

Visualizing environmental reporting in Nigerian newspapers

Ben-Collins Emeka Ndinojuo¹,
Konye Cynthia Ikems
University of Port Harcourt, Nigeria

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Abstract

The study analyzed environmental news content in *Leadership* and *The Punch* newspapers from May 1, 2019, to July 31, 2020. The study aimed to determine the images used in news reporting about the environment based on the salient features they embody in the news. The findings revealed 151 articles about the environment while 117 contained images, split between *Leadership* (52) and *The Punch* (65) newspapers, indicating their prominence in environmental reporting. While some of the utilized images in the news reports captured the impact on the environment (air, land, and water) and its inhabitants, pictures of politicians were the most featured ones. The information/awareness theme was dominant, demonstrating a development communication perspective. The study also established a notable use of the “Health” theme, implying a connection between health and the environment, predominantly because of COVID-19.

Keywords

Environmental communication, photography, infographics, content analysis.

Introduction and background

The environment is an area of concern for Nigeria and Nigerians. This has been amplified by the position of Nigeria as one of the top producers of crude oil. The impact of multinational oil companies in the exploration and exploitation process has come with a mixture of gains for the government and some of its officials involved in the management of its oil resources (Odutola, 2020; Padmore, 2018), and devastating consequences for the environment, communities and people

¹ Corresponding author:

Ben-Collins Emeka Ndinojuo, University of Port Harcourt, Nigeria.
Email: becoolholly@gmail.com

living in locations where the hydrocarbon resources are located (Anejionu, Ahiamammunnah, & Nri-ezedi, 2015; Kadafa, 2012; Nwozo, 2020; Ugwuoke, & Erubami, 2021). The print media has been at the forefront of attempts to bring the issues faced by the environment and people to local and global attention.

Alli (2001) argues that newspapers have the power to influence what people think. When in 1988, an Italian company dumped toxic wastes at Koko, a remote area in present-day Delta State, southern Nigeria, the media outcry led to the government using diplomatic channels to get the company and the Italian government to evacuate the toxic waste materials and subsequently, the formulation of a national policy on the environment, and the creation of the Federal Environmental Protection Agency (FEPA) in 1988, mandated with the administration and enforcement of the environmental law. The act setting up FEPA has since been repealed by the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007 (Ogbodo, 2009). Environmental issues also include gully erosion, predominant in the southeast Nigeria, desertification, and flooding in the northern region of Nigeria, and deforestation for developmental purposes.

The images may be in the form of photographs, graphic illustrations, infographics, or cartoons. Photographs are stills of the event that is being highlighted, when they are not available, an infographic fills the gap. Graphic illustrations are art such as abstract images, digital flyers, advertisements, logos, and posters used to express visual ideas and convey newspaper messages. An infographic is short for a combination of information graphics. They are visual representations of graphical information, data, or knowledge. They are commonly used in newspapers to show the weather, maps, and site plans for newsworthy events, thus, simplifying complex information (Nirmala, & Arul Aram, 2018; Jenkins, 2006; Okon et al., 2022). Ghode (2012) states that newspaper infographics fall into three categories; those used to summarize news events fall under the first group such as photos, statistical data, and minimal text. The second group includes maps (topographic maps), symbolic interpretations, and extra-conceptual charts. For readers to better grasp and visualize the news or information, the third group uses a broader approach to information design, in which complex conceptual ideas are explained with graphics and text.

Scholarship on the media coverage of the environment abounds in academia where the use of images may be a part of the study (John, & Jonjua, 2018; Nwabueze, & Egbra, 2016). However, little research so far has exclusively captured the use of images to illustrate media coverage of the environment; Ndinojuo (2020a) explored the use of images in reporting biodegradables in Nigerian

newspapers. Studies in environmental communication (John, & Jonjua, 2018; Nwabueze, & Egbra, 2016) revealed that the environment has been reported to some extent by the Nigerian press. This study was undertaken to attempt to contribute to the lacuna that exists in the study of images (i.e. pictures and infographics) used by Nigerian newspapers in reporting environmental issues. Images are vivid, unambiguous, and comprehensible by themselves without any accompanying text to newspaper audiences regardless of literacy level. Thus, there is the need to study and analyze them to ascertain how they have been used by Nigerian newspapers in setting agendas for national discourse and framing specific narratives. The following research questions were raised to elicit answers from the sampled news stories:

1. To what extent are environmental images present in reportage about the environment?
2. What are the subjects of the environmental photographs used in environmental reporting?
3. What is the correlation between the images used in the story in relation to the news being reported?
4. Which environmental themes are represented as photographs and infographics in the newspapers?

Most studies on issues in environmental communication have concentrated mostly on analyzing text rather than images associated with news coverage. Studies strongly agree that visuals when included in news reports can make the article more interesting and creates a compelling narrative on the perception of the audience than texts on their own (Ndinojuo, 2020a, 2020b; Nirmala, & Arul Aram, 2018; DiFrancesco, & Young, 2011; Lobodenko et al., 2022; Omolabi, & Durosimi, 2017; Smith, & Joffe, 2009). In agreement, DiFrancesco and Young (2011) suggest that the manifestation of images in complement to textual elements creates a better understanding of the article. They found out that news stories accompanied by images in Canadian newspapers are more likely to have moral and emotional themes than stories without images. They assert that images are not driving news content; neither are articles driving the content of images. Instead, it seems that journalists and editors are attaching images post facto to articles that tend to be morally or emotionally edgy, regardless of the content of those images.

Smith and Joffe (2009) allude that imagery when used in news reporting could influence the salience of information in the memory of the audience, their emotional engagement, as well as their engagement with the environmental disruption under investigation. Dur (2012) corroborates this assertion with the

notion that data visualization provides a refreshing and diverse point of view about events and correlations between them. The human mind can perceive visual imageries faster compared to words. Data visualization, when frequently used in daily newspapers, communicates complicated articles filled with ratios, numbers, and miscellaneous data much better (Nirmala, & Arul Aram, 2018).

This brings us to the importance of attribution of images used in news reporting and the relevance of photojournalists in the overall news development and production. Photojournalists because of the importance of attribution should be identified in images used in environmental news reporting and news reporting generally. They are expected to be responsible and careful in the discharge of their duties in representing visual images (Press Council of India, 2010). Ndinojuo and Ihejirika (2019) in their study that analyzed the framing of news reports about military operations against the Boko Haram group found that most of the pictures used in news reports were not relevant, poorly or not captioned at all without source credit.

Knox (2009) asserts that images found in news do not accomplish all the functions usually ascribed to press photographs, such as captions, source credits, or even provide a better understanding of the issue being reported. Some images tell a different story than what is being reported. This occurs even though according to Griffin, the pictures used in news are expected to act as a “prompt or lead-in for the reader’s eye” (Griffin, 2004: 384). Source credit and caption help the reader to understand what the image represents and the origin of the image. Not including the source affects the authenticity of the image and also denies the photojournalist credit for their work, which can serve as part of their work portfolio and can provide residual income as well as for future references when searching for work. These attributes are important for any image used in news reporting generally.

Castrechini et al. (2014) discussed the media portrayal of environmental issues focusing on how environmental reporting has transcended from scientific analysis to a more social/political discourse. In a sample of two Spanish newspapers between 1992 and 2006, they showed that environmental reporting has moved from being associated with nature to becoming primarily associated with the urban environment, and also a shift from scientific to political discourse with an emphasis on the social dimensions of environmental reporting. Nirmala and Arul Aram (2018) in their study of environmental images in Indian newspapers found that over 80% of the images used by the two newspapers analyzed were photographs compared to infographics.

Looking at the literature on environmental news reporting in Nigeria, most of the articles focused on textual analysis. Nwabueze and Egbra (2016), and Okoro and Nnaji (2012) included pictures in the content categories covering story type and nature of story respectively in the analysis of climate change reporting. It was curious that in the findings of newspaper reports in both studies (Nwabueze, & Egbra, 2016; Okoro, & Nnaji, 2012), the articles sampled did not use any pictures to write about climate change in Nigeria and Ghana or pollution and its impact on the Niger Delta. This study compared the findings to ascertain if the results would be consistent, four years after the study by Nwabueze and Egbra (2016), and eight years after the findings from Okoro and Nnaji (2012). Their observations showed that studies about the environment in Nigerian newspapers were more interested in analyzing texts rather than images. Ndinojuo (2020a) studied the use of visual images in reporting about biodegradables in four Nigerian newspapers in order to find out if there were embedded and overt meanings associated with the images used in reporting about biodegradables. This research aims to address these and other lacunas involved in the use of images in environmental reporting.

Methods

The research adopted quantitative and qualitative content analysis and visual discourse analysis to examine the images used in environmental reporting in two selected Nigerian newspapers. Two online national daily newspapers were selected and analyzed based on their circulation, which cuts across the six geo-political regions in Nigeria, content, and regularity of publication; they include; *The Punch* and *Leadership* newspapers. Both newspapers were selected to provide a balance based on the region of operation, *The Punch* is southern-based while *Leadership* is based in Northern Nigeria. Also, *The Punch*, with a circulation figure of 80,000 units per day and a strong online audience, is rated as the number one selling national daily in Nigeria, *Leadership* is one of the top-rated newspapers in northern Nigeria (Ndinojuo, 2020a; Nwabueze, & Egbra, 2016; Abdulkareem, Adisa, & La'aro, 2012). The study was conducted over a 15-month period from May 1, 2019, to July 31, 2020. With World Environment Day being June 5 annually, the time frame captures two periods within which there is environmental reportage. The environment also made headlines towards the end of 2019 with the controversy of President Donald Trump pulling the United States out of the Paris Agreement on climate change (Friedman, 2019; Holden, 2019).

The paper analyzes 916 daily editions of both newspapers. The data gathering began with typing the keyword 'environment' in the search query of the websites of the selected newspapers, entries that fall within the research stipulations were

selected and analyzed. Based on the opinion of experts and previous literature in environmental communication in Nigeria, the following themes were identified as being relevant to discourse on the environment in the Nigerian press: climate change, biodiversity, water pollution, air pollution, land pollution, water pollution, flooding, health and information/awareness. The coding consisted of the frequency and categorization of descriptive variables identifiable on the images, such as the caption and source credit, the type of image, and the environmental theme. This study adopted the model for categorization of images presented in Castrechini et al. (2014). The themes were adapted from Nirmala and Arul Aram (2015) and Nwabueze and Egbra (2016). The content categories are not mutually exclusive.

Table 1

Categorization of images

Categories	Subcategories
People	Politicians
	Experts
	Public
Landscapes	Urban landscape
	Natural landscape
	Other landscapes
Environmental problems	Impact on people
	Impact on animals/plants
	Impact on territory
Social actions	Public actions/NGO actions
	Government action

Source: Adapted from Castrechini et al (2014).

To ensure intercoder reliability, two independent coders were trained to code a subset of the research data as a pilot study. Neuendorf (2002) notes that reliability is the amount of concordance obtained by two or more independent coders. Five stories were selected from *The Punch* newspaper, using the same set of explicit recording instructions used in the formulation of the coding schedule. Chadwick, Bahar and Albrecht (1984) suggested a method of calculating intercoder reliability by dividing the number of units found in the same category by the number of units coded:

$$\text{Intercoder reliability} = \frac{\text{Number of units in the same category}}{\text{Total number of units coded}}$$

Neuendorf (2002) emphasized that coefficients of .90 or more at all times are practically appropriate for research studies, .80 or more is appropriate in nearly all circumstances, whereas .70 may be considered acceptable in a few exploratory studies depending on the research objectives. Two independent coders collected data from the five selected stories; they coded 67 and 75 items independently. Substituting for the values in the above equation:

$$\text{Intercoder reliability} = \frac{67}{75} = 0.89$$

The data obtained by independent coders above were established to be internally consistent and reliable for this study and hence were adopted as reliable to give consistent results.

Results

A content search of stories mentioning “environment” revealed a total of 200 articles, 117 (58.50%) from *The Punch* and 83 (41.50%) from *Leadership* newspapers, respectively. The study was about the “environment,” not just the literal mention of the “environment”. The articles were scrutinized, and stories that were about business or learning environments were eliminated because they did not fit the research context. One standout was the article in *Leadership* newspaper dated September 29, 2019, about the return of oil production to host communities of Oil Mining Lease (OML) 25 in Kula Kingdom of Akuku-Toru LGA of Rivers State (*Leadership*, 2019).

Table 2

Frequency and percentage of environmental images in *Leadership* and *The Punch*

Environmental reports	Leadership N (%)	The Punch N (%)	Total N (%)
Reports mentioning environment	83 (41.50)	117 (58.50)	200 (100)
Reports about the environment	64 (42.38)	87 (57.62)	151 (100)
Reports about the environmental with images	52 (44.44)	65 (55.56)	117 (100)

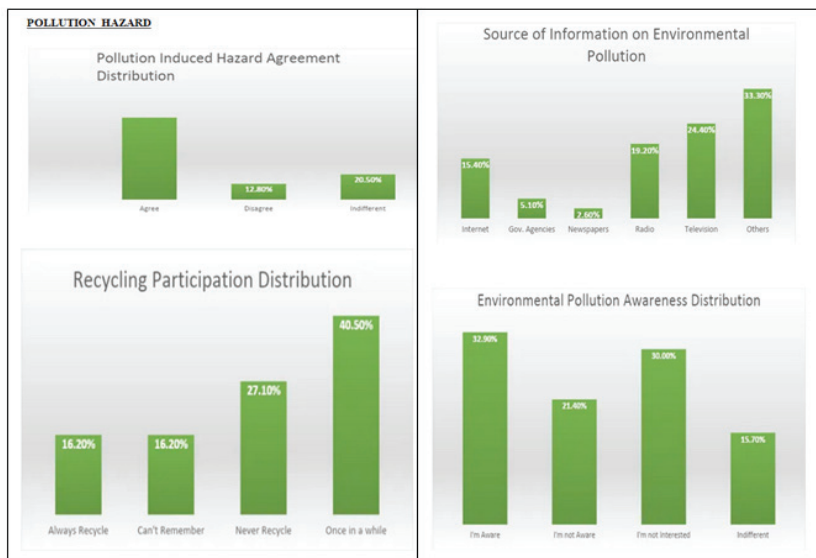
Thus, the article was not selected even though news reports about oil drilling are usually accompanied by environmental issues, but this was not the case with this article, making it ineligible for selection in the study universe. Similar articles were eliminated, thus reducing the total number of articles to 151 (75.50%);

87 news stories from *The Punch*, and 64 articles for *Leadership* newspapers, respectively. The news stories were subjected to further examination because the research is concerned with images contained in environmental news reporting. This additional examination revealed a total of 117(77.48%) news stories containing images (see Table 2). *The Punch* contributed 65(55.56%), while the *Leadership* had 52(44.44%) articles with images. This served as the sample that was analyzed to answer the research questions and to show how images were used in environmental reporting by Nigerian newspapers. *Table* also showed that 77.48% of the stories about the environment contained images.

Table 3 compares the use of photographs, graphic illustrations and infographics by Nigerian newspapers. The result revealed that infographics were rarely used by newspapers. Only one news story utilized infographics to report on the environment in *Leadership* newspaper. According to Nirmala and Arul Aram (2018), over 80% of the images used by Indian newspapers analyzed were photographs compared to infographics. In comparison, over 99% were observed for this study. The infographic is presented in *Figure 1*; where the journalist used the infographic to show the trend in reporting environmental pollution in Nigeria. This was one of the functions mentioned by Nirmala and Arul Aram (2018) about the effective use of infographics to provide information on environmental issues, show the level of impact, and predict future trends.

Figure 1

Infographic in the news



Source: Leadership (June 4, 2019)

Table 3

**Frequency and percentage of environmental images in
Leadership and *The Punch***

Environmental images	Sub-classification	Leadership N (%)	The Punch N (%)	Total N (%)
Photograph		36 (30.77)	57 (48.72)	93 (79.49)
Infographs		1 (0.85)	0	1 (0.85)
Graphic illustrations	First group	15 (12.82)	8 (6.84)	23 (19.66)
	Second group	0(0.00)	0(0.00)	0(0.00)
	Third group	0(0.00)	0(0.00)	0(0.00)

The first research question that seeks to understand the extent of environmental images being present in reportage about the environment is addressed by the total number of articles about the environment where images are used to present the news. Findings showed that 77.48% of the news stories about the environment had images. Information in Table 3 breaks down the utilization of images by comparing photographs, graphic illustrations, infographics, and cartoons. It shows that both newspapers overwhelmingly used photographs over infographic images. *The Punch* newspaper did not use any infographics in their news reporting about the environment during the study period, while *Leadership* applied an infographic image in only one scenario. Both newspapers used graphic illustrations in their reportage of environmental news, with *Leadership* using them nearly twice the number employed by *The Punch* newspaper. Only the first group in graphic illustrations that utilizes photos, statistical data, and minimal text was observed. There were also no entries for cartoons.

Table 4 further analyzes the environmental photographs in *Leadership* and *The Punch* newspaper to highlight the subjects of the environmental photographs that answered the second research question of the study.

Table 4

**Environmental photographs in
Leadership and *The Punch***

Photograph categories N (%)	Subcategories N (%)	Leadership N (%)	The Punch N (%)	Total N (%)
People 88 (75.21)	Politicians	18 (15.38)	37 (31.6)	55 (47.01)
	Experts	5 (4.27)	13 (11.1)	18 (15.38)
	Public	10 (8.55)	5 (4.27)	15 (12.82)
Landscapes 36 (30.77)	Urban landscape	5 (4.27)	0 (0)	5 (4.27)
	Natural landscape	8 (6.81)	2 (1.71)	10 (8.55)
	Other landscapes	10 (8.55)	11 (9.40)	21 (17.95)
Environmental problems 44 (37.61)	Impact on people	6 (5.13)	2 (1.71)	8 (6.81)
	Impact on animals/ plants	7 (5.98)	2 (1.71)	9 (7.69)
	Impact on territory	21 (17.95)	6 (5.13)	27 (23.08)
Social actions 22 (18.80)	Public actions/ NGO actions	5 (4.27)	3 (2.56)	8 (6.81)

The subjects of images used in environmental reporting by Nigerian newspapers were assessed from four non-mutually exclusive dimensions: People, Landscape, Environmental problems, and Social actions. The results as captured in Table 4 showed that “People” appeared in 75.21% of the articles about the environment, and politicians (47.01%) were the dominant pictures used in both *Leadership* and *The Punch*. However, *The Punch* utilized the pictures of experts in 13 news articles compared to five in *Leadership*, while for images of the public; *Leadership* had 10 stories compared to five in *The Punch* newspaper. Images of Landscape appeared in 36(30.77%) news articles. The Urban Landscape was used the least, appearing in 5 articles, the natural landscape appeared in 10 stories while the landscape described as “Other” was the dominant appearing in 21 news reports about the environment. *Leadership* had more reports covering both natural and urban landscapes compared to *The Punch* newspaper. The images showing environmental problems had 44(37.61%) outings in the environmental news reports. The impact on the territory (23.08%) was the dominant frame projected in the photographs compared to the impact on people (6.81%) and the impact on plants/animals (7.69%). In measuring the social actions depicted in images about environmental reporting, results revealed 22 (18.80%) stories with interventions of social actions, the government contributed 14(12.0%) compared to Public actions/NGO actions 8(6.81%).

The third research question addressed the question of the correlation of the image used to the environmental issue being discussed. The appropriateness or inappropriateness of the image depends on its function in the news. Does the image clarify the news? Does it expatiate on what is being reported? Does it depict what is being reported? Negative responses to the above questions indicate the inappropriateness of the image used in the report. The examination of the images showed that 35.9% of the images correlated with what was being reported as they described the event/action about the environment being reported, while 64.1% were considered inappropriate and showed no direct relationship with the environment or the environmental issue/action being reported. *Table 5* summarizes the correlation of the images to the environmental news being reported. The results for *Leadership* show an even split between images considered appropriate and those considered inappropriate, while the inappropriate images 75(64.10%) dominated reportage from *The Punch* newspaper compared to those regarded as appropriate, 42(35.90%). The newspapers used captions more than sources for their images in varying degrees; 56 stories had captions, with *The Punch* accounting for 48(41.03%), while *Leadership* used captions in 8(4%) of the total entries. Sources were rarely used in images presented from the findings; *Leadership* had no image where the source was identified, while *The Punch* presented only two images with the source (*Figures 2a* and *2b*) of the image identified. The two sources used by *The Punch* would be considered inadequate as they cited both sources as “Google”.

Table 5

Correlation of the images to the environmental event being reported

	Leadership N (%)	The Punch N (%)	Total N (%)
Appropriate	26 (22.22)	16 (13.68)	42 (35.90)
Inappropriate	26 (22.22)	49 (41.88)	75 (64.10)
Total	52 (44.44)	65 (55.56)	117 (100)
Caption	8 (4.00)	48 (41.03)	56 (47.86)
Source	0 (0)	2 (1.71)	2 (1.71)

Figure 2a

First image showing Google as source



Source: Aborisade (2019)

Figure 2b

Graphic illustration showing Google as source



Source: Ojerinde (2019)

The final research question identified the themes represented by the images used in reporting about the environment. A summary is presented in *Table 6*²:

Table 6

Environmental themes

Theme	Leadership N (%)	The Punch N (%)	Total N (%)
Air pollution	1 (0.85)	5 (4.27)	6 (5.13)
Biodiversity	1 (0.85)	4 (3.42)	5 (4.27)
Climate change	0 (0)	5 (4.27)	5 (4.27)
Crises	0 (0)	1 (0.85)	1 (0.85)
Flooding	0 (0)	1 (0.85)	1 (0.85)
Health	4 (3.42)	9 (7.69)	13 (11.11)
Information/awareness	34 (29.06)	34 (29.06)	68 (58.12)
Land pollution	10 (8.55)	4 (3.42)	14 (11.97)
Water pollution	2 (1.71)	2 (1.71)	4 (3.42)
Total	52 (44.44)	65 (55.56)	117 (100)

From the data captured in *Table 5* showing the environmental themes associated with the images used in environmental reporting in Nigerian newspapers, Information/awareness was dominant across both sampled newspapers, with *Leadership* and *The Punch* contributing 34(29.06%) each, accounting for 68% of the total images used in the reportage. The Land pollution theme was the next with the most entries showing 14(11.97%), followed by the Health theme with 13(11.11%) of the images used. The Crises theme and Flooding theme had the least entries with one entry each; the *Leadership* newspaper did not have any images captured for the Climate Change, Crises, and Flooding themes. *The Punch* newspaper, on the other hand, had at least one entry for every theme used in the process of data analysis.

Discussion

The study explored the use of images in environmental reporting in two Nigerian newspapers, *Leadership* and *The Punch*. The research attempted to provide answers to four pertinently raised research questions about the use of images in environmental reporting in Nigeria. Based on the classification of images by Ghode (2012), the prevalent image type employed by the newspapers

² Note: *Table 6* depicts the images in each theme. Some news may have multiple themes, only the prominent theme was coded for each article.

were those in the first category used to summarize and explain news. The second (maps, symbolic interpretations, and extra-conceptual charts) and third (cartoons) categories were not found in environmental news reporting by Nigerian newspapers. This was aptly captured in *Table* where still pictures were the dominant form of images used in environmental reporting. This will require further investigation to understand the absence of maps and complex conceptual ideas in Nigerian newspapers reporting about the environment.

The first research question answered the question of the extent of images being present in environmental reporting. The findings revealed that images were present to a greater extent in environmental reporting as they were found in 77.48% of the stories about the environment in both newspapers. Studies have long supported the use of images in reporting because it not only makes the article more interesting to read but also creates a persuasive and enthralling narrative on how readers understand the news than just texts on their own (Ndinojuo, 2020b; Nirmala, & Arul Aram, 2018; DiFrancesco, & Young, 2011). Images of the environment are iconic and they tell the story so much more than the messages any words can convey. Omolabi and Durosimi (2017) reiterated that when images are used in journalism, they become historical and iconic with the strategic pragmatic meaning intended for both persuasive and informative purposes. Nigeria is a nation where environmental images have greatly influenced the advocacy for the environmental.

Figure 3

Impact of oil spillage in an unnamed area in Niger Delta region, Nigeria



Source: *Leadership* (July 10, 2019)

Figure 4

Air pollution from pipeline fire in Baruwa, Lagos State, Nigeria



Source: Izuora (2019)

The impact of international oil companies in the Niger Delta region and other oil-producing communities in Nigeria has been greatly brought to the fore by environmental reporting. This study also uncovered images (see *Figures 3* and *4*) that highlighted the environment of oil companies in Nigeria. When oil companies are accused of polluting the waterways and the air quality, pictures tend to tell a better story; the illiterate can understand the issues at stake even though the text of the communication may not be comprehensible to them. *Figure 3* shows one of the many communities that have suffered from oil spillage which affects the aquatic and terrestrial life in these regions. Images like the one in *Figure 3* made Ogoni community activists halt oil exploration and drilling activities in the area for many years after the killing of the environmental activist Ken Saro Wiwa and other Ogoni activists (Doron et al., 2016; Wiwa, 2020). Environmental images played a significant role in amplifying their environmental activism. *Figure 4* also showed the impact of environmental images from the perspective of air pollution. Seeing the images of the environmental impacts will create a better understanding than using just texts to describe the impacts. Ndinojuo (2020a) summarized this by stating that images when used appropriately in environmental reporting can convey the effects of human and natural actions that serve to remind the government, stakeholders, and the general public of the significance of maintaining policies and practices promoting sustainable development ideals.

The second research question analyzed the subjects of the environmental photographs used in environmental reporting by *Leadership* and *The Punch* newspapers. While 47.86% of the images were captioned, only two of the images included source credits, and both were from *The Punch*. The caption explains the context of the image while the source credit recognizes the photojournalist responsible for the image. Attributing an image to a source not only improves the credibility of the image but also helps the photojournalist in getting recognition for their work, which could also translate into better economic opportunities in the future. Attribution also ensures that if the images were misleading or fake, there is someone to be held responsible. The findings mostly affirmed that of Ndinojuo and Ihejirika (2019) that most images used in news reporting in Nigeria were not captioned and without source credit. Their study was about the military and Boko Haram terrorist group in Nigeria, while this is an environmental study; the findings on the use of images were largely similar indicating that this is a practice among Nigerian newspapers, not limited to news about the environment, but also other classifications like politics, health, sports, etc.

The features of the images showed that images of people featured most prominently compared to other categories. Images of people were dominant in the images (75.21%), followed by those depicting environmental problems (37.61%), landscapes (30.77%), and lastly, social actions (18.80%). The findings differed from those of Nirmala and Arul Aram (2018), where the landscape was the most featured (45%), environmental problems (23%), people (11%), and social actions (5%). The differences between the studies may be because of the influence of the people in Nigeria and India. Journalists in India may place more emphasis on the event being reported than on the people who may have a role to play in the environmental issue being portrayed, compared to Nigeria, where the effect of the environmental issue being reported pales in significance compared to the people involved. Thus, when reporting about an environmental issue, the newspaper may present a still-shot of the politician involved rather than present a picture of the pollution being reported.

In terms of the people in environmental news reporting, politicians were the most represented, mainly using official photographs of the president, vice president, governors, ministers, and other high-ranking government officials. This underscores their influence as the most important element in environmental news in Nigeria. The influence of images of “people” in environmental reporting could also be attributed to lazy reporting on the part of the journalist/newspaper. Instead of reporting about an issue, they have been made aware

of; the journalist could write the story from his office and use the image of the nearest government official involved in the story to write his report. It could also be an editorial decision on the part of the newspaper to use the picture of the government official involved instead of using a picture of the environmental event being reported.

The third research question correlates the images used in environmental reporting to the event being reported. The results revealed that over 64% of the images could be considered inappropriate because their inclusion does not provide any additional understanding of what has been reported and oftentimes has no relevance to the environmental story being reported. Knox (2009) suggested that in some situations, images used in a news report tell a different story, even though Griffin (2004) noted that pictures are expected to aid news comprehension. In these instances of inappropriate use of images in environmental reporting, the images present a different understanding compared to what is being reported. *Figure 5* shows the picture of the Edo State governor, used in a report about the resignation of the commissioner for the environment. The governor does not have any direct action in the news. His aide was quoted as responding to the news, but it is the governor whose image was used in the reporting, instead of the commissioner that resigned or the aide that released the statement.

Figure 5

Edo State Governor, Godwin Obaseki



Source: David (2020)

Another example is the *Leadership* story titled “ERA Trains Students on Environmental Protection in Edo.” The common image that may illuminate the report should be the location where the training of students on environmental protection took place in Edo State, Nigeria. Instead, a stock image (graphical illustration) that has no relation to the news is used in the story (see *Figure 6*).

Figure 6

Inappropriate graphic illustration used in environmental reporting



Source: *Leadership* (October 7, 2020)

Figure 6 has a tiny caption that reads, “A troubled young man walking into the light”. One struggles to understand how this has any correlation to the news that students have been trained on environmental reporting. This same image was used in several other environmental news articles. What then is the caption on the image of a man walking into the light has to do with the news about training students about environmental degradation? Journalists and editors must be deliberate about the choice of images accompanying environmental stories. Images that do not aid understanding of the event being reported should not be used in environmental news. *Figures 7a* and *7b* highlight instances where the images correlate to the environmental news being reported.

Figure 7a

Report about environmental degradation



Source: Leadership (December 3, 2020)

Figure 7b

Environmental sanitation taskforce



Source: Omojuyigbe (2020)

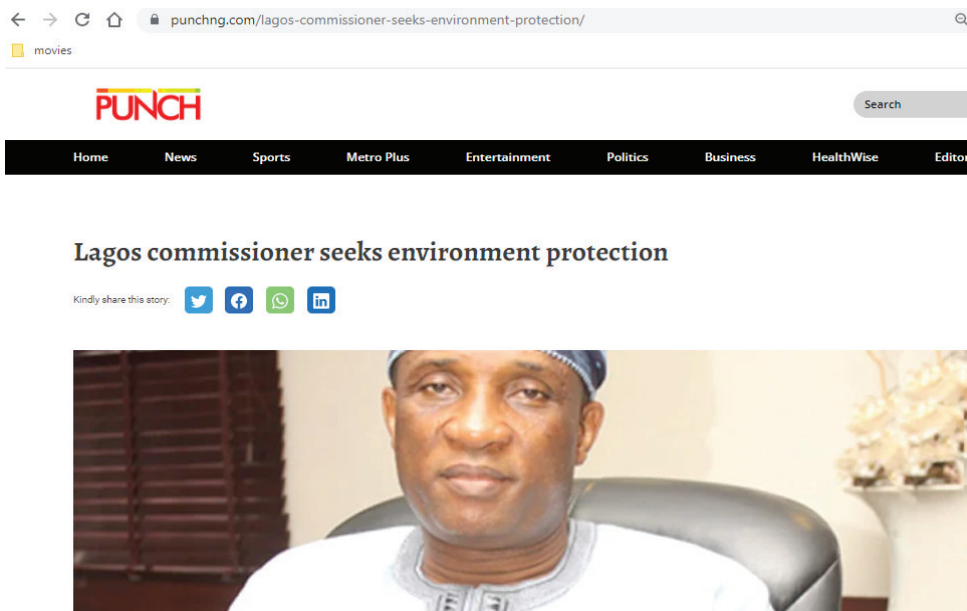
Figure 7a shows the image used in the environmental report about distributing seedlings to farmers to combat environmental degradation. The image then shows the impact of environmental degradation that may affect the area if economic trees are not planted to combat gully erosion. Figure 7b shows taskforce officers for environmental sanitation with goods impounded from defaulters. Most states in Nigeria designate a specific day, usually on a Saturday, for a statewide environmental cleanup exercise. Movement is usually restricted to members of the

public except those on essential duty. Defaulters risk being arrested and having their goods and property impounded if found loitering or doing business during sanitation hours. *Figure 7b* portrays what is being reported about the environment.

Research question four answered the themes discernable from the environmental reporting of Nigerian newspapers. The dominant theme was Information/awareness theme (58.12%). This can be attributed to the position of Nigeria being a developing country where most environmental actions are still at the awareness level rather than the implementation level. Governments, experts, and NGOs continuously proffer solutions to mitigate environmental concerns. The Health theme was also prominent, with about 11.11% of the stories. This was because of the impact of COVID-19 in 2020, and thus raised more environmental concerns and was captured in the news accordingly. Land pollution was featured (11.97%) mainly in stories about land pollution and solid waste management that plague most parts of Nigeria. The images used in these reports may not offer much insight into the story being reported as they are mostly pictures of politicians and experts mentioned in the report. *Figures 3 and 4* show examples of images used for themes of water pollution and air pollution, respectively. *Figures 8 and 9* show examples of Information/awareness theme and Biodiversity theme respectively.

Figure 8

An example of Information/awareness theme



Source: Popoola (2020)

Figure 9

An example of Biodiversity theme



Source: Ihua-Maduenyi (2019)

Comparing the themes with those in Nimala and Arul Aram (2018) where the three dominant themes were Climate change (27.8%), Biodiversity (25.9%), and Water scarcity (23.1%), the three most dominant from our findings were Information/awareness (58.12%), Land pollution (11.97%), and Health (11.11%). What the result indicates is that environmental reporting in Nigeria and India has a different focus. India is a major industrial hub and would thus be concerned about its climate change perception, which can affect its diversity. The impact of its growing population can be felt in the scarcity of resources such as portable water as captured in the reports. The press in Nigeria (as a developing country and a major exporter of crude oil) tends to be more focused on development communication of informing the public about government policies and programs regarding the environment, and as a member of the Organization of Petroleum Exporting Countries (OPEC), found pollution themes in the air (see *Figure 4*), water (*Figure 3*) and land (*Figure 7b*). The themes highlight the areas Nigerian media consider prominent for Nigeria.

Biodiversity and Climate change are global themes in environmental discourse but were found not adequately discussed in environmental news in Nigeria. What this study has, however, achieved is to show the important linkage between health and the environment in Nigeria. A dirty and polluted environment is unhealthy for human habitation and a threat to the ecosystem. This has been one of the cardinal points of Niger Delta agitators for holding

international oil companies who have over the years caused monumental damage to the flora and fauna, as well as the political landscape in the Niger Delta. The government in Nigeria with the return of democracy in 1999 created the Niger Delta Development Commission and later, the Ministry of Niger Delta to address some of the concerns of host communities against the activities of oil companies. While this may not solve the problem on its own, it is an important first step toward bringing the stakeholders to a round table of agreeing how best to tackle environmental concerns raised by the host communities.

Conclusion

The study investigated the images used by Nigerian newspapers to report environmental news. Stories from *Leadership* and *The Punch* newspapers were analyzed between May 1, 2019, to July 31, 2020. A total of 151 news about the environment were collected from both newspapers, from this number, 117 contained images showing that images were prominently featured in environmental reporting. One drawback of the images was the non-inclusion of source credits in nearly all the images used while many others were not captioned. Nigerian newspapers did not prominently make use of infographics in their reporting either.

Infographics could be maps and charts that summarize information on statistics of environmental impacts. Their non-inclusion is a drawback as it sends the message that environmental reporting is less scientific and more political. This may be the reason why the Information/awareness theme was the dominant theme in both newspapers analyzed. The images captured various scenarios in the environment from water pollution, air pollution, land pollution, biodiversity, and climate change amongst a host of other themes. A key insight from the results was the significance of the health theme in environmental reporting, showing the association between environment and health.

We believe that further studies are needed to understand the editorial process involved in image selection used in environmental news reporting and the motivations behind selecting images in the news. This could also explain why there were no entries recorded for the second and third categories of infographics based on Ghode (2012) classification. One of the limitations of this study was the use of only two newspapers from a large list of national newspapers in Nigeria. The findings provide a glimpse into the landscape of environmental reporting in Nigeria; future studies should include more newspapers to ascertain the consistency of the conclusions and generalize the results across the Nigerian newspaper landscape.

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