:

1. Forest exploitation as seen in firewood exploitation and excessive logging. Majority of people who live in rural areas depend on wood fuel or what is popularly known as firewood for cooking. The implication of this firewood consumption is that it reduces forests to grasslands. Also, the over logging of hardwoods to meet global market demand threatens forests in particular and the environment in general. What is worrying is that as trees are cut down for wood or logging, no new ones are planted for replacement.
2. Improper waste disposal and management. Rapid growth in population has resulted in rapid urbanization and industrialization, which in turn has resulted in huge waste generation in the liquid, solid, gaseous forms. Unfortunately, these wastes are not properly disposed and managed. Thus, the urban areas are reduced to squalors, slums, with heaps of refuse, and drainage systems that have become sources of water and air borne diseases,

3. Pollution also constitutes a major environmental challenge. Apart from pollution that emanates from improper disposal of wastes, effluents from industrial areas are simply allowed to flow into drainage systems, rivers or surface ground water which are the main source of water for many Nigerians. Gas flaring as a result of petroleum production activities contributes immensely to pollution. Carbon monoxide from exhaust pipes of rickety cars and busses that ply the cities and other forms of transportation are also in the race for air pollution. The list is legion.

The above three environmental issues are the primary issues from which other environmental challenges take their bearing from. The challenges facing Nigerian environment is gigantic but the efforts to curb the challenges are so far very myopic. There can't be a better time for the press to rise to its responsibility of creating awareness to environmental sustainability, mounting surveillance on the environment, and holding government accountable to its environmental responsibilities other than now. In doing this, the utopic nature, the fire brigade, or if-it-bleeds-it leads approach of reporting the environment should give way to in-depth, investigative and interpretive environmental reporting. The press has to be pro-active rather than reactive to environmental issues.

As has been seen from the arguments relating to the poverty of environmental issues coverage in the Nigerian press, this study concludes that for environmental journalists to report the environment thoroughly, all the obstacles that impinge coverage must be removed. There has to be a conducive and enabling atmosphere from within and outside the news organizations to help the journalists do their work.

These enabling atmospheres would include: establishing environmental journalism schools where environmental reporters would be educated and trained; recruiting specialized environmental journalists and or environmentalists for the beat; providing adequate as well as prime space and time for environmental stories; rewarding outstanding environmental reporters; subscribing to bodies that provide expertise to reporters on the beat; provision of resources like trainings, resource materials and other tools that will help the journalists improve their expertise. Above all, environmental issues coverage must move from straight news reporting to environmental advocacy where reporters present information on the nature of environmental issues that is decidedly and positively opinionated and invariably encourages its audience to adopt more environmentally sensitive attitudes, or become more bio-centric in their worldviews. The environment will continue to suffer decay, unless the inhabitants of the earth are called to behave and relate appropriately toward the planet earth. This is the onerous task environmental journalists have to carry out.

The challenges facing environmental coverage in Nigeria are very obvious. But solutions to the problems lie with innovation and collaboration that will usher in new opportunities for strengthened environmental coverage that will eliminate negative trends. This new trend according to PIEC (2015) will come into practice when editorial managers accept the challenge to prioritize news of the environment, recognizing the value of this coverage to growing audiences and the stature of any serious news organization.

On the import of the study, it advances environmental journalism and provides substantial literature on the practice of the genre by taking a holistic look at issues and influences of environmental coverage in Nigeria. It looked at impediments to coverage of environmental issues from both the micro and macro levels and provided suggestions for improved coverage. The study is the more relevant as it informs journalists and policy makers on what could be done to advance coverage and policy initiations that could result in a sustained environment.

Finally, given that Nigeria depends so much on its environment for sustenance, and that this environment is fast degenerating, it is only logical that issues relating to the sustenance of the environment cannot but be prioritized by the media. It is therefore logical to argue that the media cannot but be in the vanguard of championing the cause for environmental protection hence this study was undertaken to find out how avidly or otherwise the Nigerian press is covering and reporting environmental issues.

REFERENCES

Ackland, L. (1995). A *phantom audience for environmental journalism?* *Contents of the 1995 Conference on Communication and our environment Proceedings*, 248-255.

Adegoke, A. (2007). *The Challenges of Environmental Enforcement in Africa: The Nigerian Experience*. Third International Conference on Environmental Enforcement.

Adel, D. (2013). *Mainstream Media's Environmental Coverage: The Sound of Silence*. Retrieved from http://earthisland.org/journal/index.php/elist/eListRead/mainstraem_environmental.

Adelegan, J.A. (2004). *The History of environmental policy and pollution of water sources in Nigeria (1960 – 2004)* Retrieved from <http://www.nigerianlawguru.com/articles/environmental>.

Adelekan, I.O. (2009). The Nigerian Press and Environmental Information for Sustainable Development. *The International Journal of Justice and Sustainability*. 14 (4), 297-312.

Ader, Christine R. (1995). A longitudinal study of agenda setting for the issue of environmental pollution. *Journalism & Mass Communication Quarterly* 72 (2) 300-311.

Adler P.A., & Adler, P. (1994). Observation Techniques. In N.K., Denzin and Y.S. Lincoln (Eds.), *Handbook of qualitative research*. Thousand Oaks, CA: Sage.

Agunwamba, J.C. (1998). Solid Waste Management in Nigeria: Problems and Issues. *Environ Manage*. 6 (22), 849 – 856.

Akon-Yamga, G., Boadu, P., Obiri, B.D., & Amoako, J. (2011). Agricultural Innovations for Climate Change Adaptation and Food Security in Africa: The Case of Ghana and the Gambia. Fatou Janha African Technology Policy Studies Network Research Paper No. 11.

Allan, K.B. & Gibson, E. (2012). Environment Revisited. In Deborah R. Gallagher (Ed.) *Environmental Leadership: A Reference Book*. Sage Publications.

Allan, S. (2004). *News Culture* (2nd Edn). Maidenhead: Open University.

Altheide, D.L. (1996). *Qualitative Media Analysis: Qualitative Research Methods*, Vol. 38. Thousand Oaks: Sage.

Altheide, D.L., & Johnson, J.M. (1994). Criteria for assessing interpretive validity in qualitative research. N. K., Denzin and Y.S. Lincoln (Eds.), *Handbook of Qualitative Research*. Thousand Oaks, CA: Sage.

Altschull, J.H. (1984). *Agents of Power: The Role of the News Media in Human Affairs*. New York: Longman.

Anderson, A., Peterson, A., & David, M. (2005). Communication of Spin? Source – Media Relations in Science Journalism. In S. Allan (Ed.) *Journalism: Critical Issues*. Maidenhead: Open University.

Anuradha, M. (2016). Coverage of Environmental Issues in Two National Dailies of India (The Hindu and The Times of India) *AIJRRLSJM*, 1(11), 95-98

Anyanwu, C.U. (2012). The Oil Industry and the Nigerian environment. IAIA12 Conference Proceedings' 32nd Annual Meeting of the

International Association for Impact Assessment 27 May – 1 June 2012, Centro de Congresso da Alfandega, Porto – Portugal.

ARD Report, (2002). Nigeria Environmental Analysis: Final Report. (ARD Report to USAID, 2002).

Atwater, T., Salwen, M. & Anderson R. (1985). Media agenda setting with environmental issue. *Journalism Quarterly*, 62 (1985), 393-379.

Bacon, W., Das, J. and Zaman, A. (2009). 'Theme: Giving the people what they want.' Covering the environmental issues and global warming in delta land: A study of three newspapers. *Pacific Journalism Review*, 15(2) 10-31

Babalola, Y.T., Babalola, A.D. & Okhale, F.O. (2010). Awareness and Accessibility of Environmental Information in Nigeria: Evidence from Delta State. *Library Philosophy and Practice* 2010. Retrieved from <http://www.webpages.uidaho.edu/~mbolin/babalola-babola-okhale.htm>.

Babcock, W.A. (1979). *Environmental Pollution Coverage in "Newsweek" from 1969 through 1975*. Southern Illinois: UMI Publishing.

Bailey, G. & Hackett, B. (1997). *News Watcher's Guide to Content Analysis*. Canada: School of Communication, Simon Fraser University.

Bantz, C., McCorkle, S., and Baade, R (1980). "The News Factory." *Communication Research*, 7(1), 45-68

Barnes, T. & Duncan, J. (1992). *Writing Worlds*. London: Routledge.

Batta, H.E., Ashong, A.C., & Bashir, A.S. (2013). Press Coverage of Climate Change Issues in Nigeria and Implications for Public Participation Opportunities. *Journal of Sustainable Development*, 6 (2), 56 – 69.

BBC World Service Trust (2008). *Using content analysis to measure the influence of media development interventions: Elections training for journalists in Yemen*. London: British Broadcasting Corporation.

Bean, A. (2010). *"I heard it on the News": Mainstream Media and its Effect on Public Opinion and Environmental Policy*. Unpublished Manuscript, University Honors, Capstone Project.

Beeman, W.O., & Peterson, M.A. (2001). Situations and Interpretations: Explorations in interpretive practice. *Anthropological Quarterly* 74 (4) 159 – 162.

Bell, A. (1989). *Media Reporting and Public Understanding of Climate Change Issue in New Zealand*. Wellington: Department of Linguistics, University of Victoria.

Berelson, B. (1952). *Content Analysis in Communication Research*. Glencoe, IL: Free Press.

Berger, A.A. (1991). *Media Research Techniques*, California: Sage.

Berkowitz, D. (1997). *Social Meaning of News: A Text Reader*. London: Sage.

Berry, R.S.Y. (1999). Collecting data by in-depth interviewing. Paper presented at the British Educational Research Association Annual Conference, University of Sussex at Brighton, Sept 2 – 5 1999.

Borman, C. (1978). Communication Accuracy in Magazine Science Reporting *Journalism Quarterly*, 55(2) 345-346.

Boyce, C. & Neal, P. (2006). "Conducting in-depth interviews: A Guide for designing and Conducting In-Depth Interviews", Pathfinder International Tool series.

Boykoff, M. (2010). Indian media representations of climate change in a threatened journalistic ecosystem. *Climatic Change*, 99 (1) 17-25.

Boykoff, M. (2009). We Speak for the Trees: Media Reporting on the Environment. *Annual Review of Environment and Resources*, 34(2009), 431-57.

Boykoff, M., & Boykoff, J. (2007). Climate change and journalistic norms: A case study of US mass media coverage. *Geoforum*, 38(6) 1190-1204.

Boyagodu, E.W.M.S. (2017). Reporting Green: An Exploratory Study of News Coverage of Environmental Issues in Sri Lankan Newspapers. *Asia Pacific Journal of Advanced Business and Social Studies*, 3(10), 307-316

Bourassa, E., Amend, E., & Secko, D.M. (2013). A thematic Review and Synthesis of Best Practices in Environment Journalism. *Journal of Professional Communication*, 3(1) 39-65.

Brossard, D., Shanahan, J. & McComas, K. (2004). Are issue-cycles culturally constructed? A Comparison of French and American coverage of global climate change. *Mass Communication and Society*, 7(3), 359-77.

Bubela, T.M., & Caulfield, T.A. (2004). Do the Print Media Hype Genetic Research? A Comparison of Newspaper Stories and Peer-Reviewed Research Papers. *Canadian Medical Association Journal*, 170(9), 1399-1407.

Bucknall, J., Kraus, C. & Pillai, P. (2002). *Poverty and the environment* (The World Bank).

Burke, E. (1995). Ecocrisis in Nepal: the role of environmental media. *Mass Communication Review*, 22(1/2), 4-63.

Campbell, F. (1999). *The Construction of Environmental News*. London: Ashgate Publishing.

Campbell, D.T., & Fiske, D. (1959).Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56(2), 81-105.

Cantrill, J.G. & Oravec, C.L. (1996). *The Symbolic Earth*. Kentucky: The University Press of Kentucky.

Carlton, J.S., Perry-Hill, R., Huber, M. & Prokopy, L.S. (2015). The Climate Change Consensus extends beyond Climate Scientists. *Environment Research Letter*, 10(2015), 1-12.

Carlson, M. (2009). Dueling, dancing, or dominating? Journalists and their sources. *Sociology Compass*, 3(4), 526-542.

Carvalho, A. (2007). Ideological Cultures and Media Discourses on Scientific Knowledge: Re-Reading News on Climate Change. *Public Understanding of Science*, 16 (2), 223-243.

Center for Energy & Climate Solutions (2009). Summary: Copenhagen Climate Summit. Retrieved from <http://www.c2es.org/print/international/negotiations/cop>.

Chigbo, M. (2008). Why the war is starting late in Nigeria. *Newswatch*, 3 Nov. 2008.

Cohen, H. (1994). *The Press and Foreign Policy*. Princeton: Princeton University Press.

Cook, K.E. (2008). In-depth interview. In *The Sage Encyclopedia of Qualitative research Methods*. Retrieved from <http://srmo.sagepub.com/view/sage-encyc-qualitative-research>.

Cotter, C. (2010). *Investigating the Language of Journalism*. Cambridge: Cambridge University Press.

Cox, R. J. (2006). *Environmental Communication and the Public Sphere*. London: Sage Publications.

Creswell, J.W. (2007). *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. Thousand Oaks: Sage Publications.

Creswell, J.W., & Plano Clark, V.L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: sage.

Creswell, J.W., Plano Clark, V., Gutmann, M., & Hanson, W. (2003). Advanced mixed methods designs. In Tashakkori, A., and Teddlie, C. (Eds.), *Handbook of mixed method research in the social and behavioral science*. Thousand Oaks, CA: Sage.

Crossman, A. (2017). Understanding Purposive Sampling: An overview of methods and application Retrieved from <http://sociology.about.com/od/Types-of-Samples/a/Purposive-Sample.htm>.

Curry, J.L. (1982). "Media Management and Political Systems", in J.L. Curry and R. Dassin (eds.) *Press Controls Around the World*, New York: Praeger Publishers.

Daley, P. & O'Neil, D. (1991). Sad is too Mild a Word: Press Coverage of the Exxon Valdez oil spill. *Journal of Communication*, 41(4), 43-57.

Davidson, A. (1990). *In the Wake of Exxon Valdez: The devastating Impact of the Alaska Oil Spill*. San Francisco: Sierra Club Books.

Das, J., Bacon, W., & Zaman, A, (2009). Covering the environmental issues and global warming in Delta Land: A study of three newspapers. *Pacific Journalism Review*. 15(2), 10-33.

Dennis, E. E. (1991). In Context: Environmentalism in the System of News. In Craig L. LaMay and Everrete E. Dennis (eds.) *Media and the Environment*. Washington D.C: Island Press.

Denscombe, M. (2004). *The Good Research Guide for small-scale social research 2nd edition*. Open University Press.

Denzin, N.K., & Lincoln, Y.S. (Eds.). (2005). *The handbook of qualitative research (3rd edn.)* Thousand Oaks, CA: Sage.

Detjen, J. (1977). Environmental writing. In D. Blum and M. Knudson (Eds.), *A field guide for science writers*. New York: Oxford University Press.

Dike, A.A. (1985). Environmental Problems in Third World Cities: A Nigerian Example. *JSTOR: Current Anthropology*, 26(4), 501-505.

Dramola, A. & Ibem, E.O. (2010). Urban Environmental Problems in Nigeria: Implications for Sustainable Development. *Journal of Sustainable Development in Africa* 12 (1), 124 – 145.

Dryzek, J. (2005). *The Politics of the Earth: Environmental Discourses*. Oxford: Oxford University Press.

Dudo, A. D. (2005). *An Environmental Controversy: How Newspapers Framed Coverage of the Bush Administration's Proposal to Drill for Oil and Natural Gas in the Arctic National Wildlife Refuge*. M.A Thesis submitted to the Faculty of the University of Delaware.

Dunwoody, S. & Griffin, R. (1993). Journalistic strategies for reporting long-term environmental issues: A case study of three superfund sites. In A. Hasen (Ed.) *The Mass Media and Environmental Issues*. New York: Leicester University Press.

Dunwoody, S. & Ryan, M. (1987). The credible scientific source: *Journalism Quarterly* 64(1), 21 – 7.

Dutt, B. Garg, K.C. & Bhatta, A. (2013). A quantitative assessment of articles on environmental issues published in English-language Indian dailies. *Annals of Library and Information Studies*, 60(2013), 219-226

Earth Summit History: Conference on Human Environment, Stockholm (1972). Retrieved from <http://wecanada.org/about-erth-summit-history/>.

Einsiedel, E., & Coughlan E. (1993). “The Canadian Press and the Environment: Reconstructing a Social Reality. In Hansen Anders (ed.). *The Mass Media and Environmental Questions*. Leicester: Leicester University Press.

Echefu, N. & Akpofure, E. (2003). *Environmental impact assessment in Nigeria: regulatory back ground and procedural framework*. UNEP EIA training Resource Manual. Case studies from developing countries. Retrieved from <http://www.unep.ch/etu/publications/14>.

Edeani, D.O. (1994). Nigerian Mass Media Handling of Conflict in the West African Sub-Region. *Africa Media Review*, 8(1) 25-68.

Ekanem, I.A. (2003). Communicating Science Information in a Science-unfriendly environment: the experience of Nigeria. *Public Understanding of Science*, 12, 203-209.

Elwood, S. & Martin, D. (2000). Placing interviews: location and scales of power in qualitative research. *Professional Geographer*, 52 (2000), 649-657.

Emenyeonu, C.O. (2017). *Covering news in a digital age: Has digitalism eroded professionalism?* Paper presented at the International Scientific Conference on Digital Communication in the Age of Social Transformation, Ajman University 16-17 April 2017.

Emenyeonu, C. O. & Ndulaka, S. (1998). *Reporting the Environment*. Paper presented at the Postgraduate workshop on advanced reporting and writing at Department of Mass Communication, University of Nigeria, Nsukka.

Entman, R. (1993). Framing: Towards Clarification of a Fractured Paradigm. *Journal of Communication*, 43(4), 51-58.

Environmental Law Research Institute (2009). *A synopsis of Laws and Regulations on the Environment in Nigeria*. Retrieved from <http://www.elri-ng.org/>.

Eregha, P.B.& Irughe, I.R. (2009). Oil Induced Environmental Degradation in Nigeria’s Niger Delta: The Multiplier Effect. *Journal of Sustainable Development in Africa*. 11(4), 160 -170.

Ettema J.E., Whitney, D.J., Wackman, D.B. (1987) “Professional Mass Communicators.” In *Handbook of Communication Science*, eds. Charley R. Berger and Steven H. Chaffee, Beverly Hills: Sage

Fahn, J. (2008). *Media Coverage of Climate Change lags behind in Countries where it Matters Most.* Retrieved from <http://www.nature.com/climate/2008/0807/full/cl08.64.html> imate.20.

Federal Ministry of Environment, Abuja (2015). *Nigeria's Nationally Determined Contribution*. Requirement by Conference of Parties to the United Nations Framework Convention on Climate Change (COP-UNFCCC). Retrieved from <http://www4.unfccc.int>.

Federal Republic of Nigeria: *Official Gazette* (2007). No. 92, Vol. 94. Lagos: Federal Government Printer.

Fishman, M. (1980). *Manufacturing the News*. Austin: University of Texas Press.

Flower, L. (2006). Environmental Challenges in the 21st century. *Assumption University Journal of Technology*. 9(4), 248-252.

Freyenberger, D. (2013). *Amanda Knox: A Content Analysis of Media Framing in Newspapers around the World*. Unpublished M.A Thesis submitted to Faculty of the Department of Communication, East Tennessee State University.

Friedman, S.M. (2004). And the Beat Goes On: A Third Decade of Environmental Journalism. Senecah Susan (ed.) *The Environmental Communication Year Book* (Volume 1) Mahwah: Lawrence Erlbaum Associates.

Galadima, A. (2006). Coverage of Environmental Issues and problems by Nigerian News magazines: A Content Analysis. *Journal of Communications*. 4(1/2). 92-99.

Gamson, W.A., & Modigliani, A. (1989). Media Discourse and Public Opinion on Nuclear Power: A Constructionist Approach. *American Journal of Sociology*. 95 (1), 1-37.

Gans, H. (1979). *Deciding what's news: A Study of CBS News, NBC Nightly News, Newsweek and Time*. New York: Pantheon.

Gardiner, R. (2002). *Towards Earth Summit 2002*. Earth Summit 2002 Briefing Paper. Retrieved from www.earthsummit2002.org on 30 Jan.2013.

Gatlin, T. (1980). *The Whole World is Watching: Mass Media in the Making and Unmaking of the New Left*. London: University of California Press.

Galtung, J. & Rudge, M.H. (1965). The Structure of Foreign News. *Journal of Peace Research*, 2(1) 64-91.

Gavin, N. (2009). *Media Coverage Affects Climate Change Perceptions*. Retrieved from http://www.redorbit.com/news/science/1645162/media_coverage_affects_climate_change_perceptions/.

Gavin, N., Leonard-Milson, L. & Montgomery, J. (2011). Climate Change, Flooding and the Media in Britain. *Public Understanding of Science*, 20 (3), 422-38.

Ginnekan, J.V. (1998). *Understanding Global news: A Critical Introduction*. London: Sage.

Glesne, C., & Peshkin, A. (1992). *Becoming qualitative researchers: An introduction*. White Plains, NY: Longman.

Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Cambridge, MA: Harvard University Press.

Goldenberg, E.N. (1978). "An Overview of Access to the Media." In L.K. Epstein (Ed.) *Women and the Media*. New York: Hastings House.

Goodfield, J. (1981). *Reflections on science and the media*. Washington, DC: American Association for the Advancement of Science.

Gore, A. (1991). Steering by the stars.In C.L. LaMay & E. E. Dennis (Eds.), *Media and the Environment*. Washington DC: Island Press.

Graffin, E. (2006). *A First Look at Communication Theory (6th edition)*. New York: McGraw-Hill.

Grandy, O. (1982). *Beyond Agenda Setting: Information Subsidies and Public Policy*. Norwood: Abex.

Greenberg, M.R., Sachzman, D.B., Sandman, P.M. and Salumone, K.L. (1989). Risk drama and geography in coverage of environmental risk by network TV. *Journalism Quarterly*, 66(2) 267-276.

Greenberg M. R. et al. (1989). Network Television News Coverage of Environmental Risks. *Environment*, 31 (2), 16-20.

Gubrium, J. and Holstein, J. (Eds.) (2002). *Handbook of Interview Research: Context & Method*. London: Thousand Oaks.

Guide to the Nigerian Media. (2012). Prepared by the Communication Unit, UNDP Nigeria. Retrieved from <http://web.undp.org/comtoolkit/reaching-the-outside-world/docs>.

Gunster, S. (2009). Environmental journalism viewed from Canada. *Media Development*, 2, 25-8.

Hall, S. (1978). *Policing the Crisis*. London: Macmillan.

Hall.S. et.al. (1981). "The Social Production of News: Mugging in the Media. In S. Cohen and J. Young (Eds.) *The Manufacture of News*. California: Sage.

Hallinan, B. (1995). *Media and Politics: An Exploratory and Public Support for MPs in New Zealand*. University of Canterbury Christchurch.

Halloran, J. (1998). Mass Communication Research: Asking the Right Questions. In A Hansen, S. Cottle, R. Negrine and C. Newbold (Eds.) *Mass Communication Research Methods*. London: Macmillan Press.

Hanitzsch, T. and Hoxha, A. (2014) News Production: Theory and Conceptual Framework. Infocore Working paper. Retrieved from http://www.infocore.eu/wp-content/uploads/2014/12/Theoretical-Framing_WP1_News-Productions.pdf

Hansen, A. (2011). Communication, Media and Environment: Towards Reconnecting Research on Production, Content and Social Implications of Environmental Communication. *International Communication Gazette*, 73 (1-2), 7-25.

Harrison, J. (2006). *News*. London: Routledge

Hasan, Nik, N. N. (2007). *The Representation of Environmental News: A comparative Study of the Malaysian and New Zealand Press*. An unpublished PhD Thesis submitted to the University of Canterbury.

Hellebrandti, D. & Hellebrandti, L. (2010). Representations in the Brazilian media of the impacts of climate change in the coastal zone. *Pan-American Journal of Aquatic Sciences* 5(2) 298-309.

Hessing, M. (2003). Green mail: The social construction of environmental issues through letters to the editor. *Canadian Journal of Communication*, 28(1), 25-42.

Herman, E. & Chomsky, N. (1998). *Manufacturing content: The Political Economy of the Mass media*, New York: Pantheon.

Hilmi, A.H. & Emenyeonu. C. O. (2015). Environmental Journalism: A Content Analytical Study of Omani Newspaper Coverage of

environmental Issues. *International Journal of Arts and Commerce* 4 (6) 69-82.

Holsti, O. (1969). *Content Analysis for the Social Sciences and Humanities*. London: Addison-Wesley Publishing Company. The International Gazette, 73 (1-2), 27-43.

Howard-Williams, R. (2011). Consumers, Crazies and Killer Whales: The Environment of New Zealand Television.

Hunter, M.G., (2004). "Qualitative Research in Information Systems: An Exploration of Methods". In Whiteman, M.E. and Wyszcznski (Eds.) *The Handbook of Information Systems Research*, USA: Ideal Group Publishing.

Ibimilua, F. O.& Ibimilua, A. F. (2014). Environmental Challenges in Nigeria: Typology, Spatial Distribution, Repercussions and Way forward. *American International Journal of Social Science*, 3(2), 246-253.

Idid, S. A. (2017). Agenda Setting: Probing the issues during the 13th General Election. *Journal of Communication*, 33(2), 1-12.

Ifeanyi, A. (2002). Environmental impact assessment as a tool for sustainable development: The Nigerian experience. *Proceedings of the FIG XXII International Congress, April 19-26*, Washington, DC USA.

Igbeka, J. U. & Ola, C.O. (2010). Use of Newspapers by Nigerian University Students: The Case of Delta State University, Anwai Campus. Library Philosophy and Practice 2010.

Isreal, G.D. (2013). Determining Sample Size. University of Florida IFAS Extension. Retrieved from <http://edis.ifas.ufl.edu>.

Ityavyar, E. M., Thomas, T.T. (2012). Environmental Pollution in Nigeria: The Need for Awareness Creation for Sustainable Development. *Journal of Research in Forestry, Wildlife and Environment*, 4 (2), 92-105.

Jalarjan, RS. & Sreekumar, R. (2011). 'The Commercial misrepresentation of environmental issues: Comparing environmental media coverage in the first world and the developing nations, Amity Journal of Media & Communication Studies, 1(2) n.p

Jackson, S. E., Renwick, D. W., Jabbour, C. J., & Muller-Camen, M. (2011). State-of-the-art and future directions for green human resource management: Introduction to the special issue. *German Journal of Human Resource Management*, 25(2), 99-116.

Jick, T.D. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*, 24(4), 602-611.

Karboga, I. & Bertero, C. (2002). Using an interpreter in qualitative interviews: Does it threaten validity? *Nursing Inquiry*, 9 (1), 52-56.

Keating, M. (1993). Covering the Environment: A *Handbook on Environmental Journalism*. Ottawa: National Round Table on Environment and the Economy.

Keating, M. (1997). Three Decades on the Green Belt. *Alternative Journal*, 23 (1), 11-23.

Keith, S. (2011) Shifting Circles: Reconceptualizing Shoemaker and Reese's Theory of Influences on Media Content for a Newer Media Era. *Web Journal of Mass Communication*, 29(1) n.p

Kimberly, A. Neuendorf., Jasntova, P., Snyder-Suh, S., &Gore, T.D. (2006).*James Bond 007 Analysis Codebook*. School of Communication, Cleaveland State University.

Kim, H. (1977). Small department can gain from science writing course. *Journalism Educator*, 32(3), 81-83.

Kostarella, I. & Tsantopoulos, G. (2013).The coverage of environmental issues by the Greek media from the editors' perspective. Paper presented at the 1st Global Virtual Conference. April 8 – 12 2013.

Krimsky, S. & Plough, A. (1988).*Environmental hazards: Communicating risks as a social process*. Dover, Massachusetts: Auburn House Publishing Company.

Krippendorff, K. (1980).*Content Analysis*. BiverlyHills, CA: Sage.

Krippendorff, K. (2004).*Content Analysis (2nd edn.)*, London: Sage.

Labov, W. (1972).*Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.

Lacy, S. & Coulson, D.C.(2000). Comparative case study: Newspaper source on the environmental beat. *Newspaper Research Journal*, 21(1), 13-25.

LaFollette, M.C. (1990).*Making science our own: Public images of science 1910-1995*. Chicago: The University of Chicago Press.

LaMay, C. (1991). Heat and Light: The Advocacy-Objectivity Debate. In LaMay Craig and Everette E. Dennis (Eds.) *Media and the Environment*. Washington D.C: Island Press.

Lasswell, H. (1927). *Propaganda techniques in the world war*. New York: Knopf.

Lasswell, H.D, Lerner, D, and de Sola Pool, I. (1952). *Comparative Study of Symbols*. Stanford: Stanford University Press

Leff, L. (2005).*Buried by the Times: The Holocaust and America's Most Important Newspaper*. Cambridge: university of Cambridge Press.

Lemons, J. (2011). "The Urgent Need for Universities to Comprehensively Address Global Climate Change Across Disciplines and Programs. *Environmental Management*, 48(2011) 379-391.

Libler, C.M. & Bendix, J. (1996). Old growth forests on network news: News sources and the framing of environmental controversy. *Journalism Quarterly*, 73(1), 53-65

Lima, M. D. V. D., Loose, E. B., Mei, D., Schneider, T., Duarte, V., & Lambach, H. (2015). Journalism and environment: academic production of a decade in the Intercom events. *Intercom: Revista Brasileira de Ciências da Comunicação*, 38(2), 231-252.

Lindenfield, L.a., et al. (2012).Creating a Place for Environmental Communication Research in Sustainability Science.*Environmental Communication*, 6 (1), 23-43.

Lineman, M., Do, Y., Kim, J.Y. & Joo, G. (2015). Talking about Climate Change and Global Warming.*PLoS ONE*, 10(9), 1-12.

Livingstone, S. & Bennett, W.L. (2003). Gatekeeping, indexing, and live-event news: Is technology altering the construction of news? *Political Communication*, 20(4), 363-380.

Luedcke, G. & Boykoff, M.T. (2017).Media communication on environmental issues. In Douglas Richardson et al., (eds.) *The International Encyclopedia of Geography*. John Wiley and Sons Ltd.

Macnaghten, P. & Urry, J. (1998). *Contested Natures*. London: Sage.

Macnamara, J. (2005). Media Content Analysis: Its uses; benefits and best practices methodology. *Asia Pacific Public Relations Journal*, 6(1), 1-34.

Makere University (2011). Media Coverage of Science and Technology in Africa. A UNESCO Sponsored Research.

Manning, P. (2001). *News and News Sources: A critical Introduction*. London: Sage.

Manzur, A. (1998). Global Environmental Change in the News: 197-90 vs 1992-6. *International Sociology*, 13 (4), 457-472.

Mare, A. (2011). *Climate change mediation and mediatisation in Southern Africa: Towards climate and environmental journalism*. Climate Change Symposium 2011.

Marukatat, S. (1991). *A comparative content analysis of environmental news coverage in Time and The Weekly Review*. M.A Thesis, Iowa State University.

Maykut, P. & Morehouse, R. (1994). *Beginning Qualitative Research: A Philosophic and Practical Guide*. London: The Falmer Press.

McAdams, D.P. & Zeldow, P.B. (1993). Construct Validity and Content Analysis. *Journal of Personality Assessment*, 61(2), 243-245.

McCombs, M. (2004). *Setting the Agenda: The mass media and public opinion*. Cambridge: Polity.

McCombs, M. & Shaw, D.L. (1972). The agenda-setting function of mass media. *The Public Opinion Quarterly*, 36 (2), 176-187.

McCombs, M., Shaw, D. & Weaver, D. (1997). *Communication and Democracy: Exploring the Intellectual Frontiers in Agenda Setting Theory*. Mahwah, NJ: Lawrence Erlbaum.

McGeachy, L. E. (1987) "Trend in Magazine coverage of Environmental Issues, 1961 – 1986". M.A Thesis, The University of North Carolina

McQuail, D. (1993). *Media Performance: Mass Communication and the Public Interest*. London: Sage.

McQuail, D. (1987). *Mass Communication Theory*. Beverly Hills: California.

Meakin, S. (1992). The Rio Earth Summit: Summary of the United Nations Conference on Environment and Development. Retrieved from <http://www.publications.gc.ca/collections/Collection-R/LoPBdP/bp3-e.htm>.

Mencher, M. (1984). *Basic News Writing*. USA: WCB Publishers.

Miller, M.M., & Reichert, B.P. (2000). Interest Group Strategies and Journalistic Norms: News Media Framing of Environmental Issues. In Allan Stuart, Barbara

Adam and Cynthia Carter (Eds.) *Environmental Risks and Media*. New York: Rutledge.

Miller, T., & Pollak, T. (2013). "Environmental Coverage Ranking Report". Retrieved from www.environmentalcoverage.org/ranking.

Muruktla, N. et al. (2017). Online Media Coverage of Air Pollution Risks and Current Policies in India: A Content Analysis. *WHO South-East Asia Journal of Public Health*, 6(2) 41-49

Mutiu, A.G., Mohammed, R., & Ismail, A. (2017). Disaster Risk Reduction: Framing of Flood Disaster in Nigerian Newspapers. *Journal of Social Sciences and Humanities*. 12(1) 151-164.

Nasser, M.K. (1993). The Nature and Treatment of News. In L.J Martin and A.G. Chaudhary (Eds.) *Comparative Mass Media Systems*. New York: Longman.

Ndubisi, N.O. & Nair, S.R., (2009). Green Entrepreneurship (GE) and Green Value Added (GVA): A Conceptual Framework. *International Journal of Entrepreneurship*, 13(1), 21-34.

Nelkin, D. (1995). Selling Science: *How the press covers science and technology*. New York; W.H Freeman.

New World Encyclopedia (2015). Federal Republic of Nigeria. Retrieved from <http://www.newworldencyclopedia.org>.

Nguyen, A. (2008). Facing “the fabulous monster.” The Traditional media’s fear-driven innovation culture in the development of online news. *Journalism Studies*, 9(1), 91-104.

Nigeria: Country Profile (2007). *Implementation of Agenda 21: Review of progress made since the United Nation’s Conference on Environment and Development, 1992*. Retrieved from <http://www.un.org/dpcsd/>

Nigerian Environment (2012) –Current issues Retrieved from <http://www.indexmundi.com/nigeria/environment>.

Nibset, M.C. (2011). *Climateshift. Clear Vision for the Next Decade of Public Debate*. Washington D.C: American University School of Communication.

Nitz, M. & West, H. (2004). Framing of newspaper news stories during a presidential campaign cycle: The case of Bush-Gore in election 2000. In Senechal, S.L. (Ed.), *The Environmental Communication Year Book*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Nnanyelugo, O., & Nnaji, G. O. (2012). Press Coverage of Environmental Pollution in the Niger Delta Region of Nigeria: A Content Analysis of the Guardian, Vanguard, Daily Sun and Thisday Newspapers. *Journal of Humanities and Social Science*, 3, (2) 34-46.

Nossek, H. (2008). News. In W. Donsbach, *The International Encyclopedia of Communication Online* Retrieved from http://www.communicationencyclopedia.com/public/tocnode?id=g9781405131995_yr2015_chunk_g978140513199519_ss14-1#citation

Nwabueze, B.O. (1994). Nigeria '93: *The Political Crisis and Solutions*. Ibadan: Spectrum Books.

Nwabueze, C. (2007). *Environmental Communication: Perspectives on green communication and information management*. Enugu: Daisy Press.

Nwabueze, C., Nnaemeka, F., Umeora, D. & Okika, E. (2015). Nigerian Newspapers’ Coverage of Climate Change Issues. *European Scientific Journal*, 11 (17), 171-184.

Nwagbara, U. (2010). *The Nigerian Press, the Public Sphere and Sustainable Development: Engaging the Post Amnesty Deal in the Niger Delta*. Retrieved from <http://www.jdsafrika.com> on 18 Feb.2013.

Nworgu, B. (1991). *Education Research: Issues and Methodology*. Ibadan: Wisdom Publisher Ltd.

Nwufo, C. C. (2010).Legal Framework for the Regulation of Waste in Nigeria.*African Research Review*, 4 (2), 491-501.

Obiechina, T. (1987). "News Sources for Starting Reporters", in *Handbook for African Journalists*, USA: World Press freedom Committee.

O'Donnell, C., &Ronald E. R. (2008). "Coverage of Environmental Event in US and UK Newspapers: Frequency, Hazard, Specificity, and Placement." *International Journal of Environmental Studies*, 65(5), 637-654.

Ogunjinmi, A.A., Onadeko, S.A., &Ogunjinmi, K.O. (2013).Media coverage of nature conservationand protection in Nigeria National Parks.*International Journal of Biodiversity and Conservation*, 5(10), 687-695.

Okafor, O. (2011). Environmental Laws and Factors affecting them in Nigeria: A Case Study of Gas Flaring Laws in Niger Delta. Retrieved from <http://www.academia.edu> On 5 Feb. 2013.

Okpi, A. Punch (Online) (April 8, 2012). 66 million Nigerians lack access to portable water – WHO/UNICEF.

Okunola,P. (1966).Reporting the Environment: The Nigerian Print Media Experience. Paper Presented at Environmental Reporting Conference in Otta, Ogun State Nigeria.

Olausson, U. (2009).Global Warming – Global Responsibility? Media frames of Collective Action and Scientific Certainty. *Public Understanding of Science*, 18 (4), 421-36.

Olokesusi, A. (1987). Characteristics of Environmental problems in Nigeria and Management Problems.*Environmentalist*, 7 (1), 55-60.

Omofonmwam, S.I.,&Osa-Edoh, G.I. (2008).The Challenges of Environmental Problems in Nigeria.*Journal of Human Ecology*, 23(1), 53-56.

Onyenekenwa, C.E. (2011).Managing Nigeria's Environment: The Unresolved Issues.*Journal of Environmental Sciences and Technology*, 4 (3), 250-263.

O'Shaughnessy, M. &Stadler J. (2008).*Media and Society (4th edn.)* Victoria: Oxford.

Oso, I. (2006). Framing the Environment: Press Coverage of Environmental Problems.*Nigerian Journal of Communications*, 4 (1&2), 66-77.

Osuntokun, A. (ed.) (1997). *Dimensions of Environmental Problems in Nigeria*. Lagos: Davidson Press University of Ibadan.

Ottman, J.A. (1998). *Green Marketing: Opportunity for Innovation* (2nded.) Chicago IL: NTC Business Books.

Owen, D. (2013). New media and contemporary interpretations of freedom of the press. In T.E Cook and R.G. Lawrence (Eds.), *Freeing the Press: The First Amendment in Action* (rev.) Baton Rouge: Louisiana State University Press.

Oyeniyi, B.A. (2011). Waste Management in Contemporary Nigeria: The Abuja Example. *International Journal of Politics and Good Governance*, 2 (22), 1-18.

Ozor, N. &Madukwe, M.C. (2012).Influencing Curriculum Development and Knowledge of Climate Change Issues in Universities: The case of

University of Nigeria Nsukka. *Journal of Agricultural Extension*, 16(1), 103-118.

Palen, J.A. (1999). Objectivity as Independence: Creating the Society of Environmental Journalists, 1989-1997. *Science Communication*, 21 (2), 156-71.

Paletz, D.L. & Entman, R.M. (1981). *Media Power, Politics*. New York: Free Press.

Palys, T. (2008). Purposive Sampling. In Given L.M. *The Sage Encyclopedia of Qualitative Research Methods*. Sage: Thousand Oaks.

Parenti, M. (1986). Who controls the news? The myths of independence and objectivity. In *Inventing Reality: The Politics of the Mass Media*. New York: St. Martins Press.

Paskey, J., & Steward, G. (2012). *The Alberta Oil Sands, Journalists, and Their Sources*. Edmonton: Oil Sands Research and Information Network, University of Alberta.

Pate, U.A. (2012). *Media and the process of democratization in Nigeria*. Paper presented at a workshop on The Media and Democracy in Nigeria, Kaduna, December 15 – 17 2011.

Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods* (3rded.). Thousand Oaks, CA: Sage.

Peattie, K. (1992). *Green Marketing, The M&E Handbook Series*. London: Pitman Publishing.

Peters, H.P. (1992). The Credibility of Information Sources in West Germany after the Chernobyl Disaster. *Public Understanding of Science*, 1, 325-43.

Peterson, M.A. (2003). *Anthropology and Mass Communication: Media and Myth in the New Millennium*. New York: Berghahn Books.

Pierre, M. & Prothero, A. (1997). *Green Management: A Reader*. London: Dryden Press.

Popoola, M. (2014). Content and Hermeneutical Analysis of Selected Newspapers' Reportage of Environmental Issues in Nigeria. *Journal of Humanities and Social Sciences*, 19(3), 137-165.

Preston, P. and Metykova, M. (2009). "From News to House Rules: Organisational Contexts." In *Making News: Journalism and News Cultures in Europe*, ed. Paschal Preston. London and New York: Routledge.

Priest, S. (2001). *A grain of truth: The media, the public, and biotechnology*. New York: Rowman & Littlefield.

Project for Improved Environmental Coverage (PIEC) (2014). *Strengthening Environmental Coverage in the news over the next Decade*. Retrieved from <http://www.greeningthemedia.org>.

Provisions on the Environmental Management of New Chemical Substances (2003). Retrieved from <http://www.crc-mep.org>.

Rademakers, L. (2004). *Examining the handbooks on Environmental Journalism: A Qualitative Document Analysis and Response to the Literature*. An unpublished MA thesis in mass communication, University of South Florida.

Reese, S.D., and Shoemaker, P.J. (2016). A Media Sociology for Networked Public Sphere: The Hierarchy of Influences Model, *Mass Communication and Society*, 19(4), 389-410

Reese, S.D., & Ballinger, J. (2001). The roots of a sociology of news: remembering Mr. Gates and social control in newsroom, *Journalism and Mass Communication Quarterly*, 78(4), 641-658.

Reese, S.D. (2007). Journalism Research and the Hierarchy of Influence Model: A Global Perspective, *Brazilian Journalism Research*, 3(2), 29-42.

Reinisch, L. (2010) Environmental Journalism in the UAE. *Arab Media and Society*, 11(1),

Remillard, C. (2011). Picturing Environmental Risk: The Canadian Oil Sands and the National Geographic. *International Communication Gazette*, 73 (1-2), 127-43.

Renfro, P.C. (1979). "Bias in Selection of Letters to the Editors". *Journalism Quarterly*, 56(4), 822-826.

Reza, S.M.S. (2010). From Development Communication to Development Journalism: Agenda Setting on Environmental Issues in Bangladesh News Media. Retrieved from <http://203.131.210.100/conference/wp-content/uploads/2011/06/03-05-Reza-Haque-Agenda-Setting-on-Environmental-Issues-in-Bangladesh-News-Media.pdf>

Riaz, S. (2008). Agenda Setting Role of Mass Media. *Global Media Journal*, 1 (II), 187-202.

Riffe, D., Lacy, S., & Fico, F.D. (2005). *Analyzing Media Message: Using Quantitative Content Analysis in Research (2nd Edition)*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Rogers, C.L. (1999). The importance of understanding audiences. In S. M. Friedman, S. Dunwoody, and C.L. Rogers (Eds.), *Communicating uncertainty: Media coverage of new and controversial science*, Mahwah, New Jersey: Lawrence Erlbaum Associates Publishers.

Rogers, E.M. (2003). *Diffusion of Innovations (5th edn.)* New York: Free Press.

Rogers, P. (2002). Complexity in environment reporting is critical to public decision-making. *Nieman Reports*, 56 (4), 32-34.

Ronald, A. (2003). *Reader of the purple sage: Essays on western writers and environmental literature*. Reno Nevada: University of Nevada Press.

Rubin, D.M. & Sachs, D.P. (1973). *Mass media and the environment: Water resources, land use, and atomic energy in California*. New York: Praeger Publishers.

Ruse, M. (1995). *Evolutionary Naturalism*. London: Routledge.

Sachsman, D. (1999). Commentary: Should reporters use risk as detriment of environmental coverage? *Science Communication*, 21(1), 88-95.

Sachsman, D. (1996). The mass media "discover" the environment: Influences on environmental reporting in the first twenty years. In J. G. Cantrill and C.L. Oravec (Eds.), *The Symbolic Earth*. Kentucky: The University Press of Kentucky.

Sachsman, D. (2000). The Role of the Mass Media in Shaping Perceptions and Awareness of Environmental Issues. Climate Change Communication Conference, June 2000, University of Tennessee.

Sahin, I. (2006). Detailed Review of Roger's Diffusion of Innovations Theory and Educational Technology Related Studies Based on Roger's Theory. *The Turkish Online Journal of Educational Technology*, 5(2), 14-23.

Sahlins, M. (1985). *Islands of History*. Chicago: University of Chicago Press.

Sampei, Y. & Aoyagi-Usui, M. (2009). Mass Media Coverage, its influence on public awareness of climate change issues and implications for Japan's national campaign to reduce greenhouse gas emissions. *Global Environmental Change*, 19(2), 203-212.

Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research methods for Business Students*, 4th edition, Prentice Hall.

Scacco, J., Curry, A.L., & Stroud, N.J. (2015). Digital Divisions: Organizational gatekeeping practices in the context of online news. *Research Journal of the International Symposium on Online Journalism*, 5(1) 106-123.

Schafer, M. et al., (2016). Investigating Mediated Climate Change Communication: A Best Practice Guide. School of Education and Communication, Jonkoping University: Research Reports No.6, 2016.

Schamberger, M.M. (1997). Elements of quality in a qualitative research interview. *South African Archives Journal*, 39 (1997), 25-35.

Schelsinger, P. (1990). "Changing Media Process: Politics and Power." In M. Ferguson (Ed.) *Public Communication: The New Imperatives, Future Directions for Media Research*. Worcester, UK: Sage.

Scheufele, D.A., & Tewksbury, D. (2007). Framing, agenda setting, and priming: The evolution of three media effects model. *Journal of Communications*, 57 (1), 9-20.

Schudson, M. (1989). *Sociology of News production*. Retrieved from <http://www.mcs.sagepub.com/content/11/3/263> on 17 July 2015.

Shaari, H. (1997). *Influences on Ethics in News Production: The Socio-Cultural and Political Influences on the Mass Media in Malaysia*. Unpublished PhD thesis submitted to the University of Leicester.

Shoemaker, P.J. & Reese, S.D. (2014). *Mediating the message in the 21st century* (3rd ed.) New York: Routledge.

Shoemaker, P.J. & Vos, T.P. (2009). *Gatekeeping theory*. New York: Routledge.

Showkat, N. (2016). Coverage of Sanitation Issues in India. Sage Open Access <https://doi.org/10.1177/2158244016675395>

Silverman, D. (2010). *Doing Qualitative Research*. 3rd edn. Los Angeles, Sage.

Singer, E. (1990). A Question of Accuracy: How Journalists and Scientists Report Research on Hazards. *Journal of Communication*, 40 (4), 102-16.

Singer, J.B. (2004). More than ink-stained wrthes: The resocialization of print journalists in converged newsrooms. *Journalism & Mass Communication Quarterly*, 81(4), 838-856.

Singer, J.B. (2006). Stepping back from the gate: Online newspaper editors and the co-production of content in campaign 2004. *Journalism & Mass Communication Quarterly*, 83(2), 265-280.

Singer, J.B. (2014). User-generated visibility: Secondary gatekeeping in a shared media space. *New Media & society*, 16(1), 55-73.

Smith, J. (2000). Introduction In J. Smith (Ed.) *The Daily Globe: Environmental Change, the Public and the Media*: London: Earthscan Publications Ltd.

Smith, E. (2002). *Energy, the environment, and public opinion*. Lanham, MA: Rowman & Littlefield.

Sonnet, J., Morehouse, B.J., Finger, T.D., Garfin, G., Raltray, N. (2006). Drought and declining reservoirs: Comparing media discourse in Arizona and New Mexico, 2002 – 2004. *Global Environmental Change*, 16(1), 95-113.

Soroka, S. N (2012). Issues attributes and agenda-setting by media, the public, policy makers in Canada. *International Journal of Public Opinion Research* 14(3) 264 – 285.

Stamm, K.R., Clark, F., and Eblacas, P.R. (2000). Mass Communication and public understanding of environmental problems: the case of global warming. *Public Understanding of Science*, 9 (2000), 219-237.

Stempel 111, G.H. (1981). "Statistical Designs for Content Analysis", in G.H. Stempel111 and B.H. Westley (eds.), *Research Methods in Mass Communication*, New Jersey: Prentice-Hall.

Stocking, S. H. (1999). 'How Journalists deal with scientific uncertainty. In S. Friedman, S. Dunwoody and C. Rogers (Eds.) *Communicating Uncertainty: Media Coverage of New and Controversial Science*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Sudarmadi, S., Suzuki, S., Kawada, T., Netti, H., Soemantri, S., & Tugaswati, A. T. (2001). A survey of perception, knowledge, awareness, and attitude in regard to environmental problems in a sample of two different social groups in Jakarta, Indonesia. *Environment, development and sustainability*, 3(2), 169-183.

Sutton, P.W. (2007). *The Environment: A Sociological Introduction*. Cambridge: Polity Press.

Tagbo, E. (2010). Media Coverage of Climate Change in Africa: A case Study of Nigeria and South Africa. Reuters Institute Fellowship Paper, University of Oxford.

Tandoc, E.C. & Eng, N. (2017). Climate Change Communication in Social Media. In *Oxford Research Encyclopedia*. USA: Oxford University Press, USA.

Tantawi, P., O'Shaughnessy, Gad, K., & Ragheb, M.A.S. (2009). Green Consciousness of Consumers in a developing Country: A Study of Egyptian Consumers. *Contemporary Management Research*. 5(1), 29-50.

Teklesilassie, G. (2015) *Environmental Issues Coverage in Ethiopian Stae Media: The Case of Ethiopian Radio and Addis Zemen Newspaper*. Unpublished M.A Thesis, Addis Ababa University, Ethiopia

Tesema, F. (2012). *Media and Environmental Awareness: A Geographical Study in Kembata Tembaro Zone, Southern Ethiopia*.MA Thesis, University of South Africa.

Tessier, D. (2012). *Story Placement Clues readers into what the Journal views as important*. Retrieved from <http://www.civicpolicy.com/journalwatch>.

Thirumalailah, N. & Aram, A. (2017). Framing of environment in English and Tamil newspapers in India. *Journal of Media and Communication*, 9(1), 1-9.

ThisDay. (26 June 2012). Jonathan, Rio and the Environment. *Thisday Newspaper* Retrieved from <http://www.thisdaylive.com/articles/jonathan-rio-20>.

Tichenor, P., Donohue, G. & Olien, C. (1980). *Community conflict and the press*. California: Sage.

Tilman, D. & Lehman, C. (2001). Human-caused environmental change: Impacts on plant diversity and evolution. *PNAS*, 98(10) 5433-5440.

Titscher, S., Meyer, M., Wodak, R., & Vetter, E. (2000). *Methods of text and discourse analysis*. London: Sage.

Tobechukwu, E. (2011). The Nigerian Press Coverage of Political Conflicts in a Pluralistic Society. *Global Media Journal African Edition*, 1(1) 64-91.

Tran, L.O. (2014). Environmental Journalism: A Case Study of the Canadian Bituminous Sands. Unpublished M.A Thesis submitted to Concordia University Montreal, Quebec, Canada

Tuchman, G., (1973). Making News by Doing Work: Routinizing the Unexpected, *The American Journal of Sociology*, 79(1), 110-131.

Tuchman, G. (1978). *Making News – A Study in Constructing Reality*. London: The Free Press.

Ukonu, M.O., Akpan, C.S., & Anorue, L.I. (2012). Nigerian Newspaper Coverage of Climate Change, 2009 – 2010. *New Media and Mass Communication*, 5 (2012), 22-37.

Umechukwu, P.O.J. (2001). *Mass Media and Nigerian Society: Development Issues and Problems*. Enugu: Thompson Printing and Publishing Co.

UNEP, (2010). African network for Environmental Journalists (ANEJ). Retrieved from http://www.unep.org/roa/Project_programme_on_14_June_2015.

UNICEF (2011) - 33 Million Nigerians Defecate In Open Places. Retrieved from <http://www.nairaland.com/701916/33-million-nigerians-defecate-open#8614785>.

Ungar, S. (2008). Global Bird Flu Communication: Hot Crisis and Media Reassurance. *Science Communication*, 29 (4), 472-497.

Ungar, S. (2014). Media context and reporting opportunities on climate change: 2012 versus 1998. *Environmental Communication*, 8(2004), 233-248.

Upton, J. (2014) *Major newspaper coverage of climate change plummeted last year*. Retrieved from <http://grist.org/news/major-newspaper-coverage-of-climate-change>.

Uyo, A. (1996). *Management of Environmental Issues in Nigeria*. A paper Presented at Environmental Workshop on Environmental Reporting.

Valenti, J. M. (1998). Ethical Decision Making in Environmental Communication. *Journal of Mass Media Ethics*, 13 (4), 219-31.

Vandevoordt, R. (2017). Why Journalists covered Syria the way they did: On the role of economic, social and cultural capital, *Journalism*, 18(5), 609-625

Webb, E. J., Campbell, D. T., Schwartz, R. D., & Sechrest, L. (1966). *Unobtrusive measures: Nonreactive research in the social sciences* (Vol. 111). Chicago: Rand McNally.

Weingart, P., Engels, A., & Pansegrouw, P. (2000). Risks of Communication: Discourses on Climate Change in Science, Politics, and the Mass Media. *Public Understanding of Science*, 9 (2000), 261-83.

West, B.M., (2003).*The Reporter's Environmental Handbook, 3rd edn.* New Brunswick and London: Rutgers University Press.

Wii, O.A. (1983). The Role of Mass Media. In Martin, L.J. and Chaudhary, A.G. (eds.) *Comparative Mass Media Systems*. New York: Longman.

Wildemuth, B.M., (2003). *Why conduct user studies? The role of empirical evidence in improving the practice of librarianship*. Keynote address at "Fine-Tuning Information Strategies" INFORUM 2003: 9th Conference on Professional Information Resources, Prague, May 27 – 29, 2003. Retrieved from <http://www.sils.unc.edu/~wildem/INFORUM-2003.Wildemuth.pdf>.

Weigold, M. (2001). Communicating Science: A Review of the Literature. *Science Communication*, 23(2), 164-193.

Wilkins, L. & Patterson, P. (1990). Risk Analysis and the Construction of News. *Journal of Communication*, 37 (1990), 80 - 92.

Willis, J. & Okunade, A.A. (1997). *Reporting on risks: The practice and ethics of health and safety communication*. Westport, Connecticut: Praeger.

Wimmer, R.D. & Dominick, J.R. (2006). *Mass Media Research: An Introduction. (8th edition)* Belmont: Thomson Wordsworth.

Wolfsfeld, G. (1997). Promoting Peace through the news media: some initial lessons from the Oslo peace process, *International Journal of Press and Politics*, 2(4), 52-70.

World Federation of Science Journalists (2013). *Nigeria association of Science Journalists (NASJ)*. Retrieved from www.wfsj.org on 14 June 2015.

Wrench, J.S., Thomas-Maddox, C., Richmond, V.P. & McCroskey, J.C. (2009). *Quantitative Research Methods for Communication – A Hands-On Approach (Indian edition)*. Oxford: Oxford University Press.

Wyss, B. (2008). *Covering the Environment: How Journalists Work the Green Beat*. New York: Routledge.

Yang, T. & Percival, R.V. (2009). The Emergence of Global Environmental Law. Retrieved from <http://digitalcommons.law.scu.edu>.

Yared, B. (2009). *Environmental Problems and Solutions in Ethiopia Generally and Africa specifically (A Case Study on Ethiopia)*. Jimma University faculty of Law.

Young, N. & Dugas, E. (2011). Representations of Climate Change in Canadian National Print Media: the Banalization of Global Warming. *Canadian Review of Sociology*, 48 (1), 1-22.

Zhu, J., Watt, J.H., Snyder, L.B., Yan, J. & Jiang, Y. (1993). Public issue priority formation: Media agenda-setting and social interaction. *Journal of Communication*, 43(1993) 8-29.

Appendix A

List of Newspapers in Nigeria (Functional National Newspapers)

Source: Member Nigerian Union of Journalists (NUJ)

1. Vanguard (National) - Based in Lagos - Privately Owned
2. The Punch (National) - Based in Lagos - Privately Owned
3. This Day (National) - Privately Owned
4. The Nation (National) - Based in Lagos - Privately Owned
5. Nigerian Tribune - Based in Ilorin - State Owned
6. The Guardian - Based in Lagos - Privately Owned
7. Leadership Nigeria (Abuja) Privately Owned
8. The Sun (Lagos) Privately Owned
9. PM News (Lagos) Privately Owned
10. Daily Trust (Abuja) Privately Owned
11. Daily Independent (Abuja and Lagos)
12. National Mirror Newspapers (National) Edo State
13. Daily Newswatch (Lagos) Privately Owned
14. Complete Sports (Oyo, Ibadan, Lagos, Abuja) Privately Owned
15. Business World (Lagos) Privately Owned
16. Business Day (Lagos) Privately owned
17. The Advocate (Enugu)
18. New Telegraph (Lagos) Privately Owned
19. Manufacturing Today (Lagos) Privately Owned
20. Orient News (Awka) Privately Owned
21. Sunday Nitch (Lagos) Privately Owned

Note: There are other newspapers that are not regular and not national in outreach hence they are not included in this list.



Appendix B

Coding Guide

I. Serial number of paper: Fill out the serial numbers of the newspapers to be analysed (1 -386).

II. Paper Id. The papers ID should be filled in the following order

1. The Guardian
2. Daily Trust
3. Business day
4. ThisDay

III. Newspaper date: Enter in the following way: 1 Jan. 2013.

IV. Story ID: Number all stories carried in the newspaper analyzed serially, e.g. 1-5)

V. Page number of story: Page where story is carried.

VI. Item type (Treatment of story). This refers to the way the story is written and should not be confused with the subject of the story

- 1.**News:** for any story that emphasizes facts of recent events. Often uses a straight news or inverted pyramid style of writing
- 2.**Feature/Column/article/analysis:** Longer, more reflective, interpretive, investigative stories that don't just regurgitate facts of recent events.
- 3.**Editorial:** Stated opinion of the newspaper
- 4.**Advertisorial:** any advertisement in an article form
- 5.**Readers' comments:** Any reactions from newspaper readers
- 6.**Cartoon:** any drawings that tell a joke or satire on the issues analysed.
- 7.**Other combination:** Anything that does not fall within the above categories.

VII. Placement 1: This identifies the page on which environmental news is placed.

1. Front page: Enter 1 if the story is on the front page, or starts from the front page and continues in the inside page. This does not include promotion of the item on the front page. (if a skybox refers to a story inside, it does not count as a front page story)
2. Inside page: Enter 2 if stories are carried on the inside pages
3. Back page: Enter 3 if story is carried on the back page

VIII. Placement 2: This identifies the position of the page on which item is placed.

1. Top: Enter 1 if on the top.
2. Middle: Enter 2 if in the middle.
3. Bottom: Enter 3 if at the bottom.

IX. Graphics/photos: this identifies graphs, charts, photos, and artists impressions used to help tell the story.

1. Pictures: Enter 1 if photos are used.
2. Graphs/charts: Enter 2 if graphs or charts are used.
3. Artist impression: Enter 3 if artist impression is used.

X. Main Issues: This identifies environmental issues carried by the newspapers and should be entered in the following order/number. However in cases where the story is complex and involves more than one issue, the dominating issue should be entered.

1. Pollution
2. Public sanitation
3. Environmental sanitation/strategy
4. International environmental conventions
5. Conservation
6. Biodiversity
7. Climate change/global warming
8. Desertification
9. Deforestation
10. Nature preservation
11. Hazardous chemicals
12. Waste disposal
13. Corporate green policies/actions
14. Other

XI. Origin

1. Staff/by line (Stories written by newspaper staff, or stories identified as coming from the news)
2. Wire service
3. Press release
4. Government
5. Readers' letters
6. Unknown

XII. News Authors

1. By line
2. Wire services
3. Press release

XIII. Geographical focus/Dateline

1. Community
2. LGA
3. State/Sate capital
4. National
5. Federal capital
6. Continental
7. Global/international

XIV. Sources/Main actors quoted (Note: Code multiple sources, not just one, eg. 1, 3, 4. Sources from government, expert, activist)

1. Government officials
2. Politicians
3. Environmental activists
4. Industrialists
5. NGO's
6. Advertisers

XIV. Subsidiary actors (multiple coding where necessary)

1. Citizens
2. Unions
3. Victims of disasters

XV. Direction/Tone

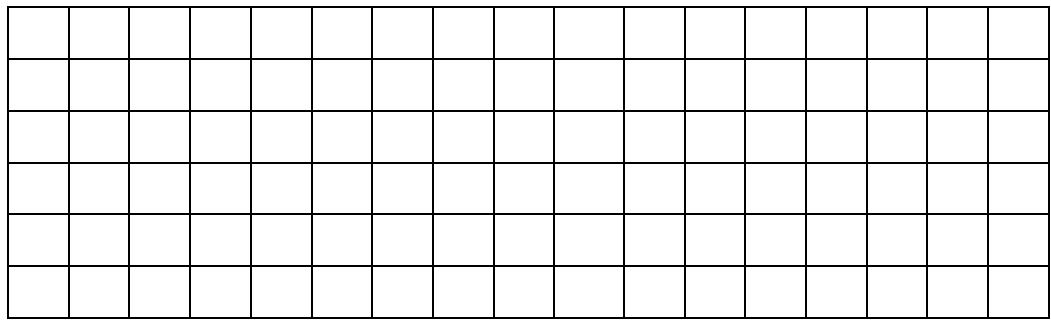
1. Favorable
2. Unfavorable
3. Indifferent.

Please write down sentences that denote tones in the space provided in the coding form. The headlines could be used where necessary, or key words in the story could be used in summing up the story.

Example: favorable tone: 1. Conservationists push for 25% forest recovery by 2030
2. World wide effort to keep global temperature rise to 2 degrees centigrade. .

Appendix C

Coding Instrument



Appendix D

Inter-Coder Reliability Result

Categories coded	No. of Coding decisions	Decisions agreed upon by the two coders	Decisions on which the two coders disagree	Reliability	Percentage of Agreement
Environmental themes in the stories	50	50	0	1	100
Prominence/value/placement of environmental news	50	50	0	1	100
Environmental news sources	50	50	0	1	100
Origin of environmental news stories	50	44	6	0.88	88.00
Direction/Tone of environmental news stories	50	50	0	1	100
	250	246	6	0.984	98.41

Note: Reliability =2(C1, C2)

C1+C2

2(C1, C2) represent the coding decisions which the two coders agreed upon, while C1 + C2 refer to the total number of coding decisions done by both the first and second coders respectively.

Appendix E

Interview Guide/Protocol

Dear Respondent,

I am a PhD student at University Utara Malaysia. I am conducting a study on Press Coverage of Environmental Issues in Nigeria to determine the quantum of environmental coverage by the Nigerian press and what influences such coverage.

In order to realize these objectives, I would appreciate it immensely if you could spare your time to answer, objectively, the questions in this interview.

I confirm that the answers given and the opinions expressed in this interview will be dealt with utmost confidentiality and strictly used for the purpose of this study.

Thank you.

Respondent's biographical data.

- a. Name (Full name – underline the surname/last name)
- b. What is your position, e.g. editor/reporter?
- c. What is your highest academic qualification?
- d. Which newspaper do you work for?
- e. What is your position?
- f. How many years of work experience do you have?

Interview questions:

- 1. How long have you been reporting the environment?
- 2. Does your number of years as an environmental reporter (experience) affect you in the way you report the environment? If yes how?
- 3. Do you think you are qualified to report the environment? Why/How?
- 4. Do you belong to any environmental reporters' association? What are the implications of belonging / not belonging to such associations?
- 5. What are the major impediments to reporting the environment
- 6. Why is the coverage of environment not prioritized?
- 7. Would you say that environmental reporters possess the required skills, knowledge, and awareness to report the environment?
- 8. What is the impact of institutional control on environmental reportage?
- 9. Does your newspaper have a clear policy or interest in covering the environment? If yes please briefly mention and explain the policy.
- 10. How do the policies of your organization affect environmental coverage?
- 11. What do you consider the purpose of your environmental news coverage – information, mobilization, education.

12. What aspect(s) of the environment does your newspaper pay more attention to and why?
13. Why are most of your reports straight news rather than interpretive or investigative reports.
14. Does your newspaper provide refresher courses, or updates for journalists covering the environment?
15. How does the provision of such courses or lack of it affect your coverage of the environment?
16. Do you have access to any environmental reporting handbook and would such handbook help in improving environmental reporting?
17. What are your sources of environmental news and which ones do you prefer and why?
18. Given the number of stories and the depth of such stories on the environment, would you say that your newspaper (press) plays its agenda setting role on a crucial issue as the environment?
19. Do you have regular pages/columns for environmental news/issues? If no why?
20. Do environmental stories enjoy the same prominence as political stories, conflict stories, crime, and entertainment? If no why?
21. Do you have access to bodies, organizations, institutions that shape environmental policies?
22. What are the implications of having/not having access to such institutions?
23. What is your level of knowledge of environmental issues regarding legislation, laws and implementation of such laws?
24. Is there any activity or event that is celebrated to encourage, support, and appreciate environmental reporters within and outside your newspaper organization?
25. Do you think government has done enough in regulating the environment? If yes or no please explain.
26. Overall are you satisfied with the way environmental issues are reported in the Nigerian press?
27. If no, what needs to be done?
28. Note that there were other follow up/probing questions that are not written down here

Appendix F

Interviewing techniques/process informed by the literature.

Source: Berry, R.S.Y.L. (1999)

One essential element of all interviews is the verbal interaction between the interviewer/s and the interviewee/s. Hitchcock (1989:79) stresses that 'central to the interview is the issue of asking questions and this is often achieved in qualitative research through conversational encounters.' Consequently, it is important for the researchers to familiarize themselves with questioning techniques before conducting interviews.

(A) Questioning techniques

Individuals vary in their ability to articulate their thoughts and ideas. With good questioning techniques, researchers will be more able to facilitate the subjects' accounts and to obtain quality data from them. Current literature suggests some questioning techniques, summarized in the following ten points:

1. Ask clear questions

Cicourel (1964) reflects that 'many of the meanings which are clear to one will be relatively opaque to the other, even when the intention is genuine communication.' Accordingly, it is important to use words that make sense to the interviewees, words that are sensitive to the respondent's context and world view. To enhance their comprehensibility to the interviewees, questions should be easy to understand, short, and devoid of jargon (Kvale 1996:130).

2. Ask single questions

Patton (1987:124) points out that interviewers often put several questions together and ask them all as one. He suggests that researchers should ask one thing at a time. This will eliminate any unnecessary burden of interpretation on the interviewees.

3. Ask truly open-ended questions (Patton 1987:122-3)

Truly open-ended questions do not pre-determine the answers and allow room for the informants to respond in their own terms. For example, "What do you think about your English?" "How do you feel about the method of English teaching in your home country?" "What is your opinion of English lessons in the UK?"

4. Ask experience/behaviour questions before opinion/feeling questions
(Patton 1987:115)

It is useful to ask questions about experience or behaviour before asking questions about opinions or feelings as this helps establish a context for the informants to express the latter. For example, asking "What happened?" before "How do you feel now?"

5. Sequence the questions (Cohen and Manion 1994:277)

This refers to using a special kind of questioning technique called 'Funnelling', which means asking from general to specific, from broad to narrow. Cohen and Manion quote an example from the study by Sears, Maccoby and Levin:

All babies cry, of course. Some mothers feel that if you pick up a baby every time it cries, you will spoil it. Others think you should never let a baby cry for very long. How do you feel about this? What did you do about it? How about the middle of the night?

(Cohen and Manion 1994:277)

6. Probe and follow-up questions (Patton 1987:125-126)

The purpose of probing is to deepen the response to a question, to increase the richness of the data being obtained, and to give cues to the interviewee about the level of response that is desired. This can be done through direct questioning of what has just been said, for example, "Could you say something more about that?"; "Can you give a more detailed description of what happened?"; "Do you have further examples of this?" Alternatively, a mere nod, or "mm," or just a pause can indicate to the subject to go on with the description. Repeating significant words of an answer can lead to further elaboration (Kvale 1996:133).

7. Interpret questions (Kvale 1996:149)

Throughout the interview, the researchers should clarify and extend the meanings of the interviewee's statements to avoid misinterpretations on their part. Kvale (1996:135) suggests that researchers may use question like 'Is it correct that you feel that.....?'; "Does the expression..... Cover what you have just expressed?" to allow the interviewees to confirm or disconfirm what has been interpreted by the researchers.

8. Avoid sensitive questions

It is advisable to avoid deep questions which may irritate the informants, possibly resulting in an interruption of the interview. Cicourel (1964) agrees that 'the respondent may well feel uneasy and adopt avoidance tactics if the questioning is too deep.'

9. Encourage a free rein but maintain control

The researchers should be prepared to let the interviewees 'travel' wherever they like, but a rough checklist of ideas or areas the former want to explore is useful. Palmer (1928:171) suggests that proficient interviewers should be always in control of a conversation which they guide and bend to the service of their research interest.

10. Establish rapport

This can be achieved by, for example, respecting the informants' opinions, supporting their feelings, or recognising their responses. This can also be shown by the researchers' tone of voice, expressions or even gestures. In addition, Kvale (1996:128) suggests that 'a good contact is established by attentive listening, with the interviewer showing interest, understanding, and respect for what the subjects say.' He (1996:148) continues, '[a good interview] allows subjects to finish what they are saying, lets them proceed at their own rate of thinking and speaking.'

(B) Other techniques informed by the literature

In addition to questioning techniques, there are other factors which may have an impact on to interview. Cohen and Manion (1994:286) cites Tuckman's (1972) guidelines for interviewing procedures, as follows:

At the meeting, the interviewer should brief the respondent as to the nature or purpose of the interview (being as candid as possible without biasing responses) and attempt to make the respondent feel at ease. He should explain the manner in which he will be recording responses, and if he plans to tape record, he should get the respondent's assent. At all times, an interviewer must remember that he is a data collection instrument and try not to let his own biases, opinions, or curiosity affect his behavior.

Tuckman (1972)



Appendix G

Sample of In-depth Interview Transcript.

Interviewer: The researcher

Transcriber: The Researcher

Interviewee/Respondent: Environmental journalist @ ThisDay Newspaper

Interview Setting: The Interview took place in the office of the publisher of Nigerian Catholic Reporter, Lagos Nigeria on 15 -2-16 from 2 – 3 pm.

Interview Duration: 60 mins.

Start of Interview:

Do you consent freely to participate in this interview?

Yes, but on the condition that it will not be recorded electronically and that my name will not be mentioned.

What is your position – eg.editor/reporter

I am a senior correspondent.

What exactly do you do?

I work both in the office and in the field collecting and writing environmental news.

What is your highest academic qualification?

I hold diploma in Journalism.

Which newspaper do you work for?

I work for ThisDay.

How many years of work experience do you have?

Five years...or should I say going to my sixth year.

How long have you been reporting the environment?

That's some three years now.

What was the single most significant factor that led you to the coverage of the environment?

I have diploma in journalism and was posted to cover environment

Do you think the number of years you have covered the environment (experience) has in any way influenced the way you report the environment?

No. I don't think so.

In other words would you say that you have enough qualification and experience to cover environment?

Eeeem...well it depends. From the way we report environment I will say that I do well in covering the environment.

What do you mean by “the way we cover environment”?

We write news of environmental issues that happen like any other news story

Generally would you say that environmental reporters possess the required skills, knowledge and awareness to report the environment?

Well like I just said I think we do because we write environmental stories just like we do other stories

Given that environment is complex would you say that you do in-depth story on the environment?

My brother (referring to the researcher) I won't lie to you. That doesn't happen most of the time. There may not be need for that. Who will even read?

What are the major impediments to reporting the environment?

Wallahi (honestly) it is a very dry area. It's a field that lack any form of business a journalist can do. No incentives like other areas of reporting.

Does your newspaper have any policies on interests in covering environmental news? If yes what are they?

Shrugs ...Eeeem I don't know much about any specific policies but I know that we prefer stories that help us sell our publication especially now that there is no money in the country.

Did you mean that you don't prioritize environmental news?

Most likely because it's a dry area.

How does the policy of your organization affect environmental coverage?

To be honest with you there are stories that can be stopped by your superiors due to interests.

What interests?

Financial interests. Sometimes when there are more contents that are paid for, we may drop environmental story.

What are the impacts of institutional control on environmental coverage?

Not much control happens here...nothing seems to be happening so what do you want to control? Editors and proprietors may be exert some controls that may not be good for the beat.

What are the purposes of environmental coverage – information, mobilization, education, advocacy?

All of them. As a national newspaper we have to all these purposes.

What aspects of the environment does your newspaper pay more attention to and why?

I think this is the prerogative of the editor or editorial board. But we have more climate change news.

Why?

Well because that is the news that is trending. Everyone big or small reports it mostly these days.

How do you generate climate change news?

Mostly from news agencies. Most of the stories don't happen here.

What of some major issues like pollution and waste disposal?

Sometimes they are covered but they are local issues. Do we need to report them again when everyone knows about them?

What about reporting them regularly so government can do something about them?

Government? You are talking like you don't know the Nigerian government.

Do environmental stories enjoy the same prominence as political stories, conflict stories, crime and entertainment?

I don't think so. These stories you mentioned are the stories that people are interested in. not the environment. Every Nigerian is interested in politics. Even those that are hungry. The same with conflict.

Do you have regular pages for environmental news?

Yes

Given the number of stories and depth of such stories on environment, would you say that your newspaper plays its agenda setting role on crucial issue as the environment?

Not quite. Much could be done.

Like what?

Yeah ... like adding depth to stories, and maybe better placements on prime pages and reporting it more regularly.

What of environmental regulation, do you have enough knowledge of this?

I can read up any environmental regulation or law when the need arises.

Do you think government has done well in promulgating environmental laws and regulations?

Absolutely. Good laws are there but implementation is the big problem. There are thousand and one regulations but compliance is poorly tracked.

Does your newspaper provide refresher courses or updates for journalists covering the environment?

Not specifically. Sometimes it is a general refresher course for all reporters. Nothing specific for environmental reporters.

How does this affect your coverage?

Well the essence of refresher courses or updates is to stay current and know what is trending in the field and how to report them. When you don't get updated you definitely will be lagging behind.

Do you have access to any tools, like environmental handbooks, that aid in reporting environmental news properly?

For where? (Pigin English that emphatically means NO!) We don't have such books here.

We only get handouts in some assignments. That's all.

Would such handbooks be handy?

Why not? They definitely will help in defining concepts and explain terms in an understandable manner.

Do you have access to bodies, organizations and institutions that shape environmental policies? If yes mention them.

Yes. We are affiliated to UN agencies, and government agencies, ministries and parastatals and NGOs

What are the implications of having access to such bodies?

They are good story sources. They help deepen the authenticity of your report.,,

What are the sources of environmental news?

Wire services, breaking news, experts, government officials, NGOs, and other bodies.

Which of these sources dominate and why?

As in most cases government or official sources are preferred because they save your time. You may not have enough time to begin to verify your stories..in some cases the stories are readymade.

Is there any activity or event organized to honor, encourage and support environmental reporters?

Well there is Nigerian Media Merit Award (NMMA) which gives a prize for the best environmental journalist.

Does such an award encourage good coverage?

Absolutely. It encourages competition, original work and more zeal in covering the beat because you know you could get the prize therefore you give it your best shot.

Overall are you satisfied with the way environmental issues are reported in the Nigerian press?

Yes I am satisfied but more needs to be done. For example it needs to be reported regularly and in a way that people can relate to it. May be it should deserve front page placements and more editorials can be written on environmental issues.