
An Analysis of the Influence of the Nigerian Mass Media on Public Understanding of Climate Change

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***Abstract:** This paper assessed the influence of Nigerian media on public knowledge of climate change. This work acknowledges that public understanding of climate change is a prerequisite to taking voluntary action to mitigate its effects. The work therefore sought to ascertain the specific ways in which Nigerian media reportage of climate change had influenced public knowledge of the subject matter. A survey was conducted in Abuja, Enugu, Ikeja and Port Harcourt. Editors of four newspapers in Nigeria were interviewed. Results indicated that the mass media did not rank the highest as sources of information for the audience on climate change, and they (media) did not significantly influence public knowledge of climate change. This finding differed from results of studies in the US. Respondents linked climate change to changes in weather patterns. This study recommended that opinion polls are necessary to see where audience interests lies as well as how much media views influence public understanding in terms of communication effectiveness.*

1. Introduction

The scarcity (by June 2012) of tomatoes, fresh corn and fresh vegetable across markets in Nigeria once again threw

up questions as to what was wrong. Among the causes, the most likely, according to farmers and traders, was inconsistent rainfall. In the North, Niger State suddenly went from a prolonged drought to flooding in August 2010, causing crop failure, death of livestock and submerging of whole villages. An *AFP* news report of August 24, 2010 showed that the Nigerian Meteorological Agency had forecast low rainfalls, but it came pouring down.

Flooding also affected seven other States in Northern Nigeria, where it displaced two million people according to *BBC* news of September 24, 2010. The States include Borno, Sokoto, Katsina, Kano, Jigawa, Zamfara, and Kebbi. The Nigerian media reported the 2010 flooding of Lagos (and Ogun State in western Nigeria), which sacked schools in Ajegunle and other parts of the State (*Daily Triumph*, October 21, 2010). The Nigerian Television Authority (NTA) reported the death of 10 people from flooding in Lagos on August 26, 2011. Desert encroachment in the north, 'acid rain' in the Niger Delta and high winds in the northern parts of eastern Nigeria have also engaged both the media and government in Nigeria (NTA news, 12 June, 2012).

The NTA in its network news on November 12, 2009 reported the anomaly in rain patterns in Nigeria. The report was a news interview with the Director General, Nigeria Meteorological Agency, Dr. Anthony Anuforo, who said the agency had issued a warning on February 19, 2009 about shifting rain patterns. Dr. Anuforo regretted that authorities did not take the warning serious. The shifting patterns have continued.

Many Nigerians have been arguing whether or not the shifting rain pattern and the desert encroachment are Nigeria's own climate change. Developing nations, including Nigeria, listen to stories about climatic extremes on foreign media as though they were folktales. Part of the seeming fairy tale on foreign media is that Africa, as in the case of the global financial crisis, would be the worst hit when the climate change *Armageddon* happens.

This is the prelude to this study: what do members of the Nigerian public know about climate change and has media

reportage influenced public's knowledge of climate change? For instance, global attention is turning towards looking at climate change as a global crisis (Lester and Cottle, 2009), climate change adaptation, emission cuts, cleaner energy, carbon trading, carbon tax and how climate change is framed or symbolized in newspapers (Gelbspan, R. 1998; Boykoff and Rajan 2007; Dunwoody ,1992). These foci are considered in line with the various audiences of climate change: policy makers, environmental bodies, farmers, greenhouse gas emitting companies, and international bodies concerned with environment.

Mosser (2007, p.43) observes that the “need for effective communication, public outreach and education to increase support for policy, collective action and behaviour change is ever present, and is perhaps most pressing in the context of anthropogenic climate change”. The challenges associated with communicating climate change in order to facilitate societal response are enormous.

Boykoff and Ravi (2007, para8) also note that the “integral role played by the media is not surprising, as they are still the main source of information and opinion for millions of readers and viewers through newspapers, magazines, television, radio and the internet”. As people gain most of their political, economic or other news from the media, so they do with scientific stories. Various studies have shown that the public gathers much of its knowledge about science from the mass media (Wilson, 1995), with television and daily newspapers being the primary sources of information (Project for Excellence in Journalism, 2006; NSF, 2004). Is this the case in Nigeria? In other words, what are the sources of information on climate change, and what do the people know and do about climate change?

Statement of the Problem

Various studies have documented research evidence that the media actually report climate change (Ukonu 2012, Boykoff and Ravi 2007, Sampei and Aoyagi-Usui, (2009, p.8, Bast, 2010; Idso, Singer and Fred, 2009; Pielke, 2009; Oso 2006, Galadima 2006, Nwabueze 2007, Moeti, Maraisane &

Marou, 2008). However, there is a dearth of Nigeria-based study on sources of information for the Nigerian audience on climate change as well as public understanding of climate change. Public action towards climate change will not begin until the public understands climate change and their place in the fight against it, especially in the areas of forcing the authorities to make and execute meaningful policy about it. “Responsible citizenry necessitates a concrete knowledge of causes and until, for example, the public understands what causes climate change it cannot be expected to take voluntary action to mitigate its effects” (Board, O’Connor & Fisher, 2000).

Umejei (2009) thus cautions that Nigeria risks the worst ravages of global climate change if most of its mass media continue in their present ignorance of the basic issues and the grave challenges they pose. Umejei impliedly believes that the media should not just call attention to the impacts of climate, neglecting other important issues about adaptation.

Objectives of the Study

The study pursued the following specific objectives:

1. The extent to which members of the public are exposed to Nigerian media reports on climate change.
2. The specific ways in which the Nigerian media have influenced public knowledge of climate change.
3. What the Nigerian public understands about climate change.
4. The factors affecting editors and reporters in their reportage of climate change.

Research Questions

The following questions have been formulated to guide this study:

1. To what extent have members of the public been exposed to Nigerian media reports on climate change?
2. What are the specific ways in which the Nigerian media have influenced public knowledge of climate change?
3. What does the Nigerian public understand about climate change?
4. What are the factors affecting editors and reporters in their reportage of climate change?

Media and public knowledge of climate change.

Studies have shown that the public learns a large amount about science through consuming mass media news, Wilson (1995, pp. 75-89). Across Africa, ordinary people have started noticing the effects of global warming around them but many still do not know what to do about the changes attributed to global warming. Therefore, the media can play crucial roles in informing the public about climate change. Luganda (2007, p.34) notes that:

The media can play a crucial role in disseminating useful climate information to effectively guide public debate and understanding about the weather, climate and climate change. Millions of farmers are grappling with the changing climate around them but are starved of real timely information on what their options are. Still, it is not uncommon to hear them talking about ongoing changes in rainfall patterns. Indeed, as climate change takes centre stage, everybody is talking about it — in markets, homes and communities (cited in Olarewaju 2011, p.42).

Various studies (*The Guardian*, Monday March 9, 2009, p. 31) have established that Nigerians' understanding of climate change-related issues including the negative effect of the fast changing climate on lives is low. There have, therefore, been calls to the media to step up their reportage of the climate change issues in order to create the necessary awareness needed to alert Nigerians and build their positive response. Luganda (2007) believes that regular, accurate

communication about climate change is the first step toward developing coping mechanisms in Africa.

Communication has already proved a powerful tool for disaster management. In the war against HIV/AIDS, conferences, radio broadcasts, community mobilisation meetings and seminars have helped stem the disease's spread in Kenya and Uganda, and increasingly in the Southern Africa Development Community countries. Governments need to replicate these communication strategies in the climate sector to develop successful coping strategies. Informing the public about an upcoming drought, for instance, gives people time to plan how to cope. Similarly, new information can help governments make better preparations for a potential disaster Luganda (2005, p.34).

Therefore, the role of the media should not be to simply report climate change events and disasters. The media have a role in influencing personal, national, and international action to address climate change. Media coverage of climate change should set agenda on what people should know and do (Nwabueze 2007). Weingart, Engels, and Pansegrau (2000, pp. 261-283) note that media portrayals of climate change have proven to be a key contributor among a number of factors that have shaped and affected science and policy discourse as well as public understanding and action.

Boykoff and Rajan (2007) have also observed that journalism shapes public concern. This is not to disregard the fact that the media are not the only factors that shape public understanding of given issues as espoused in the media effects debate over the years. But a strong correlation between media portrayals of climate change and public understanding has long been demonstrated in some countries. Sandell and Blakemore (2006) found that media images of climate change have shaped the public's view about climate change in the US, where climate change has been largely constructed as uncertain.

A study of US newspaper and magazine coverage from 1986 through 1995 – in *The New York Times*, *The Wall Street Journal*, *The Chicago Tribune*, and *The Los Angeles Times* – found that uncertainty was consistently a prominent theme

in reporting Zehr (2000, p. 85). Zehr concluded that uncertainty “was used to help construct an exclusionary boundary between the public and climate change scientists thereby contributing to deferential citizens and diffused public involvement through acceptance of the need for ‘more research’ Zehr (2000, p. 85).

A study of beliefs and attitudes about the severity of climate change was undertaken in 1997 and 1998 by Krosnick and Horlbrook (2006, pp. 7- 43). Through telephone interviews of 1,413 adults, they found that beliefs were a function of three main factors: possible relevant personal experiences (e.g. exposure to weather disasters), perceived consequences of climate change (e.g. relative vulnerability) and messages from informants (e.g. scientists via the mass media). Following their findings, Krosnick and Horlbrook came up with a mechanism linking knowledge and action:

Knowledge may have increased certainty, which in turn increased assessments of national seriousness, which also increased policy support. Knowledge about an issue *per se* will not necessarily increase support for a relevant policy. It will do so only if beliefs, attitudes, and beliefs about human responsibility are in place to permit the necessary reasoning steps to unfold (Krosnick and Horlbrook 2006, pp. 36-37, cited in Olarewaju, 2011, p.25).

Wilson conducted a survey of 649 university students in 1992 to investigate the consequences of climate change. He found that approximately half of the students indicated that media was their primary source of global warming knowledge. Within media, ‘national television news’ was the most frequent source Wilson (1995, pp. 75-89). Another study of 100 university students in 1997 was done via telephone survey of 512 adults to explore pathways of understanding climate change causes, consequences and solutions. The study indicated that newspapers and television were reported to be the most frequent sources of information about global warming and that this was linked to understanding of the connections between fossil fuel use

and climate change, Stamm and Clark (2000, pp. 219-237, cited in Olarewaju, 2011, p.25).

There have also been many polls asking where people are accessing scientific information within the media. For instance, a 2006 Pew Study found that television was the primary source of information, and the internet was the second most utilized source (Pew Internet and American Life Project 2006). The poll also found that 65% of respondents reported that they had come across science news when using the internet for other reasons, and just half of those using the internet for science information had gone to a website whose content is devoted to science (Pew Internet and American Life Project 2006).

Ungar (1992, 2000) however argues that there existed a paradox where increases in specialized knowledge led to more compartmentalized groups of understanding. Ungar says the issue of climate change lacked the day-to-day relevance necessary to motivate people to learn and take action, and that this arena remains a contested space of knowledge, understanding and 'appropriate' action, as efforts to overcome these challenges can be problematic. In his words: "bridging metaphors can be inappropriate or misapplied, the public could very well be concerned but relatively ill informed about such issues, Ungar (2000, p. 309).

2. Theoretical Framework

Meaning Theory

The meaning theory sees the meanings people hold as strongly influenced by their exposure to mass communication. The meanings, in turn, shape people's understanding of, and actions in, situations with which they must cope in the real world (Defleur and Dennis, 1991, p. 573). People shape, reshape and stabilize meanings so that they can communicate in predictable ways, especially in social situations. The media are a chief part of social communication processes. Not only do people receive information directly from the mass media, they also discuss

such information in conversations and pass on news and interpretations in a process of diffusion. Thus in a “media-saturated society, exposure to mass communication plays a singularly important part in forming our habits of perception and interpretation of the world” (Defleur & Ball-Rokeach 1975, p. 228). In this significant way the media’s portrayal of reality can indirectly, but strongly, influence people’s behaviour.

Methodology

This research work adopted survey and depth interviewing as its research design. The four environmental editors of the Guardian, Thisday, Vanguard and Daily Sun were interviewed. Broadcast stations in Nigeria did not have specific programmes solely for climate change. They had general programmes for environment. The questionnaire was adopted as the instrument of data collection for survey. Graphs were used to present information. An interview schedule was drawn up for the editors.

Four major capitals in various zones in Nigeria were studied. Out of a total population of 2,053,273 (2006 population census in Nigeria for Abuja, Enugu, Ikeja and Port Harcourt), a sample size of 400 was selected using the Taro Yamane (1967) formula. The areas of study were divided into zones and a table of random numbers was used to select the streets studied. The systematic sampling technique was used to select households studied within the streets.

The following areas were selected from the zones; the streets appear in brackets:

Enugu: New Haven (Ezeagu, Udenweze, Mbanefo, Lumumba, Marcus Garvey, Egede, Basse Duke, Nza, Edewu, Nanka), Uwani (Edozie, Hasan, Nsukka, Agunwa, Ebe, Onubogu, First, Ojike), Obiagu (Onu Asata, Lagos, Akuruka, Omeife, Ebe Lane, Ani and Council/Edinburgh) and Achara Layout (Agu, Ozogu, Achina, Umuuchu, Amafor, Idodo, Sam Unubia). From these

Port Harcourt: Old G.R.A., Old Port-Harcourt Town zone (Amassoma street, Azikiwe road, Captain Angangala street, Harold Wilson Drive, Creek road, Hospital road, Niger street), Aba road, Ogbunabali, D'Line, New G.R.A.(Afam street, Agudama street, Igbokwe Street, Ikot Ekpene Street, Agudama Street, Emekuku street, Kaduna street, Manila Pepple street, Nkpogu, Street, Okoroji Street, Olu-Obasanjo), and Diobu (Abakaliki Street, Abba, Afikpo, Chigbu, Dickson, Dim Street, Echue, Ejigini, Azikiwe, Emole, Emenike, Gambia, Ikerre, Ikom).

Abuja: Wuse Zone 5 (Bokoba street, Douala street, mombassa Street, Bissau street), Wuse Zone 2 (Dar es Salam Street, Agadez Street, Parakou Street, Libreville Street), Area 1 (Sokoto Street, Aladja Street, Kano Street, Oyo Street) Wuse Zone 6 (Harare Street, Coutonu Street, Iriga Street, Tunis Street)

Ikeja: Maryland (AJose Street, Oki lane), Opebi (Emina Crescent, Allen Avenue, Joseph Street), Ogba (Oba Akran, Joseph Odulano Street, Akinwale), Alausa (Amara-Olu Street, Ojodu Road), and Agidingbi (Olu Aboderin Street, Lateef Jakande Road)

3. Findings/Discussion

1. The extent to which members of the public have been exposed to media reports on climate change.

Interpersonal communication, internet and television still had an edge over newspapers as sources of climate change information for the respondents. Interpersonal communication ranked the highest among the sources of information on climate change for the respondents (figures 3, 4 & 7). It was only 19 respondents out of 400 (4.75%) who indicated having ever read a story in a newspaper on climate change. The respondents who had read newspapers did not remember reading up climate change stories.

The editors indicated in the interview that they faced the challenge of communicating climate change because in the midst of their effort, there is poor readership. Unfortunately,

the editors said they rarely conducted readership surveys on climate change, because climate change did not make big stories, and members of the audience were not interested in climate change. This means a cycle of crisis of interest, in which audience lack of interest discouraged editors from giving climate change prime attention, and the audience in turn did not think highly of climate change partly because editors did not give it prominent positions in newspapers. Who will break this cycle of crisis of interest?

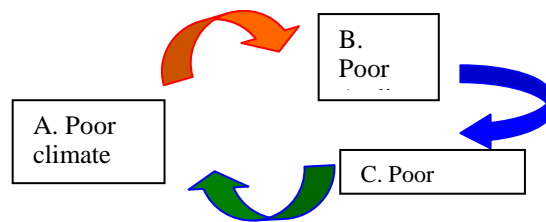


Figure 01: Climate change cycle of poor interests. It is not definite which is A, B or C, but each leads to the other in a cycle not rewarding to any of the parts.

Nigeria's situation differs from what obtains in many developed countries such as the US where a study indicated that newspapers and television were reported to be the most frequent sources of information about global warming and that this was linked to understanding of the connections between fossil fuel use and climate change, Stamm and Clark (2000, pp. 219-237, cited in Olarewaju, 2011, p. 25).

2. The specific ways in which Nigerian media have influenced public knowledge of climate change.

The fact that few respondents read newspaper stories on climate change implied that newspapers had little direct influence on public knowledge of climate change. Those who had read climate change stories in newspapers received information such as advice against bush burning, adoption of the culture of planting trees in respondents' surroundings, reduction of burning of carbon-emitting substances, appropriate dress code to suit weather conditions, reduction of consumption of fossil fuel, and use of alternative sources of energy. The respondents also reported having read stories

on the Copenhagen conference in 2009 and climate change talks, the human causes of climate change, climate change and economic growth, the Lagos floods (no specific flood or date was mentioned), climate change as an environmental problem and ways to overcome this challenge to our environment. These responses were in line with what the newspapers had reported about fighting climate change in line with a study by Ukonu (2012).

However, the kind of responses provided by the respondents as adaptation measures they had undertaken against climate change showed that they had not received such information from the media because the responses were awful. More than half of the respondents did not indicate that they ever engaged in any adaptation measure, and those who indicated the measures they took in response to climate change gave the following responses: reduce meat consumption, prepare before hand not to be caught in the rain, minimize the way I use power, going out always with an umbrella, carry camisole, shower cap in the bag, stock up on food against incessant rains, grow more trees, lessen bush burning. Only the last two options sounded like measures against climate change.

Respondents in Port Harcourt (and Lagos) were concerned about incessant rains, their jobs and fast deteriorating roofs in their villages; but they linked the problem of 'acid rain' and deteriorating roofs to pollution and gas flaring. Pollution and gas flaring are causes of climate change, but the concept of climate change was not clear to them, they just knew that it is said that there is oil pollution through gas flaring which is causing 'acid rain and decay of roofs'. Therefore, they did not think that there was anything they could do as an adaptation measure since they were not the cause of the problem.

3. What the Nigerian public understands about climate change.

The respondents' idea on climate change was linked to weather changes and talks about ozone depletion (figure 6). Respondents were also concerned about how their comfort and occupation will suffer due to the effects of climate

change which they limited to pollution, too much rain and sunlight. This finding is in line with the findings of the British Council Nigeria in collaboration with the BBC World Service on climate change and perception of Nigerians as follows: “the understanding of climate change is hazy among every segment of society. The knowledge of the impact from the private sector on their activities on the environment is linked only to waste disposal and pollution. They do not link climate change to carbon”. The report further stated that Nigerians understand climate change in terms of change in weather pattern and this was limited in sensual awareness of abnormal increase in the level of heat and effect it had on farm yield in a rain-fed agriculture (*Vanguard*, Wednesday, January 20, 2010, p. 34).

Having made the above observation, there is still a lot the audience associates with climate change, which is neither appropriate nor near anything one might see in a newspaper on climate change. For instance, what many respondents said about the effects of climate change on the environment and occupation of respondents were laughable. There were answers such as “excessive rain or sun could hinder my daily activities; excessive heat makes life uncomfortable; it can affect my skin; more money for skin protecting creams; self-employed people suffer when it rains too much and affects patronage of business; lateness to work which can lead to job loss; people on night shift are in trouble when it rains in the night”.

4. Factors affecting editors and reporters in reporting climate change

According to *The Vanguard* environmental editor, the first and biggest was understanding climate change. In his words: “Climate change is an area that has some uncommon terms; you hear about carbon trading, carbon caps, and you need to read up. For many reporters the internet is their major source of climate change stories, because they have some time to find the meaning of words in stories they search up, unlike in events where experts use high sounding terms. There is also the problem of communicating climate change, because of the interest problem on the part of readers”. The

editor revealed that there were more people in journalism in Nigeria who had no background in communication-related disciplines than otherwise. He believes, however, that with a flair for writing, all journalists were coping well.

The *Thisday* and *The Guardian* editors also mentioned terminology, and the fact that climate change was not yet a major sector in Nigeria as it existed in industrialised countries. The *Thisday* editor said that climate change is a unit in the Nigerian Ministry of Environment, (not even a department) and apart from the director, who was often difficult to track down, there were virtually no experts to explain reporters' questions. This, he said, was why many reporters simply turned to the internet for stories on climate change, and that, in turn, was why many climate change stories had foreign origin.

The *Daily Sun* editor mentioned the challenge of resources needed to cope with the demands of reporting climate change. He noted that whenever a disaster occurred, reporters would need to visit the place to interview people affected by climate change-associated disaster as was the case in Lagos in 2010 when environmental journalists in Africa visited a scene of climate disaster to see those affected. The editor noted that a lot of resources went into the visit, and not every newspaper would allow their reporters to embark on such visits.

In terms of encouragement, all the newspapers had received training and sponsorships from what the *Thisday* editor called development partners and NGOs. *The Guardian* mentioned the Nigerian National Petroleum Corporation, (NNPC), *Daily Sun* mentioned African Adaptation Programme (AAP) of the US, *Thisday* mentioned the Department for International Development, (DFID), while *Vanguard* mentioned the United Nations Development Programme, (UNDP). These agencies sponsored reporters to climate change conferences in Copenhagen and Cancun. They also sponsor training sessions for climate change reporters.

All the newspapers reported that they did not experience a lot of discouragement from any quarters. The *Daily Sun* editor however noted that sometimes when a newspaper

reported government's mishandling of any climate change disasters, government often showed visible anger. He cited the case of the bar beach that usually sacked people in Lagos as a result of climate change-induced sea rise, and governments insensitivity towards the incident (in terms of resettling residents or providing relief when disaster called) which had become recurrent.

The *Thisday* editor also mentioned that during trainings, resource persons from developed countries directed the attention of African journalists to carbon emissions and pollution happening in their (African journalists') environments, and that African journalists should report such emissions more instead of just looking at developed countries as the major polluters. He however said that he did not buy such ideas, because it amounted to pushing the blame towards Africans, who had been the ones pointing accusing fingers towards the industrialised nations, and seeking compensations from them.

No newspaper had ever conducted a readership survey concerning climate change stories. "Readership surveys are extremely rare," said the *Daily Sun* editor. The *Thisday* editor noted that editors did not give much emphasis to climate change because the audience was not interested in climate change, and that was why it was not getting front page placements.

On the conditions the editors would like to improve to help them report climate change better, the *Vanguard* editor noted that reporters complained that they wanted to stay on one beat long enough to have more experience. "Some of them complain when they are transferred to other desks. On the side of government, we want government agencies to talk about climate change more. Government is not talking enough about it and people are no more concerned than government".

The *Thisday* editor noted that perhaps, government's lack of interest was also affecting newspapers, because newspapers generated more than 70% of their information from government agencies. "Newspapers also waited for major events or for disasters to happen before they

remembered climate change,” he added. The *Thisday* editor called on government to make ‘deliberate’ effort to get major information providers on climate change to co-operate with reporters (especially given that many of the information sources are government agencies).

The *Daily Sun* editor said that there was need for an environmental page in the *Daily Sun* to handle specifically environmental stories as obtains in other newspapers. He noted that what the *Daily Sun* had was Property Page, where other non-environmental stories also appeared. He charged editors to give climate change reporters more space in newspapers to write about climate change.

4. Conclusion

In view of the findings of this research work, this study concludes as follows:

1. The Nigerian public has not been significantly influenced by Nigerian newspaper reports on climate change.
2. Nigerian newspapers were not the major sources of information on climate change for the Nigerian public.
3. The Nigerian newspaper editors were concerned about poor public interest in climate change as well as ‘less-than-enough’ government attention to climate change for which they (the newspapers) did not often give front-page placement to climate change stories.

Recommendations

1. Newspapers should embark on enlightenment campaigns on the internet, (their web pages) directing people to read up climate change stories and get educated.
2. Government can as well direct people through TV programmes, radio and the internet to read newspapers to get climate change information.

3. Newspaper should seek monetary grants from funding agencies to hold colloquiums on climate change for the general public and sensitize them to climate change reporting in newspapers.

4. Climate change information should not be presented as hard, complex scientific information. Topics should emphasize human interest.

5. Reporters should conduct more public opinion polls about climate change and run the results as stories. This will not only help reporters gauge public opinion on climate change, and thereby direct choice of topics, it will also give the public a sense of belonging in the scheme of choice of issues discussed about climate change. Those whose views are sampled will definitely want to read their views in newspapers, and also talk more about climate change.

6. Local, low cost newspapers should show much greater interest in reporting climate change, given the latter's urgent nature.

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Appendix: Figures for Data Presentation

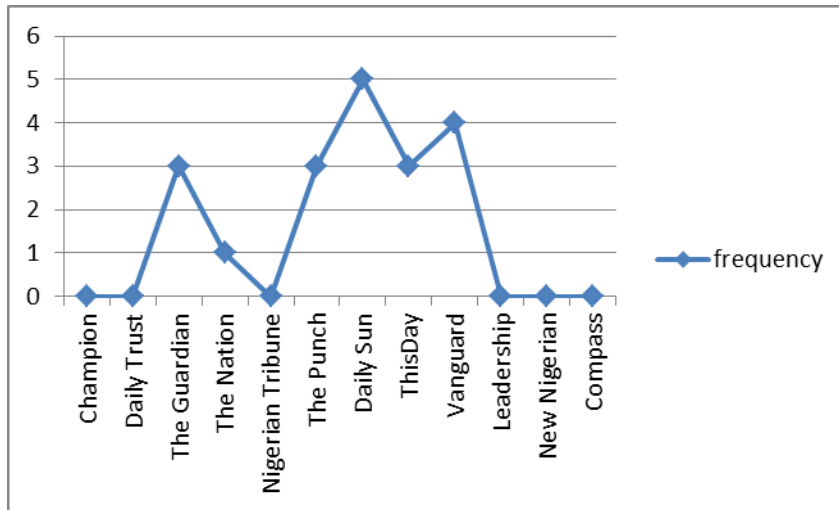


Figure 1: Newspapers read by respondents

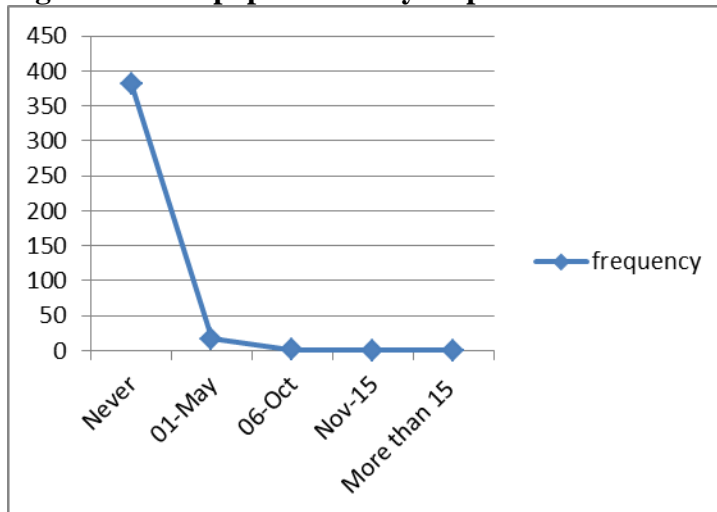


Figure 2: Readership in the last one month

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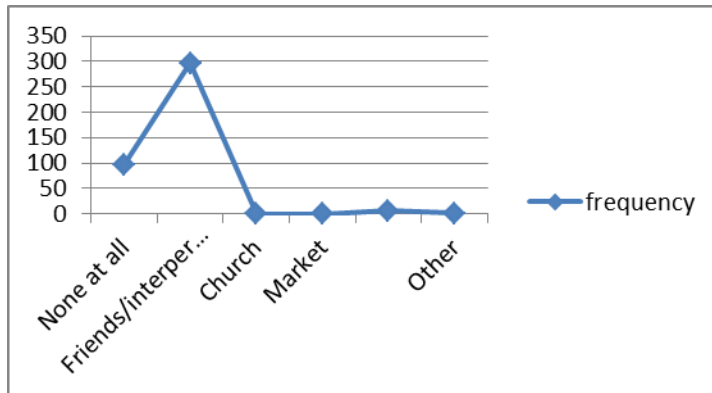


Figure 3: Other sources of information

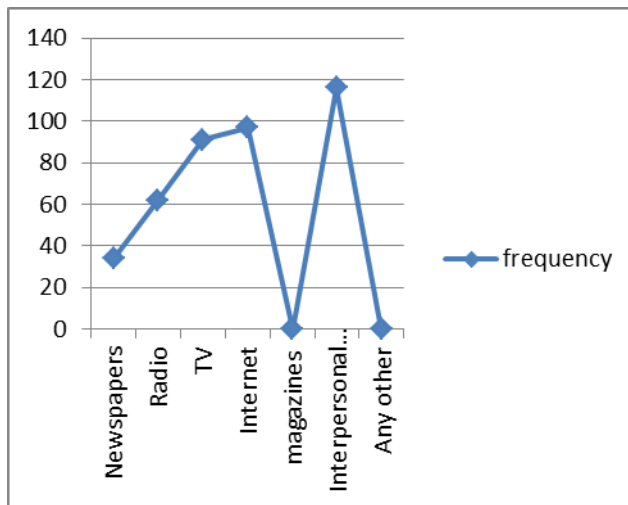


Figure 4: Sources most often used

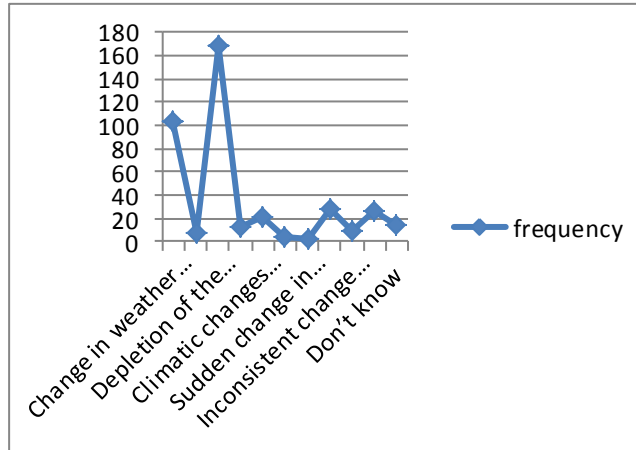


Figure 5: Climate change understanding

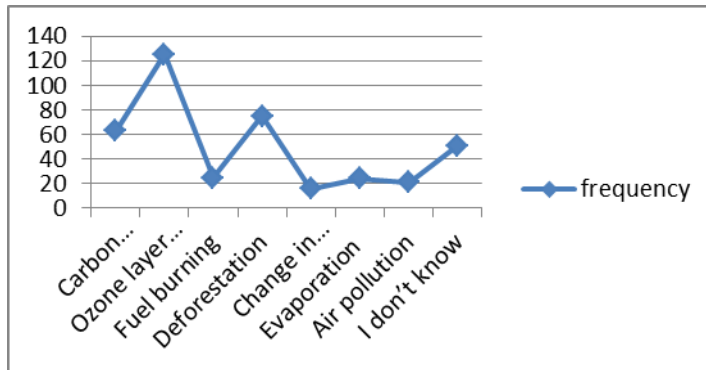


Figure 6: Causes of climate change

Name the issues often discussed about climate change?

1. Hurricane (9 times)
2. Tsunamis (3 times)
3. Depletion of ozone layer and ways to stop human actions that cause this (157 times)
4. Weather report (24 times)
5. Effects on man, animals and non-living things (47 times)
6. Solutions (66 times)
7. How to maintain favourable weather conditions (3 times)
8. Flooding (47 times)
9. Global warming (96 times)
10. Ultra violet rays (2 times)
11. flooding (23 times)
12. Changes in temperature (46 times)
13. Earthquake (11 times)

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- 14. Ice melting in cold regions (5 times)
- 15. Need to reduce rate of deforestation (5 times)
- 16. Rain, sun (3 times)
- 17. Poor sanitary condition and dirty environment (once)

Many respondents had several options included in their responses. However, each individual category of response was isolated and the number of times it occurred was recorded. Again, the idea behind this question was to see how close respondents' answers came to the issues discussed in newspapers about climate change.

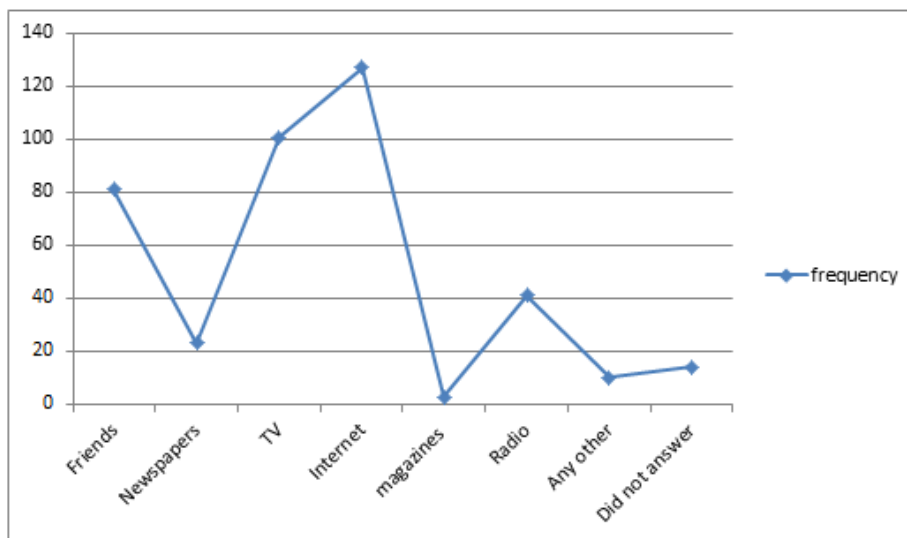


Figure 7: Where respondents learnt of information on climate change