Journal of Environmental Science and Economics
https://doi.org/10.56556/jescae.v4i1.1221
ISSN: 2832-6032

RESEARCH ARTICLE

# Broadcast Media Service, Weather Reports Management and Public Environmental Affability. An Appraisal by Residents in Select Sahel Sahara States of Nigeria

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Received: 20 March, 2025, Accepted: 26 March, 2025, Published: 27 March, 2025

**Abstract**

Concerns abound over environmental and climatic changes. This study investigated the need for clear messages from the media about weather reports. It has the title: "Broadcast Media Service, Weather Reports Management and Environmental Affability: An Appraisal by Residents in Select Sahel Sahara States of Nigeria". The objectives were to find out the lucidity of weather reports; the extent of credibility; the utility percentage of weather reports for environmental affability among residents of sub-Sahara states in Nigeria. The scope of work was limited to the Sahel-Sahara region of Nigeria. These are: Borno Yobe, Kano, Katsina, Jigawa, Sokoto, Zamfara, Kebbi, The research was an online survey with the population of 23,682,681 persons and a sample size of 600 persons. The instrument of research was an online questionnaire proportionately distributed to respondents. The media richness and the media dependency theories were applied. The findings showed that majority of respondents do not understand the terminologies in weather forecasts. From 600 respondents, 367 or 61 percent of the residents agreed that the weather reports are not very clear for understanding. A major recommendation is that media presenters of weather reports should apply interpretative simplicity models to break complex meteorological terms for audience and listeners understanding.

**Keywords:** Affability; Environmental; Management; Media; Weather

## Introduction

Information is a necessary resource for everyone. Therefore, to share knowledge, ideas, and perspectives, communication is an important process to be considered. Since ancient times, humans have invented technologies to communicate on a large scale. For instance, Hassan & Thomas (2006) say that the transition from telegraphs to the internet illustrates the cumulative advancements in communication technologies, originating from basic tools like smoke signals. These technologies can be broadly categorized under the title "media," which can actually be defined as a means of communication that fully imposes the six components of a communication process, namely: source, message, medium, destination, feedback, and noise. In this vein, broadcast media can be considered a certain type of mass communication in which audio and video messages are conveyed. Broadcasting is a communication process in which the information transmitted is aimed at a large

and diverse audience. Webster & Phalen (2012) say that broadcast media is classified under main categories of television and radio, satellite and internet, cable and podcast. Specifically, televisions entertain sight and hearing senses, while radios only entertain the sense of hearing. Television was invented in the 1920s, though its use started in the late 1930s; however, it spread in the late 1950s. Radios were invented in the late 19th century and began their use in the early 1920s. Both technologies have been utilized worldwide and have influenced daily life. McQuail (2010) says that television and radio networks can be found at every level of society, namely: national, intermediate, local, corporate, and community levels, or even just a centralized one. Broadcast media has some unique properties that create a number of objectives, which are media specific. Unlike other media types, broadcast media provides a mixture of audio and visual effects that create some unique perception effects in the audience. Weather reporting as a part of broadcast media is undoubtedly the most recently introduced and watched programme for people of all ages and backgrounds. It is, indeed, a must inserted part of broadcast news. The impact and importance of weather reports can be seen in the choice of appropriate formats, the kind of language used, the differentiation between regional, national, and international feeds, and also in the efforts put in place by networks to safeguard their weather broadcast efforts. The calm of a weather anchor playing an important role during a natural calamity is something that can never be forgotten. Journalists for purposes of news casting, explore the various aspects of weather reports to justify the time and efforts taken to put in by networks to keep audiences glued to channels. Broadcast news presentations have a crucial role to play on the public friendliness with the environment, as media are the link between the viewers, the environment and the news stations. However, some questions are asked about the aims of exploring weather reports, the impact on the viewing behavior of news segments, and the kind of formats used. Weather is something everyone talks about, and it can greatly affect the way individuals and nations do business (Ahrens & Henson, 2021). For this reason, broadcasting media in many forms, such as television, the Internet, or radio, interested in keeping a close watch on regional, national, and international weather situations are appreciated. It can be said that weather reporting and proper management for the affability of the listeners has an engraved space in the broadcast media yet not without challenges which this work seeks to explore for public affability in the Sahel states of Nigeria. Media messages cannot be allowed to reach the people raw or not interpreted to the clear understanding of the people. The prevailing challenges can be solved if appropriate message management techniques are applied in breaking complex terms and scientifically concepts. The people deserve undistorted messages for due engagements in social and economic activities.

**Statement of the Problem**

In Nigeria, the Nigerian Meteorological Agency (NiMet) is the body responsible for forecasting weather. While NiMet provides essential data, it remains the job of the media especially the radio and televisions to disseminate the information regarding weather reports. The challenge for the understanding of the information from the media lies on the accuracy and timeliness of weather reports. There are many factors which can be real challenge affecting accuracy including technological limitations. Despite advancements, Nigeria's meteorological infrastructure, such as weather stations and radars, are still underdeveloped in some regions, especially rural areas. There is also the challenge of effective data collection. The lack of a comprehensive network of weather monitoring stations can limit the quality of data, making localized forecasts less reliable. More so there is climate variability where Nigeria is affected by a diverse range of climates, from the arid north to the humid south. This variability, coupled with the increasing effects of climate change, can complicate forecasting efforts. These are challenges that are directly on weather reports while the indirect challenges can stem from the incompetence, inefficiency and lack of interest from the media practitioners. It calls for timely updates. Weather

conditions can change rapidly, necessitating real-time updates. Broadcast media must be agile in delivering current information, particularly during extreme weather events. It must be an engaging presentation whereby media anchors need strong communication skills to maintain viewer attention while presenting data clearly and effectively. The statement of the problem is therefore, if the media are adequately placed to offer the needed service on weather reporting for a friendly environment in Nigeria.

## Objectives of the Study

1. What is the lucidity rate of broadcast media approaches on weather reports for environmental affability among residents of Sahara states in Nigeria?
2. What is the extent of credibility of broadcast media approaches on weather reports for affability among residents of Sahara states in Nigeria?
3. What is the utility percentage of broadcast media approaches on weather reports for environmental affability among residents of sub-Sahara states in Nigeria?

## Scope of Work

The Sahel-Sahara region of Nigeria refers to the northern part of the country, which lies within the transition zone between the Sahara Desert to the north and the more tropical savanna regions to the south. This region is characterized by arid to semi-arid conditions, low rainfall, and is prone to desertification. The Sahel-Sahara states of Nigeria typically include those states located in the northernmost part of the country. These are: Borno, Yobe, Kano, Katsina, Jigawa, Sokoto, Zamfara, Kebbi

These states are characterized by sparse vegetation, and many of them experience the effects of the advancing Sahara Desert due to climate change and environmental degradation. Agriculture in these areas is typically reliant on drought-resistant crops, and the people often practice a mix of farming and pastoralism. The region is also affected by seasonal winds like the Harmattan, which brings dry and dusty conditions from the desert. The Sahel-Sahara region is critical in discussions about climate resilience, desertification control, and socio-economic development in Nigeria.

## Literature Review

### Lucidity of Weather Reports in Broadcast Media

Media reports about the weather are essential for predictions, daily planning and safety. Smith & Brown (2019) say that inaccurate or inconsistent weather forecasts can lead to frustration of the audience. On the side of the media, it can lead to loss of credibility for the broadcaster. Therefore, precise and reliable weather reporting is crucial for retaining viewer confidence and loyalty. Informing the public about weather conditions accurately in broadcast weather reports is crucial for public safety and preparedness. Inaccurate weather forecasts can lead to serious consequences, such as unpreparedness for natural disasters or disruptions in daily activities. Therefore, it is essential for the media to use reliable data and advanced technology to provide precise and timely information. Technological advancements in weather forecasting have significantly improve the

accuracy and timeliness of weather reports. With the use of satellite imagery, radar systems, and computer models, media can work with meteorologists to predict weather patterns more precisely. The partnership can allow broadcasters to deliver more reliable information to the public, helping them make informed decisions. Broadcast media objectives on weather reports can be adapted to changing patterns by being accurate and timely, reliable and easy to understand (Zhang, Li, Wang, & Chen, 2024).

Particularly, weather reports enhance public safety because they provide timely information about severe weather conditions. This allows individuals and communities to prepare for disaster events such as hurricanes, thunderstorms, and extreme temperatures. By staying informed, people can take necessary precautions to protect themselves and their property. Weather reports can significantly impact on local economies by informing businesses about potential disruptions. Farmers and agriculturists rely on accurate weather information to plan their planting and harvesting schedules, while tourism industries adjust activities based on weather forecasts. Additionally, weather updates help retail stores manage inventory by predicting demand for seasonal products in equipment, clothing, boots and supplies. On events planning, weather reports play a crucial role in helping individuals and organizations plan activities and events. Accurate weather information allows people to make informed decisions about travels, outdoor gatherings, and even daily commutes. By staying updated, they can avoid potential disruptions and ensure safety.

**Credibility of Broadcast Media Weather Reporting: A Focus on Nigeria**

Broadcast media plays a crucial role in delivering timely and accurate weather reports, a service that directly affects various sectors such as agriculture, transportation, and disaster preparedness. In Nigeria, where agriculture is a primary livelihood and climate change has heightened the unpredictability of weather patterns, effective weather reporting is vital. Weather reports are delivered through television, radio, and increasingly via digital platforms like social media (Akinsanmi & Okafor 2022). Oladipo (2020) says that broadcasters serve as intermediaries between meteorological agencies and the public, translating technical data into comprehensible and actionable information. Crucial skills required for this task include presenters' competence of conveying complex weather information in layman's terms, making it accessible to a diverse audience. Next is the availability of effective use of visual aids. In television broadcasts, the use of visual tools like maps, satellite imagery, and animations enhances understanding. Public perception of weather forecasts in Nigeria tends to vary, with some uncertainty regarding their reliability. This is particularly true in rural areas where the technology is less developed, leading to potential inaccuracies in localized forecasts. However, improvements in digital tools and the broader dissemination of information through mobile technology have helped bridge some of these gaps.

**Challenges in Delivering Weather Reports**

Meteorologists regularly face problems such as the changeability of weather patterns and the limits of predicting tools. For instance, unexpected changes in atmospheric situations can lead to inexact forecasts. Also, communicating multifaceted weather statistics in a way that is comprehensible and actionable for the community can be a substantial challenge. Reporting the weather precisely and effectively is a weighty obligation for media organizations. Weather reporting influences manifold sides of daily life, including agriculture, transportation, disaster preparedness, and personal planning. However, numerous challenges weaken the ability of media institutions to deliver exact and appropriate weather data. These challenges range

from technological limitations to audience perception and institutional restraints. On challenges of tools, accurate weather reporting trusts deeply on cutting-edge technology, such as satellites, radars, and computer modeling systems. However, not all media establishments have access to these refined tools. Schultz et al. (2017) say that high-resolution weather guess models need considerable computational power and know-how, which countless media organizations cannot have enough money to procure. As a consequence, media institutions frequently depend on third-party weather services, which may deliver general statistics that is not explicit to home-grown environments. Meteorological data is composite and requires professional clarification. Media personnel often lack the technical education needed to explain meteorological data correctly. As noted by Doswell (2004), sweeping statements on weather data can cause misinformation, miscommunication and misunderstanding, causing community doubt about weather forecasts. For an illustration, a media institution might read a "40% chance of rain" as rain being improbable, whereas meteorologists know it to mean that rain can happen in 40% within the prediction region. Weather is integrally active, and circumstances can alter speedily, making real-time reporting difficult. Lindzen (2007) stresses that even the most innovative weather models have boundaries in foreseeing unexpected weather occurrences, such as tornadoes or flash floods. Media institutions face the trouble of keeping their reports informed while guaranteeing precision. The wide-ranging public often misconstrues weather intelligences, which can lead to mix-up and frustration. Demuth, Morss, & Lazo, (2016) say that concepts and languages like "likelihood of brightness and rainfall are commonly misunderstood, causing unpredicted decision-making based on the guesses. Media institutions must strike an equilibrium between systematic accuracy and public presumption. This is an undertaking that is far from being achieved. In a determination to appeal to viewers, some media offices sensationalize weather reports. This practice dents public trust and can end in needless anxiety or complacency. Potter and Warren (2014) point out that sensationalism in weather reporting regularly ranks ratings over correctness, creating beliefs of uncertainty. In the course of risky weather events, well-timed and accurate information is a serious issue. Media institutions often compete to coordinate real-time weather updates, particularly when communication infrastructure are not enough. For example, the obliteration of communication networks during Hurricane may disclose noteworthy differences in disaster-related weather reporting (Tierney, Lindell, & Perry, 2006). Weather reporting must cater to miscellaneous audiences with changing levels of knowledge and language skill. As Smith and Mawson (2008) highlight, failure to communicate weather risks in ethnically and linguistically suitable methods can end in misinformation and a lack of preparedness among defenseless residents. Media institutions face ethical quandaries when reporting weather forecasts. These include deciding whether to underscore worst-case circumstances to ensure preparedness or to tone down risks to evade causing anxiety. Kovach and Rosenstiel (2001) contend that ethical journalism necessitates harmonizing public interest with the duty to avoid horror mongering.

**Utility of Broadcast Media Reporting of the Weather to the Public**

Weather forecasts play a vibrant part in defending lives and property by providing prompt notices about austere weather circumstances. Johnson, Kim, & Evans (2023) say that improvements in broadcast media have improved the giving out of real-time weather warnings, allowing communities to arrange for hurricanes, tornadoes, and other life-threatening actions. This apt communication decreases death toll and alleviates harm. Broadcast weather reports are indispensable for economic development, predominantly in sectors such as farming, air travel, and logistics. For example, farmers depend on report forecasts to schedule sowing and garnering moments (Greenfield, Patel, & Novak, 2022). Similarly, shipping firms use weather updates to

guarantee harmless and well-organized service. Broadcast media enhances community preparedness for disasters by providing detailed information on possible hazards. As noted by Rivera and Coleman (2021), media institutions' ability to reach inaccessible areas through radio and television ensures that even underserved people get serious weather information. Regular weather reporting fosters a better understanding of climate and ecological changes. Martin and Lee (2023), educating the community about uncommon weather shapes harps on maintainable practices supported with universal efforts of adjusting to temperature alteration. Interactive features, such as viewer-submitted weather photos or live call-ins during broadcasts, enhance community engagement. These features make weather reporting relatable and encourage audiences to take proactive measures during severe weather events (Smith & Ortega, 2023). The integration of digital platforms with traditional broadcast media has expanded the reach of weather reporting. Mobile apps, social media updates, and live streaming ensure that weather information is accessible anytime and anywhere. Carter, Smith, & Lin (2022) emphasize that these platforms have bridged the gap between urban and rural audiences. As cleared by Brown and Taylor (2023), media efforts to explain phenomena such as El Niño and La Niña contribute to a more informed and robust society.

**Review of Related Literature**

On similar work, Keul & Holzer (2013) in "the relevance and legibility of radio/TV weather reports to the Austrian public" asserted that the communicative quality of media weather reports, especially warnings, can be evaluated by user research. It is an interdisciplinary field, still uncoordinated after 35 years. The authors suggested a shift from a cognitive learning model to news processing, qualitative discourse and usability models as the media audience are in an edutainment situation where it acts highly selective. A series of field surveys 2008–2011 tested the relevance and legibility of Austrian radio and television weather reports on fair weather and in warning situations. 247 lay people heard/saw original, mostly up-to-date radio/TV weather reports and recalled personally relevant data. Also, a questionnaire on weather knowledge was answered by 237 Austrians. The main results were (a) a relatively high level of meteorological knowledge of the general population, with interest and participation of German-speaking migrants, (b) a pluralistic media usage with TV, radio and internet as the leading media, (c) higher interest and attention (also for local weather) after warnings, but a risk of more false recalls after long warnings, (d) more recall problems with radio messages and a wish that the weather elements should always appear in the same order to facilitate processing for the audience. In their narrow time windows, radio/TV weather reports should concentrate on main features (synoptic situation, tomorrow's temperature and precipitation, possible warnings), keep a verbal "speed limit" and restrict show elements to serve the active, selective, multi-optional, multicultural audience. On their part, Adum, Okika, Chiaghana, & Okoli O. O. (2021) appraised the perceptibility of media sensitization towards the utilization of media weather reports among farmers in Anambra state. The authors say that the benefits inherent in the utilization of climate change report in Agriculture cannot be over emphasized. It assisted the farmers to sort knowledgeable choices about their plantings and helps expand farming profits. This study surveyed the closeness or acquaintance of farmers in Anambra state to media weather reports, their characters towards the weather reports and their application of weather reports in agriculture decision making. This study was premeditated as a survey. A sample of 400 farmers was drawn from 120,000 farmers listed with the Ministry of Agriculture, Anambra State. Six local government areas were designated to signify the three senatorial zones in the state, and four group of people to represent the selected local government areas. Findings from the survey showed that the farmers have information of weather reports but, they do not exploit these because they do not comprehend the communication content and are incapable to deduce it towards utilizing them in making

decision for their planting coordination. The study determined that effort in understanding of the weather reports and religious conviction were the reasons that constrain the usage of weather reports in agriculture decision making among farmers in Anambra State. The study suggested, augmented and continued aggressive sensitization by the media. The study recommended that the bodies accountable for formulating the weather prediction like the Nigerian Meteorological Agency should be providing steady and simplified weather reports to the media, and make such reports to be less methodical in order to bridge the trial of struggles in acceptance. The gap in this work is that it has nothing to do with the Northern states of Nigeria rather a single state in the entire Southern region of Nigeria. It has limitations since the population was only on farmers against this present work that cover all grades and occupations of persons in four states of the Sahel Sahara states of Nigeria.

## Theoretical Framework

### Media richness theory (MRT)

It is occasionally talked about as information richness theory, to define a communication medium's capability to replicate the information directed over it. It was introduced by Richard Daft and Robert Lengel in 1986 as an extension of rank and evaluate the richness of certain communication media. It hypothesizes that richer, individual communication media are usually more active for communicating ambiguous issues in disparity with leaner, less rich media. In presenting media richness theory, Daft and Lengel try to help establishments handle communication trials, such as unclear or confusing messages, or contradictory explanations of messages. Media Richness Theory has been retroactively distinct as the capability of information to modify understanding surrounded by a time break. Media richness theory states that wholly communication media differ in their skill to allow users to interconnect and to change understanding. The extent of this capability is recognized as a medium's "richness." MRT places all communication media on an unceasing scale founded on their ability to sufficiently communicate a multifaceted message. Media that can competently overwhelm different frames of reference and illuminate vague issues are measured to be richer whereas communications media that need additional time to take understanding are believed less rich. Mammadov (2022) maintains that a main driver in choosing a communication medium for a specific message is to decrease the equivocality, or possible misapprehensions, of a message. If communication is misleading, it is unclear and thus more problematic for the receiver to decipher. The added equivocal a message, the more cues and data needed to deduce it appropriately. He also stressed that message lucidity may be conceded when manifold sections are interconnecting with each other, as departments may be trained in dissimilar skill sets or have inconsistent communication standards. Media richness is a function of characteristics on ability to handle multiple information cues simultaneously, facilitate rapid response, establish a personal focus, utilize appropriate language.

### Media Dependency Theory

The first to present the theory of media dependence by Ball-Rokeach and De Fleur in 1976 who suggested a theory which attributes to the media influences rather than their respective characteristics of the relationship between individuals, media and culture. Identifying the position and characterization of the media system. The theory of media dependence focuses on an ecological approach, to show the relationships between small, medium and large systems and the components. The theory discusses the ways in which the different social

structures (economic political, religious, and educational systems) and the social framework contribute to the social information system. In addition, describe how the mass media system has become an important knowledge system. In modern society, people have relied on their personal connections and networks to achieve their goals of understanding what is happening in society and determining how to act and how to spend their free time (Nawi, Alsagoff, Osman, & Abdullah, 2020).

To accomplish goals, it has become difficult for persons to rely solely on their personal contacts. It has become difficult for people to live well in modern society with the growing speed of social change without relying on the media for knowledge. Through this process, the media has become an essential system in society that people need to rely on in their everyday lives to obtain knowledge. The concept of media as an information system puts the media system at the heart of society. Individuals, organizations and social systems cannot obtain important information entirely in society without relying on the mass media system (Choi, Tan, Yasui, & Pekelnicky, 2014). The second core proposition of media reliance theory is that the power of the media depends on the interdependence of individuals and the media. The third suggestion of the theory of media dependence is that with growing complexity or confusion in society and also in leading society to a particular problem, the role of the media system in society increases for social improvements that are both long-term and short-term.

## Methodology

The method for the research was an online Survey. Bhat (2024) says that the online survey, or internet survey, is one of the most popular data-collection sources, where a set of survey questions are sent out to a target sample, and the members of this sample respond to the right questions over the World Wide Web. In online survey, respondents receive surveys via various mediums such as email, embedded over websites, social media. It has advantage of real time message and response, cost efficiency, minimum margin of error and saves time.

### Population

The population of the study was 23,682,681 persons residing in four Sahel Sahara states of Nigeria. The four states taken for the research are Borno, 6,651, 590, Jigawa 6,679,080, Kebbi 6,001,610 and Yobe 4,350,401 persons. The figures were taken from the 2023 projected population of the affected states.

### Sample Size

Akpan (2023) argues that 600 persons can be a convenient figure to peg the sample size in a large population while 50 can remain the least figure where population is low. Hence, the sample size of the study was taken at 600 persons.

### Administration and Methods of Data Collection

The collection of data was done by forming 600 copies of questionnaire with 10 basic inquiries through Google Forms format and mailing to residents. The copies were pretested through face value reading by two research assistants and distributed online based on proportionate formula per the four select states. In that arrangement, Borno took 169 copies, Jigawa, 169 copies, Kebbi 152 copies and Yobe took 110 copies. The electronic (e.) mail addresses of the residents were obtained from the Mobile phones Network providers' data base.

### Ethical Consideration

This study was dedicated to keeping the maximum ethical values during the research process. Ethical agreement was pursued from proper institutions, boards and research committees. The ethical considerations which directed the conduct of this research was by earning informed consents. Henceforth, all participants were wholly

informed about the purpose, objectives, and processes of the research. Participation was totally voluntary, and informed consent in verbal, was obtained preceding data collection. In order to ensure confidentiality and anonymity, the identity of all partakers was assured. Therefore, no individual identifiers were used in the reporting of findings. Data was coded and securely stored to ensure privacy. Additionally, respect for all participants was with self-esteem and reverence. Exceptional attention was paid to cultural feelings in the Sahel Sahara states of Nigeria, ensuring that traditional communication was suitable and comprehensive. The right to pull out by potential respondents was assured at any point without any negative consequences or the need to provide reasons. The affected residents were informed that the research was intended to minimize any possible injury to the participants. No complex or offensive questions was asked that may cause agony. The participants and other residents were guaranteed that data collected was firmly for academic and research purposes while findings was to be reported fairly, without untruth, distortion, or twisting. It was made known that findings may be shared with the local populations and interested party in the Sahel Sahara states to encourage transparency and inspire informed use of the results for programme and practice in media and environmental messages. By observing to these ethical values, the study had aimed to back meaningful insights on the protection of the privileges and wellbeing of all partakers.

**Data analysis**

The analysis of data was carried out through the creation of simple frequency tables and supported with a pie chart for the computing of responses into data and ascertain the highest and the lowest answers in terms of figures. The answers were computed based on each of the questions raised earlier.

Pie Chart 1: The lucidity of broadcast media weather reports for environmental affability among residents of Sahara states in Nigeria

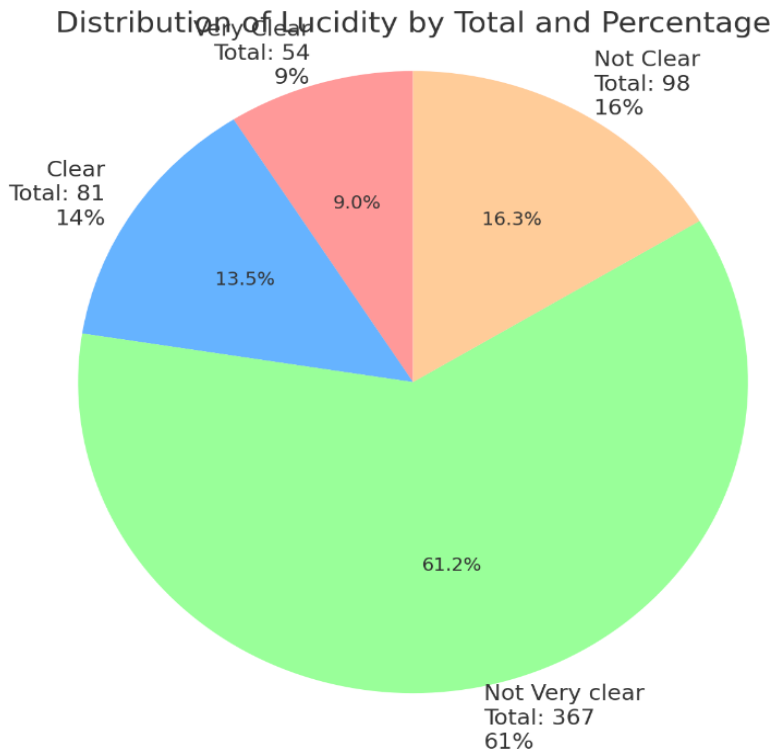
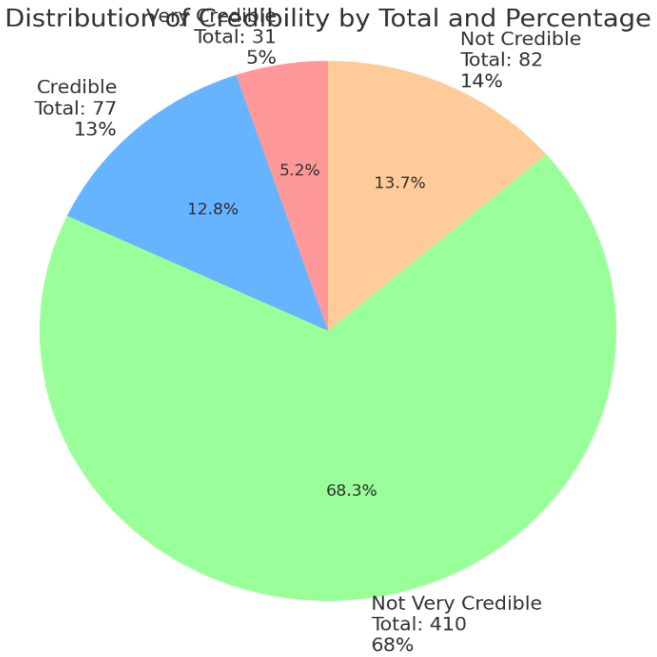



**Table 1.** Distribution of Lucidity Level Weather Reports by Broadcast media

| Lucidity | Borno | Jigawa | Kebbi | Yobe | Total | Percentage |
|---|---|---|---|---|---|---|
| Very Clear | 15 | 11 | 18 | 10 | 54 | 9 |
| Clear | 25 | 26 | 10 | 20 | 81 | 14 |
| Not Very clear | 79 | 84 | 124 | 80 | 367 | 61 |
| Not Clear | 50 | 48 | - | - | 98 | 16 |
| Total | 169 | 169 | 152 | 110 | 600 | 100 |

Source: Online Survey Response 2024

The pie chart marked 1 and the supporting Table 1 has four aspects of lucidity of the message on weather reports. Out of 600 respondents, 367 or 61 percent of the residents per the four states agreed that the weather reports are not very clear while very clear had 54 or 9 percent respondents. This indicates a serious communication gap between meteorological agencies/media houses and the general public. The responsible factors may be on technical language, poor presentation, or insufficient localization of contents.




Pie Chart 2 and Table 2: Credibility of Weather Reports from Broadcast Media

| Credibility | Borno | Jigawa | Kebbi | Yobe | Total | Percentage |
|---|---|---|---|---|---|---|
| Very Credible | 6 | 21 | 4 | - | 31 | 5 |
| Credible | 23 | 23 | 8 | 23 | 77 | 13 |
| Not Very Credible | 106 | 87 | 140 | 77 | 410 | 68 |
| Not credible | 34 | 38 | - | 10 | 82 | 14 |
| Total | 169 | 169 | 152 | 110 | 600 | 100 |

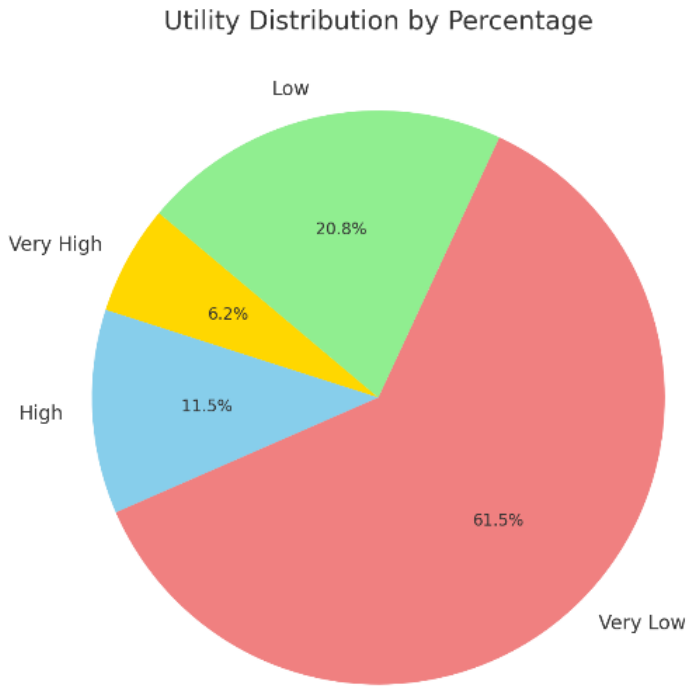
Source: Online Survey response 2024

In Table 2 and pie chart 2 , the variables of credibility are listed and out of 600 respondents 410 or 68 percent agreed that the weather reports are not very credible while those who supported the credibility were77 or 13 percent of respondents. Very credible had 31 0r 5%, not credible 82 or 14%, The implication is that the people have no reliability on weather reports from the broadcast media. With 68% of respondents perceiving weather reports as not credible, there is a clear trust deficit. This indicates a major setback for the effectiveness of weather communication systems in the Sahel Sahara region. People may doubt the accuracy, timeliness, or relevance of the information broadcasted. In a region vulnerable to climate-related hazards like droughts, heat-waves, and dust storms—lack of trust in weather reports can endanger lives. If people do not believe the reports, they are less likely to act on weather warnings or prepare adequately for adverse conditions. The meteorological agencies and broadcast media may be viewed as unreliable or ineffective.

**Table 3.** Pie Chart 3: The utility level of broadcast media weather reports for environmental affability among residents of sub-Sahara states in Nigeria.

| Utility | Borno | Jigawa | Kebbi | Yobe | Total | Percentage |
|---|---|---|---|---|---|---|
| Very High | 12 | 11 | 14 | - | 37 | 6 |
| High | 34 | 35 | - | - | 69 | 12 |
| Very Low | 89 | 79 | 104 | 97 | 369 | 62 |
| Low | 34 | 44 | 34 | 13 | 125 | 20 |
| Total | 169 | 169 | 152 | 110 | 600 | 100 |

Source: Online Survey 2024




In Table 3 and supported pie chart 3, the utility level of weather reports was scored very low utility by 369 or 62% of persons out of 600 persons while the least score of very high utility was from 37 or 6% of persons. High recorded 69 or 12%, low 125 or 20%. The implication is that a lot of persons do not utilize or consider

weather reports from the broadcast media for daily activities. With 62% of respondents perceiving weather reports as having very low utility, it suggests that most people do not find weather information helpful or applicable to their daily lives or activities. This could stem from poor timing, irrelevant content, or mismatch between what is broadcast and the actual needs of the audience. The low utility score may point to less or no connection between the weather reports and local realities. Weather reports might be lacking in clear, actionable advice. Simply stating temperature or rainfall probability without telling people what to do reduces practical usefulness.

**Discussion of Findings**

The pie chart marked 1 and the supporting Table 1 has four aspects of lucidity of the message om weather reports. Out of 600 respondents, 367 or 61 percent of the residents per the four states agreed that the weather reports are not very clear while very clear had 54 or 9 percent respondents. The lucidity level of weather reports by broadcasting stations generally refers to how clearly and easily the information is communicated to the audience. Several factors influence this, such as the language used, the presentation style, the use of visual aids like maps, and the complexity of meteorological terms. Weather reports are typically designed to cater to a broad audience, so most broadcasting stations aim for a high level of clarity. Broadcasters are expected to avoid technical jargon to ensure clarity. They are to use everyday language to explain weather phenomena like storms, temperature changes, and precipitation, making the information accessible to people without scientific backgrounds. But the reverse is the case in this research. There is lack of lucidity by the response of persons as this also agrees with the work of Adjin-Tettey (2013) that communication has to do with relaying information to share meaning in order to reach mutual understanding in a horizontal, two-way interaction in which parties actively participate in, and consensually determine priorities through the processes of assessing risks, exploring opportunities, and facilitating the sharing of knowledge, experiences, and perceptions. For this reason, it the work to find out whether the information conveyed by meteorologists (through the television medium, with the motive to help viewers make informed decisions) actually create a shared meaning for the end users. The findings clearly shows that the majority of respondents who are media end users do not understand the terminologies used in weather forecasts. This calls for great concern on public dependency on media and the theory of media richness. It is likely that lack of clarity can be responsible to overuse of technical terms which confuse the general public, ambiguity in long-term forecasts predicting weather for more than a few days end up in uncertainty, of probabilistic terms of "chance of rain" or "partly cloudy" to audiences. It can also be due to regional differences in multilingual or multicultural dialects or languages used in broadcasts that affect the lucidity for non-native speakers. In Table 2 and pie chart 2 , the variables of credibility are listed and out of 600 respondents 410 or 68 percent agreed that the weather reports are not very credible while those who supported the credibility were77 or 13 percent of respondents. The implication is that the people have no reliability on weather reports from the broadcast media. This confirms what Robinson (2023) says that not every weather post on social media is real, so it is important to verify the accuracy of information. People sharing images from past storms or Artificial intelligence generated images can cause confusion. To verify that an image is real and current, it is recommended to check the credibility and expert accounts for weather information. That can include government weather services, private weather companies, meteorologists, scientists, or storm chasers.
In Table 3 and supported pie chart 3, the utility level of weather reports was scored very low utility by 369 or 62% of persons out of 600 persons while the least score of very high utility was from 37 or 6% of persons. The implication is that a lot of persons do not utilize or consider weather reports from the broadcast media for daily

activities. The utility level of weather reports among individuals who listen to broadcast station presentations varies significantly based on factors such as region, access to technology, and personal reliance on weather information. In many countries, including Nigeria, the utility level can be relatively low due to several factors since in some areas, people may not trust the accuracy of weather reports, especially if they have historically been inconsistent or unreliable. Many listeners may find the information provided too general, not specific enough to their location, or not presented in a way that relates directly to their daily lives. Not everyone understands the technical language used in weather reports, which reduces the perceived utility for those without a background in interpreting such information. Some individuals, particularly in rural or less technologically connected areas, may rely more on traditional methods for weather prediction rather than broadcast reports. Nkiaka (2019) observed that low awareness, understanding, and accessibility, low relevance and users' capacity to take decision, distrust in forecasts, and institutional barriers such as fragmented institutional framework with overlapping roles are major barriers to uptake of weather and climate information in sub-Saharan Africa. This further explains that despite an increasing number of climate model simulations, there is largely poor usage of equipment to channel the information produced and disseminated. Often the messages are irrelevant and not reliable to inform decision-making at local scale, particularly for individuals and agencies. Ziervogel, Shale, & Du, (2010) show similar results of low use of weather forecast information due to delay in access to short-term decision-making forecast services and doubting its reliability. It shows that there is a big disconnection between weather information service providers and information users as one key constraint limiting the use of climate information in Africa.

**Conclusion and Future Directions**

Weather reporting familiarizes the public to weather-related concepts, promoting scientific literacy. The tests of weather reporting by media institutions are multi-layered, connecting technological, interpretative, communicative, and ethical issues. Overcoming these challenges requires collaboration between weather-related experts, media professionals, and policymakers to enhance the accuracy and effectiveness of weather communication. Despite the challenges, broadcast media reporting of the weather provides numerous benefits to society. Accurate and timely weather reports are crucial for public safety, economic productivity, and fostering environmental awareness.

**Limitations/Future Studies**

This work had limitations on only four states of Northern Nigeria. It had limitations of using only the survey method and did not establish the demographic factors of the respondents. On suggestions for further studies, this study has opened up numerous areas that future research can work on, deepen understanding and advance policy and practice in media-based environmental communication, especially in arid regions like the Sahel Sahara. Consequently, this study suggest future studies on comparative studies across regions. Future research could compare how broadcast media manage weather reports influence environmental awareness in different ecological zones of Nigeria or other West African countries, to categorize regional differences and best practices. It also suggest studies on the inclusion of digital media platforms. This is because with the growing infiltration of internet and mobile technologies, succeeding studies could survey the part of digital media as social media, weather apps, and short message service apart from traditional broadcast media in environmental and weather communication. In addition, future research could give emphasis on in-depth audience reception

studies to appreciate how different demographic groups like youth, farmers, migrants, urban and. rural inhabitants construe and answer to weather-related media content. Future studies might examine the impact of government policies on environmental communication through broadcast media, and propose frameworks for integrating climate communication into national development strategies. Further, fresh studies can explore the use and potential of homegrown communication techniques of town criers, local assemblies, and folk media for weather and environmental information dissemination through broadcast media. By expanding research along these lines, academics and practitioners can build a wide-ranging context of using media to improve environmental awareness and resilience, particularly in susceptible regions like the Sahel Sahara.

## Recommendations

1. Media presenters of weather reports should apply interpretative models to break complex terms for audience and listeners understanding.
2. Media anchors need friendly communication skills to maintain viewers and listeners attention.
3. Presentation of data on weather reports should be localized to interest of listeners. clearly and effectively

### *Declaration*

**Acknowledgment:** N/A

**Funding:** No funding received for this publication Conflict of interest: The authors declare they do not have potential conflict of interest

**Ethics approval/declaration:** N/A

**Consent to participate:** N/A

**Consent for publication:** N/A

**Data availability:** Data is available upon reasonable request from the authors

**Author's contribution:** Formal analysis, data collection and formal writing were done by the two authors in the review of literature, arrangement and final corrections.

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