





# Symbolic representations of the environment using texts and visuals in three environmental programs on Nigerian television stations

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## ABSTRACT

Television programs are not just figments of the imaginations of television producers and their presenters, they are representations of the reality that has been perceived in their environment. Visuals and texts are tools and symbolic representations of reality based on the knowledge drawn from the society around them. Using the social construction of reality as a theoretical foundation, this study tried to assess: how meaning is textually presented in selected episodes of the three environmental programs? And how do the visuals of the sign-in intro of the three environmental programs represent the environment? This was done using 4 episodes each of the three programs making a total of twelve for the thematic analysis and one episode of each of the three environmental programs. Data was obtained using thematic analysis of transcribed content from the selected episodes (frequency counts and percentages) and paired sample t-test statistics used to analyze data. Findings include the combined importance of texts and images to explain the issues of the environment being discussed. The thematic analysis indicated that people, environment and climate were the major issues identified across the twelve episodes in the word cloud, tree map and percentage frequency count. Additionally, images are also not just about the elements but also the colors and what they represent. Blue and green were predominantly used in the visual sign-in introductions of the three programs. Eco Africa used the visuals to depict the change they want to see, while the other two programs were majorly representations of the existing environmental issue and challenges. The study recommended that producers and presenters use text and images based on symbols predominant in their society to ensure that there is no disconnect with their audiences.

**Keywords:** representation, visuals, climate, people, environment, themes

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## INTRODUCTION

The drive for a healthier planet is important because UNEP (2012) global environment outlook 6 posits that the planet supports the lives and livelihood of seventy percent of the earth's population. As such, responsible use of the earth's resources is key to the sustainability of the environment for future generations. Sustainability is therefore not an individual or isolated activity. It requires collaborative actions that benefit all parties including the environment. Stakeholders like policy makers, international organizations, civil societies, audiences, and the media, must work together to preserve the environment. While all these stakeholders are working on different fronts to mitigate current impact levels, individual members of society are an essential component of the process, who must be carried along throughout the process.

It is therefore the media's role as intermediary to ensure that individuals not only understand the current state of the environment

but know how their everyday actions play into the present and future trajectory of all aspects of the environment. The media uses a variety of tools depending on the platforms to package these strategic messages for their audiences. Television is one platform that has the capacity to package information using a combination of multimedia features—audio, visuals, moving videos, and text.

León and Erviti (2015) and Wilson (2024) posit that television is a strategic medium to use in disseminating programs that address local and other relevant environmental issues. Television allows the presenter to package the message using specific codes—signs and symbols developed from the frameworks of his/her knowledge as acquired over time. These codes are a function of the socialization processes these presenters have undergone in the society they are broadcasting the information to. This process is important because environmental programs may throw up multiple meanings when audiences are exposed to the message (Obasi & Msughter, 2023). Additionally, audiences may find it difficult understanding what the

symbols used mean—that is the visuals and words (irrespective of the language) once it is outside of their usual context (Hall, 1973b, 1980a, as cited in Murdock, 2017). This implies that there are certain socio-cultural indices or factors that influence how audiences engage and interpret any television content (Morley & Jin, 2011; Johnson et al., 2023). Their interpretation may either be what was intended by the presenter/producer or something totally different, thus defeating the programs objectives. This study intends to analyze the following environmental programs *Environment matters* on Nigerian television authority (NTA), and *Eco Africa* and *Earthfile* on Channels Television in order to address the following questions:

1. How is meaning textually presented in selected episodes of the three environmental programs?
2. How do the visuals of the sign-in intro of the three environmental programs represent the environment?

### Social Construction of Meaning in Environmental Programs

Akpan et al. (2012) state that the media is pertinent to the construction of the reality of people and the lens through which they engage with different subject matters in society. They help to determine how people view issues such as climate action and environmental sustainability. Through the information disseminated, the media can influence the public's perception of climate change and environmental issues and possibly chart the path towards them contributing to the achievement of sustainable policies and action.

Social construction explains the process by which knowledge generally and specifically on the environment and related matters like climate action and pollution, is created and shared through daily social interaction with others (Woroniecki et al., 2020). These interactions affect reality by shaping the thoughts and behavior of individuals and societies towards several issues—the environment inclusive. At the same time, these social interactions demonstrate that individuals including those working in the media operate based on shared knowledge of what is reality, for example what the current environmental issues are. Social construction of reality focuses on how knowledge shared through media programs are designed to build and sometimes reinforce the ongoing production of shared knowledge or consensus knowledge. This knowledge and meaning creation on issues like the environment and climate are shaped by institutions like family, school, neighborhoods, and religious institutions.

Burr (2015) explains that social constructionism is a product of different fields like psychology and sociology, a view held by Zhao (2020) and McQuail (2011) who mentions that the theory draws from the symbolic interactionism of Blumer (1969, as cited in Calhoun et al. 2012) and the phenomenological sociology of Schutz (1972, as cited in Rasid et al., 2021), defining the way humans interact with their world and other people. Language is one of the main tools through which reality is mediated and value sets developed and disseminated through relationships. Language guides the process by which people think and the categories they allocate different concepts and issues into. For instance, climate action and environment are viewed and defined differently across different cultures and continents. For some, it refers to nature, others—a way of living, etc. Meanings, however, are constantly shifting based on changes within the cultural and historical plane of any society.

### Visual Representations of Meaning in Environmental Communication

Images or visuals add meaning to texts in any communication, whether in print or audio-visual form. Although they are different kinds of data, Radermacher (2024), believes they are similar to an extent. They help to boost audiences understanding of concepts which would otherwise have been abstract to them. Visuals serve as symbols by which audiences can more easily understand the written or spoken aspect of the environmental message. Today, images are used as information to entertain, inform and educate audiences. It is used to stimulate audiences' minds so they can get involved in discussions and actions on an issue of importance (Jerry & Atieno, 2016).

Visuals are a part of the socialization process that determines how individuals define concepts. Images are so ingrained in individuals that in mentioning words and phenomenon, images pop up in their minds. In the process of socialization, individuals retain norms and values much more easily by associating them with visuals or images. Most of the images used in the media to represent or communicate specific aspects of a message are often picked from images and symbols central to a society's values and way of life, so that individuals can connect with the message once they see them.

Hansen and Machin (2015) explain that images are used because text alone is incapable of shaping the narrative on the discussion of climate and environmental issues. Images play a central role in framing media content to expose audiences to different aspects of the issue. From their discussion on the role of visuals in representing toxins, it can be deduced that visual images help to centralize and frame the meaning of an issue as well as give it a sense of place. This view is corroborated by Milstein et al. (2017) who believe that meaning is co-created using text and symbolic objects such as images to buttress and give representation to the issues at play. Together, words and visuals work together in creating meaning on environmental issues.

A difficulty that occurs in the use of images is the possibility of individuals and audiences getting different interpretations different from the presenters intention. A practical example of the possible divergence of meaning derived from images or visuals is the use of photographic sketches of drought cases in the Northern parts of Kenya. Jerry and Atieno (2016) state that such images can be interpreted in a variety of ways, to signify a time for migration in search of food, water, and pasture for residents. In such instances, the text would serve as backup to give the individual/audiences' clues as to the intended meaning of the image.

Another challenge is that there have been complaints that images are likely to appear with attributions of blame, be used as metaphors to depict crisis situations and discuss future situations but are least likely to discuss or depict the causes of the status quo. A crisis metaphor repeatedly used for drought effects in Kenya is death toll of human and animals.

Irrespective of the challenges, there is evidence to support the strength of images for climate and environmental communication. One of the benefits is that it is useful in the area of scientific communication. Scientific information can be quite complex and far above the understanding of the average citizen [lay person]. Visuals help to bridge the gap that exists between scientists and the technical jargons with which they explain issues and the target audiences—policymakers, citizens etc. Ballantyne et al. (2018) posit that images help audiences to make a personal connection between the issue and themselves. They

bridge the gap between the source behind the narrative and the public especially because of the diverse nature of the audience. Ordinarily, citizens may fail to feel the connection or impact of climate change or environmental issues on their lives, but from the visuals they can possibly see how streets are flooded from rising water levels, etc.

## METHODOLOGY

The qualitative research approach was adopted. Specifically, textual and semiotic analyses to examine selected episodes of environmental communication content of the three programs of the study—*Environment matters* on NTA, *Earthfile* and *Eco Africa* on Channels Television. The textual analysis method focused on a thematic analysis of the texts and semiotic analysis of the images of selected episodes of the environmental programs. The methods were used to identify, analyze, and assess relevant variables from episodes of the identified environmental communication programs.

Out of a population universe for the broadcast stations comprising of thirty-one television stations which includes one national, nineteen state, and eleven private stations in the South-West of Nigeria (Broadcasting Organization of Nigeria [BON], 2021; mediaReach, 2016).

### National-1

1. NTA–Environment Matters State–19
2. NTA, Oyo
3. Broadcasting Corporation of Oyo State (BCOS)
4. Oyo Channels 4, 5, and 7, Ibadan, Oyo State
5. Oyo Galaxy TV, Ibadan
6. Lagos State Television (LTV)
7. NTA 2 Channel 5, Lagos
8. NTA 10, Lagos
9. NTA Channel 8, Lagos
10. NTA Akure
11. Ondo State Radiovision Corporation (OSRC)
12. NTA, Ado -Ekiti
13. Ekiti TV
14. Broadcasting service of Ekiti [Ekiti State Television]
15. Osun State Broadcasting Corporation (OSBC)
16. NTA Osogbo
17. NTA Abeokuta
18. Ogun State Television (OGTV)

### Private-11

1. Galaxy Television
2. Channels Television [*Eco Africa*, *Earthfile*]
3. Africa Independent Television (AIT) [used to have *Environment today* as of 2013, began re-airing in 2019, which has continued till present]
4. Television Continental (TVC)–[Green Angle–last aired in 2019]
5. ON TV

6. Silverbird TV (STV)
7. Super Screen TV
8. Degue Broadcasting Network (DBN)
9. Remdel Television, Akure
10. Murhi International Television (MURHI TV)
11. Wazobia Max

**Source:** BON (2021) and mediaReach (2016).

Of these, four stations have specific programs on the environment—NTA, Channels Television, Television Continental (TVC), and Africa Independent Television (AIT), and therefore constitute the population of broadcast stations for the programs.

As in 2021, only two of these television stations—NTA and Channels Television aired these programs consistently. For these two stations, NTA has one environmental program—*Environment matters*, which has aired since September 2018, and Channels Television which has two environmental programs—*Earthfile* and *Eco Africa*, which have aired since 2013 and 2015, respectively.

Each of the programs airs an episode every week, for four weeks in a month, multiplied by the number of months they have been in existence. To eliminate the disparities in the number of years the programs have aired, the accessible population of the program episodes was calculated based on the episodes of the program produced between June 2020 and July 2021. The study population in relation to aired episodes amounted to one hundred and forty-four.

For the textual analysis, a total of 4 episodes were assessed for each program. Each of the 4 episodes were randomly selected per quarter, making a total of 12 episodes for the three programs. The dates for each quarter were indicated and a date randomly selected per quarter for all the three programs. The semiotic analysis was, however, based on clips from one episode of each program and measured based on signs using text, illustrations, and non-numerical terms to represent the data acquired from the content. It focused on the description of the characteristics or concepts of the variables being studied. The representations of meaning in the programs was thematically analyzed using qualitative solutions research international's NVIVO.

### Brief Description of the Selected Television Stations

One of the two televisions, NTA, is a government owned national station, with stations in the 36 states and Federal capital territory. The second, Channels Television, is privately-owned with stations in major cities of four States of Nigeria, although it has bureaus across the nation.

## FINDINGS: MEANINGS IN ENVIRONMENT MATTERS ON NTA, EARTHFILE, AND ECO AFRICA ON CHANNELS TELEVISION

The dates and details of the episodes assessed are presented in **Table 1**. The first section was analyzed using thematic analysis [using a word cloud, tree cluster, and word frequency count] for a combined total of twelve episodes of the programs and one episode of the program each for the semiotic analysis.





**Table 2.** Frequency word count of themes in the environmental programs (content analysis [Selected Episodes, 2021])

Word	Length	Count	Weighted percentage (%)
People	6	132	0.63
Environment	11	83	0.40
Climate	7	77	0.37
Africa	6	74	0.36
Nigeria	7	74	0.36
World	5	64	0.31
Water	5	60	0.29
Forest	6	59	0.28
Change	6	58	0.28
Going	5	53	0.25
Wildlife	8	53	0.25
Green	5	51	0.24
Areas	5	50	0.24
Million	7	49	0.24
Years	5	49	0.24
Environmental	13	48	0.23
Really	6	46	0.22
Around	6	43	0.21
Country	7	43	0.21
Species	7	42	0.20
Women	5	42	0.20
Nature	6	41	0.20
Countries	9	40	0.19
Energy	6	38	0.18
Great	5	38	0.18
Project	7	38	0.18
State	5	36	0.17
Resources	9	35	0.17
Today	5	35	0.17
National	8	34	0.16
Animals	7	33	0.16
Local	5	33	0.16
Still	5	33	0.16
Communities	11	32	0.15
Plastic	7	32	0.15
Sustainable	11	32	0.15
Coastal	7	31	0.15
Marine	6	31	0.15
Right	5	31	0.15
Trees	5	31	0.15
Actually	8	30	0.14
Snake	5	30	0.14
Think	5	30	0.14
Conservation	12	29	0.14
First	5	29	0.14
Global	6	29	0.14
Health	6	29	0.14
Region	6	29	0.14
Farmers	7	28	0.13
President	9	28	0.13

### Visual representations of the program's introduction/sign-in

The three environmental programs start with their unique signature tunes amidst a blend of visuals representing various aspects of the environment. A few of the images used for the introductory part of each program were assessed.

#### Environment matters

*Environment matters* starts with a slide of pictures dancing across the screen amidst the signature tune for the program. The selected images

are presented below. They include the image of gas being flared in the middle of the sea, flooded areas, a drought affected area, a farmland and then ends with the name or logo of the program, which is in a green curved band. Each of these images represent an aspect or challenge that Nigeria and other parts of Africa face with the environment.

The human element in the images depict humans in two different situations. In one of the images, the human is shown cutting the tree—representing the fact that humans are behind the issues with deforestation and possibly have some measure of power over nature while the second image represents a human spraying insecticide on his farmland, trying to protect it from pests. This also indicates the second SDG which is about zero hunger in the world, and how humanity is striving to achieve this through various means.

The other images do not reflect the human component that has affected the environment, which is a lost opportunity to visually communicate that humans determine what happens in and to the environment. Although it can be implied that these other activities cannot happen without human intervention. The images with humans though are not representative of Nigerians or Africans, and it might serve as a barrier for audiences to connect with the program. The use of images that fit the context and experiences of the programs' audience is very important.

Additionally, the human elements only represent one spectrum of the human element, thus leaving out the female's role either as affecting the environment or capable of turning it around positively, which is contrary to the SDGs call for gender equality. Moreover, the visual of the flood in residential areas shows the power of nature to exert its influence over the built environment when not properly managed, something that connotes humanity's relationship with its environment in different situations, such as the dredging for oil for monetary gain, and how that act has destroyed the environment, oil pollution, destruction of biodiversity, and ecosystems in some instances.

The name of the program is also shown around a globe, a hint to the focus of the program, which is to focus on environmental issues that affect everyone, not just Nigeria, or in Africa [See the video at <https://www.youtube.com/watch?v=B2xLkOc9TfI> by Nigerian Television Authority (2023)].

The green in the *Environment matters* name band also connotes the environment, as green is typically used to depict the nature, the greenery or vegetation, and anything that is eco-friendly. But it is also set in a blue background also depicting other aspects of nature like the skies, lakes, water. The Economic Development in Africa Report 2012 explains that the color green also connotes 'being good for the environment'. The use of green in the logo of the program is likely to inspire in audiences that need to be good to the environment and the desire to treat the environment better.

#### Earthfile

In *Earthfile*, the introductory visuals are like that of *Environment matters*. However, the images are predominantly shrouded in blue color. The selected images consist of a street with water overflowing from the ocean, which could denote the flooded road beside bar beach in Lagos, Nigeria, or connote other seaside streets and what happens when sea levels rise. It also denotes the placement of the built and natural environment side by side, indicating that ever so often, the natural environment can overpower or overshadow the built environment.

The other images include a line-up of solar panels, land affected by drought, a herd of cows moving across a landscape, a man and woman moving through a flood, an image of the earth, and then the same image with the *Earthfile* logo.

The use of solar panels breaks the monotony of assuming the environment is only about the physical landscape and its biodiversity. It represents a link between people and the environment as those panels are human-built, and secondly, it indicates the nature of man's relationship with the environment—which is to draw resource from it, and lastly, it depicts a positive aspect of it, the use of green energy that does not affect the environment negatively no matter how much of it is taken. The solar panels both denote and connote the global shift towards clean energy, and less dependence on fossil fuels as a source of energy. It therefore connotes other sources like the wind energy, bioenergy, geothermal energy, natural gas, and hydropower, the latter of which has been used in Nigeria for decades.

Cows depicted in the intro also has both denotative and connotative meanings for Nigerians; denotatively, it indicates that environment includes animals, but connotatively, it represents something negative, what with the recent spates of attacks of farmlands by cow herders, and the impression it gives that 'these cows are more important than humans', at least in Nigeria. On seeing such a visual, it might make audiences recall the current economic, socio-political, and violent issues presently affecting Nigerians, and make them distracted or lose interest in the program.

The human element in the flood communicates that humans are affected by environmental issues. Although it represents both aspects of gender, it, however, positions them more as victims on the receiving end of what nature meets out, and not as people who are doing something about it.

The earth shape in the program logo, also gives a hint of what the name *Earthfile* already says—the program is about the earth and secondly, it hints at the scope of discussions that could be covered in the program, not just local but environmental issues affecting everyone globally. However, the images are predominantly shrouded in blue [See the video at <https://www.youtube.com/watch?v=idDxogkyvCI> by Channels TV (2023a)].

Although blue is not commonly used to represent the environment, blue has representations in nature, or what can be termed parts of the environment, such as lakes, the sky, oceans, and rivers, and even our lives such as water. This confirms Jossierand et al.'s (2021) statement that blue has salient representations in nature. This infers that as audiences watch the *Earthfile*, and see the blue hues that introduce the program, they would be reminded of certain aspects of nature which are blue, and which they encounter on a regular basis. This should in turn create a connection in the minds of audiences to the need to protect these aspects of the environment that they encounter daily, and which are a part of their everyday lives.

### *Eco Africa*

The visuals in *Eco Africa*, the third program, cover several situations like *Environment matters* and *Earthfile*. The program introduction starts with smiling humans—a woman, children in class, followed by men installing a solar panel, and people packing plastics properly in a bag, women in water farming [likely harvesting the product as there are baskets attached to them], an older man and a child in front of a system—

both representing two generations, and then ends with the *Eco Africa* logo before switching to the first of the two presenters.

While the images represent the human elements of the environment, to indicate that they affect and are affected by the environment, it also suggests that the people are excited possibly about what is to be discussed after or the issue of the environment. It gives the impression that there is hope in whatever is going to be discussed in the program *Eco Africa*. The smiling individuals are also a contradiction to the subject of environment, which is often discussed in dire terms. However, given the direction of this specific program, it inspires hope and interest about the subject to be discussed.

It also represents gender balance, with the men indicated in a latter visual installing the solar panels. The visual of the men could connote the African mindset of the role or responsibilities of men to do the heavy lifting, even though that stereotype is no longer feasible as there have been female engineers impacting the world with their skills for decades.

The second visual with the girl child could represent two things—directly denoting the SDG 4, which is focused on achieving inclusive and quality education for all, particularly in Africa, where the girl-child is more likely than the boy not to go to school because of certain cultural practices and stereotypes. It could therefore be a way to prompt viewers to encourage the girl-child education. Connotatively, it represents two areas of focus. First, it is the fact that education is a vital component of environmental discussions and awareness creation, and secondly, the children in the image represent the future, the reason why environmental issues are of great importance and need to be addressed urgently. Finally, it connotes the changes necessary for encouraging more people to get on board, children like Greta Thunberg, who instigated the 'School strike for climate', a movement that went round the world [See the video at <https://www.youtube.com/watch?v=QPSkc9IHSIY> by Channels TV (2023b)].

Like in *Earthfile*, the visual on installation of solar panels in *Eco Africa*, denotes and connotes the global shift towards clean energy, and less dependence on fossil fuels as a source of energy. It therefore connotes other sources like the wind energy, bioenergy, geothermal energy, natural gas, and hydropower, the latter of which has been used in Nigeria for decades.

The hands holding a bag with plastic bottles in them reminds audiences of the need to avoid litter and recycle. The fact that there are more than one pair of hand connotation partnerships, the need for all citizens to work together in creating and implementing solutions that address environmental issues.

The women in the fields harvesting both denotes the important role women play in agriculture, and connotes their role in the environment, but it also connotes the movement towards the achievement of the second SDG, which advocates for zero hunger, thus showing the interconnectedness of all the SDGs with the environment. The man and the young boy in front of a laptop represents two things—the technological aspect of environmental issues, and secondly, two generations—indicating that the subject of environment crosses generational boundaries and lines. It could also connote the responsibility of parents to teach their children about the environment, and how to take care of it.

The last image that is shown just before the two presenters comes up is that of the program name, set in the middle of a landscape of both

the natural and built environment in the frame. This scene connotes the goal of environmental stakeholders and possibly the program to ensure harmony between the natural and the built environment, depicting the possibility for humanity to draw resources from the environment, without damaging it irreparably.

The colors blue and green are highlighted throughout the visual, denotatively with the skies and sea being blue, also alluding connotatively in this instance to nature in various forms and the 'greening' of human activities to sustain the planet. The specs of blue and green can also be seen across all the other visuals used in the introduction and the rest of the program, constantly drawing audiences' attention to what the program is about. The way visuals are used to introduce the program *Eco Africa* indicates that they play a major role in pulling audiences to watch, while additionally giving a hint or promise of what the program would be about.

The visual element from *Environment matters* and *Earthfile* connotatively indicate that the programs would discuss the issues, problems, and challenges with the environment, something that can be a turn-off for audiences as acknowledged by some of the FGD respondents. Nevertheless, *Eco Africa* is anchored differently. The visuals in *Eco Africa* reflected the direction from which it discusses the issues, identifies the challenges but proffers hope through human-designed solutions, a trait that runs through the program. Other differences include the presence of technology in *Eco Africa*, an acknowledgment of the role technology currently plays and would play in the development of solutions to varying aspects of environmental challenges, and the representation of children connoting the future of the planet, the future of the environment and potential change agents in the plan to save the planet.

The above description confirms that images cannot be used idly without thought about what they denote and connotes for the intended audience, as it is a good place to win or lose audiences' even before the program itself starts.

As Boykoff and Goodman (2015) and van Beek et al. (2020) state the way visuals are used in depicting environmental issues, would affect how audiences receive and interpret the issues particularly with something as sensitive as the environment. van Beek et al. (2020) emphasize that while visuals can be a positive thing, they also have the capacity to leave out other ways of representing an environmental issue or policy, and this can be a negative because the citizens only see aspects of the environmental issues as presented by the media producers of these programs.

## CONCLUSION AND RECOMMENDATIONS

The thematic analysis established that the most common themes across the twelve episodes used to represent and or discuss environmental issues were people, environment, and climate. These three concepts were also visible both directly and indirectly across the visuals used in the sign-in to the three environmental programs assessed. Other similar themes across the programs were the concepts of Africa, forest, wildlife, change, Nigeria, world, water—equally important concepts representing the issues, and the specific context—local and global.

The images used in introducing the three programs established a connection with the environment using images such as grass, farmlands

and colors like green and blue, commonly associated with the environment. This is also important because of the intensity of recent climatic changes, and the far reaching direct and indirect impact, such as drought, low agricultural yields, rising sea levels and floods leading to loss of farmlands and homes, and insecurity because of the battle for resources for humans and livestock. The programs are using images that viewers can connect with based on their current realities.

Of the three programs, *Eco Africa* used the human element copiously to indicate that the environment is about people, whether positively or negatively. The visuals in *Eco Africa* also reflected the direction from which it discusses the issues, it identifies the challenges but proffers hope through human-designed solutions, a trait that runs through the program. Other differences include the presence of technology in *Eco Africa*, an acknowledgment of the role of technology in the development of environmental solutions to environmental challenges, and the representation of children connoting the future of the planet, the future of the environment and potential change agents in the plan to save the planet. Two colors were dominant across the three programs—blue and green to establish a connection with the colors of nature and the environment such as the sky, seas, grass, and trees.

Content producers are enmeshed in society, the same place as their audiences, and so they are bound to pick words and images from their environment. Albeit they may use visuals from other climes based on their exposure. Language plays a role in awareness, acceptability, and engagement. The technical nature of the language used in crafting messages was a major issue identified from the type of sub-frame, and FGD audience reactions to the way language was used in presenting the three environmental programs. The language was mainly technical, which can be explained given the scientific nature of most of the issues related to the environment.

From the textual (thematic) and semiotic analyses, the strategy for designing environmental content is critical. Words and images are an essential component of the creation of messages in environmental programs. Presenters and producers must understand the intricate role that text and visuals play in depicting the messages of change they intend to pass to audiences on the environment. It is therefore important that they pick words and visuals that reflect the symbols their society can connect with. Additionally, visuals especially are not only for communicating the problems and challenges of the environment. they can be used as *Eco Africa* has done from just the sign-in to depict the changes they need audiences to imbibe and embrace in order to save the environment.

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## REFERENCES

- Akpan, C. S., Anorue, L. I., & Ukonu, M. O. (2012). An analysis of the influence of the Nigerian mass media on public understanding of climate change. *Journal of Alternative Perspectives in the Social Sciences*, 4(4), 688-710.
- Ballantyne, A. G., Wibeck, V., & Neset, T. S. (2016). Images of climate change – A pilot study of young people's perceptions of ICT-based climate visualization. *Climate Change*, 134, 73-85. <https://doi.org/10.1007/s10584-015-1533-9>
- BON. (2021). *Registered members of Broadcasting Organisation of Nigeria*. <https://bon.ng/radio-tv-member/>
- Boykoff, M. T., & Goodman, M. K. (2015). Science (and policy) friction: How mass media shape US American climate discourses. In B. Sommer (Ed.), *Cultural dynamics of climate change and the environment in Northern America* (pp. 189-205). Koninklijke Brill. [https://doi.org/10.1163/9789004300712\\_009](https://doi.org/10.1163/9789004300712_009)
- Burr, V. (2015). *Social constructionism* (3rd ed.). Routledge. <https://doi.org/10.4324/9781315715421>
- Calhoun, C., Gerteis, J., Moody, J., Pfaff, S., & Virk, I. (Eds.) (2012). *Contemporary sociological theory*. John Wiley & Sons Ltd.
- Channels TV (2023a). *Earthfile*. <https://www.youtube.com/watch?v=idDxogkyvCI>
- Channels TV (2023b). *Eco Africa*. <https://www.youtube.com/watch?v=QPSkc9iHSIY>
- Hansen, A., & Machin, D. (2015). *Visual environmental communication*. Routledge. <https://doi.org/10.4324/9781315753492>
- Jerry, A., & Atieno, L. (2016). Climate change images in Kenya's news photographic representations. *International Journal of Weather, Climate Change and Conservation Research*, 2(2), 1-11.
- Johnson, C., Hills, M., & Dempsey, L. (2023). An audience studies' contribution to the discoverability and prominence debate: Seeking UK TV audiences' 'routes to content'. *Convergence: The International Journal of Research into New Media Technologies*, 30(5), 1625-1645. <https://doi.org/10.1177/13548565231222605>
- Josserand, M., Meeussen, E., Majid, A., & Dediu, D. (2021). Environment and culture shape both the colour lexicon and the genetics of colour perception. *Scientific Reports*, 11, Article 19095. <https://doi.org/10.1038/s41598-021-98550-3>
- León, B., & Erviti, M.C. (2015). Science in pictures: Visual representation of climate change in Spain's television news. *Public Understanding of Science*, 24(2), 183-199. <https://doi.org/10.1177/0963662513500196>
- McQuail, D. (2011). *Mass communication theory*. SAGE.
- mediaReach. (2016). *Media facts: Nigeria, West and Central Africa*. mediaReach OMD.
- Milstein, T., Pileggi, M., & Morgan, E. L. (2017). *Environmental communication pedagogy and practice*. Routledge. <https://doi.org/10.4324/9781315562148>
- Morley, D. G., & Jin, H. (2011). British cultural studies, active audiences and the status of cultural theory: An interview with David Morley. *Theory, Culture & Society*, 28(4), 124-144. <https://doi.org/10.1177/0263276411398268>
- Murdock, G. (2017). Encoding and decoding. In *The international encyclopedia of media effects* (pp. 1-11). John Wiley and Sons, Inc.. <https://doi.org/10.1002/9781118783764.wbieme0113>
- Nigerian Television Authority (2023). *Environment Matters*. <https://www.youtube.com/watch?v=B2xLkOc9Tfl>
- Obasi, M. C., & Msughter, A. E. (2023). Assessment of media coverage of environmental hazards in mining communities in Ebonyi State, Nigeria. *Environmental Challenges*, 13, Article 100758. <https://doi.org/10.1016/j.envc.2023.100758>
- Radermacher, M. (2024). Texts and images as data in qualitative social research: Proposing a common methodological approach. *International Journal of Qualitative Methods*, 23. <https://doi.org/10.1177/16094069241233170>
- Rasid, R., Djafar, H., & Santoso, B. (2021). Alfred Schutz's perspective in phenomenology approach: Concepts, characteristics, methods and examples. *International Journal of Educational Research & Social Sciences*, 2(1), 190-201. <https://doi.org/10.51601/ijersc.v2i1.18>
- UNEP. (2012). 21 issues for the 21st century: Result of the UNEP foresight process on emerging environmental issues. UNEP. <https://www.unep.org/resources/report/21-issues-21st-century-results-unesp-foresight-process-emerging-environmental>
- van Beek, L., Metze, T., Kunseler, E., Huitzing, H., de Blois, F., & Wardekker, A. (2020). Environmental visualizations: Framing and reframing between science, policy and society. *Environmental Science & Policy*, 114, 497-505. <https://doi.org/10.1016/j.envsci.2020.09.011>
- Wilson, P. (2024). *The role of the broadcast media in the management of environmental health issues in Enugu State, Nigeria*. SSRN. <https://doi.org/10.2139/ssrn.4694450>
- Woroniecki, S., Wendo, H., Brink, E., Islar, M., Krause, T., Vargas, A., & Mahmoud, Y. (2020). Nature unsettled: How knowledge and power shape 'nature-based' approaches to societal challenges. *Global Environmental Change*, 65, Article 102132. <https://doi.org/10.1016/j.gloenvcha.2020.102132>
- Zhao, H. (2020). Explicating the social constructionist perspective on crisis communication and crisis management research: A review of communication and business journals. *Journal of Public Relations Research*, 32(3-4), 98-119. <https://doi.org/10.1080/1062726X.2020.1802732>

