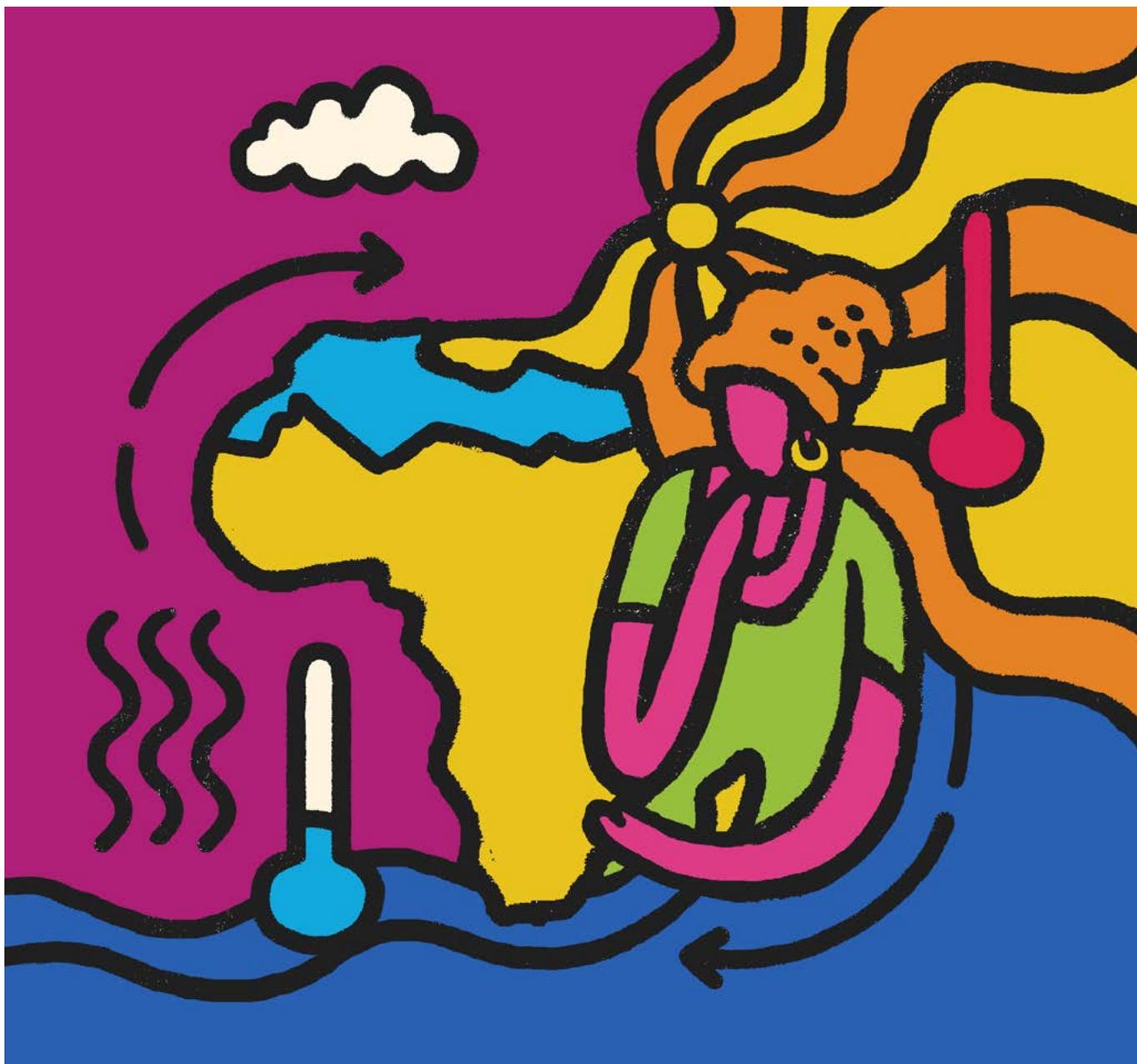


ASSESSING AND EVALUATING THE DOMINANT THEMES OF ONLINE CLIMATE CHANGE NEWS COVERAGE IN SUB-SAHARAN AFRICA TO ASCERTAIN THE PREVALENCE OF CLIMATE CHANGE SKEPTICISM

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INTRODUCTION

Climate Change

In defining Climate Change, the United Nations Framework Convention on Climate Change (UNFCCC) states that it is a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. Scientists believe climate change is caused by an increase in Green House Gases (GHG) emissions which negatively result in the warming of Earth's surface. This is a consequence of having high concentrations of carbon dioxide (Co₂), methane (CH₄) and nitrous oxide (N₂O) and the chlorofluorocarbons that trap heat.

The impact of climate change has been phenomenal as it is labelled one of the most critical challenges of the 21st century. Notable impacts of climate change include drought, floods, hurricanes, sea level rise, heatwaves and more, all of which have devastating impacts on different sectors of human livelihood. Developing countries, like those in sub-Saharan Africa (SSA), have felt the blunt of climate change in key sectors like agriculture, health, transportation, water, energy and infrastructure due to erratic rainfall, floods and other climate-induced disasters (TNC Malawi, 2021).

Climate Skepticism

There is, however, a group of skeptics or deniers of climate change who argue that climate change does not exist. According to skepticalscience.org, climate skeptics are against any proof that supports the position that global warming is man-made. They argue that there is no evidence for climate change, that global warming is a hoax, that there is no consensus on climate science and that rising temperatures are a normal phenomenon of the world. On the global level skepticism is advanced by industrial players who promote the debate that climate change is not real (Robbins, 2018). This has crossed over to political leadership in some countries, especially in the United States (US) where then-President Donald Trump pulled the US from the Paris agreement, according to the Nov. 4, 2020, BBC report "US formally withdraws from Paris agreement," by Matt McGrath.

Despite climate change being considered a polarizing topic in the West, there has been little research to assess the existence and levels of skepticism in the climate change discourse in sub-Saharan Africa (SSA).

Objective

This study seeks to establish the level of skepticism in the sub-Saharan Africa region by taking stock of what has been published in the online media. Further, the study assesses the dominant themes for climate change coverage in the region.

Climate Change and the Media

Media are the channels of communication that dispense messages in the form of voice, pictures and text to large group of people. This includes print media, such as newspapers, journals and magazines; electronic media, which includes radio, television and film; and digital media, which include websites, blogs and social media platforms. Media play a critical role of informing, educating, persuading and sometimes alerting the public about climate change. The media are therefore important for raising awareness and disseminating information (Shafer et al., 2014). More importantly, media have an agenda- setting effect such that the more the media cover an issue, the more important the public thinks it is (Mc Combs and Shaw 1972).

The other significance is that it is a forum in which various climate change responses are discussed and given legitimacy. In addition, the media provide a platform where experts, protagonists and antagonists articulate their positions and have them challenged. In case of differences, the media come in to explain on both sides of the argument (Robbins, D 2018). This open platform is the ideal medium to assess levels of climate change skepticism in SSA. It also provides the platform to determine the important themes that are covered regarding climate change.

Methodology:

This assessment has been undertaken through literature review of existing data and implementation of a qualitative approach that provided information on stories published online to assess climate change perception, opinions, skepticism and beliefs in SSA using Cornell University's Nexis Uni system and other search engines, such as Google.

Stories with climate change headlines were selected and reviewed. Stories with climate change content relevant to the study were then selected for further review and became part of the sample.

Assessment of the themes involved scrutinizing message framing in the stories that were reviewed. Most climate change communication narratives require that a story be framed to make climate change more than an environmental problem to connect its relevance to the audience. This is done by relating climate change impacts or effects on society with other topics, such as national security and human health, among others. Essentially, this is what has made climate change coverage complex as it affects broad sectors of human activities. These sectors are the themes the study seeks to establish in SSA.

Further, all the selected stories were scrutinized to find out how widely climate change is covered in SSA online media. The stories that contained skepticism arguments were selected for review. The numbers of such articles determined the study's depth. Additionally, news stories were analyzed from online news outlets selected from one state each in Eastern, Western and Southern Africa regions. The countries and the media platforms were randomly selected.

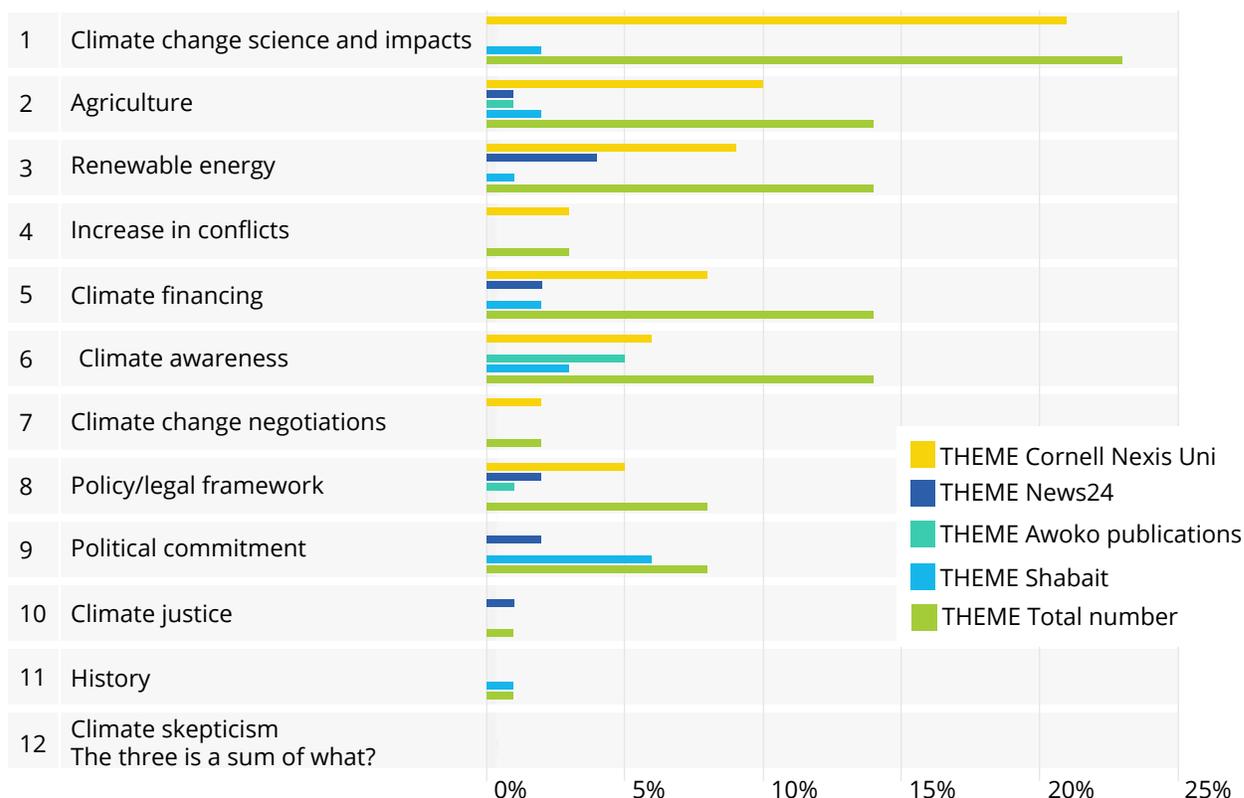
The Nexis Uni search returned a total of 250 stories published between 2011 and 2021 that appeared to address climate change perceptions, opinions, skepticism or beliefs in Africa. From this, 100 were identified as relevant to the study. A total of 60 stories were analyzed and assessed for the dominant themes and scrutinized for the presence of a climate skeptic component in the news coverage: 30 from Nexis Uni and 30 from randomly selected online news sources, with ten stories picked from each online source: South Africa (News24), Eritrea (Shabait) and Sierra Leone (Awoko online publications).

3.0 Findings:

Table 1. Findings for the dominant climate change themes covered in SSA

THEME	NO ARTICLES				
	Cornell Nexis Uni	News24	Awoko publications	Shabait	Total number
1 Climate change science and impacts	21	0	0	2	23
2 Agriculture	10	1	1	2	14
3 Renewable energy	9	4	0	1	14
4 Increase in conflicts	3	0	0	0	3
5 Climate financing	8	2	0	2	14
6 Climate awareness	6		5	3	14
7 Climate change negotiations	2	0	0	0	2
8 Policy/legal framework	5	2	1		8
9 Political commitment	0	2	0	6	8
10 Climate justice	0	1	0	0	1
11 History	0	0	0	1	1
12 Climate skepticism	Trace				3

Figure 1. Graph showing climate change dominant themes in Sub Saharan Africa



Very little climate skepticism.

In almost all the stories reviewed there is no mention of climate change skepticism. On the contrary, there is a consensus that climate change is real and happening in Africa. The major concern centers on how unfair it is that Africa is suffering some of the worst devastating effects of climate change despite contributing the least amount of carbon emissions in the world. Perhaps this is because the extreme climate-related events as presented by the media are already being experienced by African countries; if one faces the impacts associated with climate change, the probability of accepting the reality of climate change is likely higher.

Only three articles expressed some semblance of skepticism around climate change. However, the stories did not challenge the science of climate change or carbon emissions and their impact. All stories were from the Nexis Uni. The first one talked about the existence of climate critics and cynics but did not expound further on the position. The second one, which addressed findings from a study of 10 African countries, argued that God, not carbon emissions, cause global warming and that natural disasters are a punishment for sin. The third article reported on an attack on a climate skeptic – a nuclear physics expert — who was condemned for arguing against climate science and challenging the assertion that global warming is not anthropogenic.

The three stories constitute 5% of all selected stories for the study. This is 10% of the total generated from Cornell Nexis Uni, with nothing coming from online articles.

Dominant themes from the studies

From the 60 stories, the study established 12 themes that were apparent in most of the climate change discourse.

Climate change impacts

Almost all news stories collected from Cornell Lexus Uni expressed the importance of explaining the science of climate change and its various devastating impacts in SSA, with 21 of the 30 stories selected from Nexis Uni reflecting this theme. This indicates a 70% prevalence rate. The online platform only had 2 stories out of 30, for a 6.7% prevalence rate. In total, the study had 38.3% representation on this theme. This may be due to the newsworthiness of stories that convey the extent of climate change impacts, as focusing on impacts could make people more receptive to actions to reverse climate change.

Agriculture

Twelve news stories carried agricultural topics. The main issues involved reduced crop yields due to climate change and use of sustainable farming tools, such as climate-smart agriculture, as part of adapting to climate change. Of the 30 stories assessed from three online news publications, four had the agriculture theme, which is a 13.3% representation. Nexis Uni generated 10 stories with this theme, representing 33.3%. In total, the study identified 10% of the stories from the selected study sample with an agriculture theme.

Renewable Energy

Fourteen articles had clean energy or renewable energy as their theme, representing 23.3% of the stories reviewed. The issues raised included positions that renewable energy is secure, sustainable and healthy for the continent. This coverage may be driven by the fact that Africa has vast potential for developing solar, wind, geothermal and hydropower energy sources. Nine of the stories were from Cornell Nexis Uni, for a prevalence of 30%. The three online news platforms generated 5 stories, for 16.7% prevalence.

Climate Change Awareness

Fourteen stories carried a theme of climate change awareness, comprising 23.3% of the sampled material. This study determined that there is grave concern with climate change awareness and communication and media are challenged to communicate climate change and shape public opinion. Six of the fourteen stories (42.9%) pointed to the deficits of the media in effectively communicating the issue and effecting behavioral change in the populace, with governments also failing to educate the citizens on causes and effects of climate change. In a study by Afrobarometer, it was noted that 40% of adults, especially rural women and the poor, are unaware of climate change. One story even suggested that policy makers, activists and governments need to create more awareness and that climate change should be streamlined for easy understanding by many stakeholders.

Climate Financing

Fourteen stories tackled issues involving climate financing, representing 23.3% of the sample. The issues involved included an appeal for industrialized polluters to pay for the impacts of climate change and assist developing nations in their mitigation, i.e., polluters must pay. The sentiment expressed in this coverage is disappointment in rich nations for their lack of commitment to international agreements that would provide needed funds for mitigation. One story cites the Copenhagen Summit as an example. The articles also indicated that African nations want investment with domestic and foreign revenue to finance green growth agenda (Rwanda), subsidize the transition from fossil fuels to clean energy (Eritrea) and replace old polluting plants with renewables (South Africa).

Policy/Legal framework

Eight news articles addressed the topic of climate change policies. The study identified varied reasons for this coverage, with one being that African governments have now put in place climate change mitigation and adaptation policies. This is shown through publicity about National Action Plan and National Adaptation Plan launching ceremonies and publicizing signing of the Paris agreement (Eritrea). In one article, South Africa was challenged for setting weak targets under NDC to reduce GHG. There was even a call to have another law so that it supports the NDC policy's enforcement. Other articles focused on the need for countries to implement strong policies on revenue collection and deal with illicit financial flows so that funds are for sustainable development.

Political commitment

Eight news articles reported on the political commitment of heads of state or strides that government ministers are making to adapt and mitigate climate change impacts and attempts to reduce GHG emissions. This coverage mostly involved government officials outlining policies that will guide government in its climate adaptation drive. The Eritrea government indicated it is doing something and all countries should follow its example, with an invitation extended to the private sector and civil society to follow suit. Other articles followed the theme of climate change negotiations. This coverage indicated that Africa gets a raw deal in global negotiations and that once agreements are made, many processes must be completed before implementation, thus counteracting the sense of urgency around the continent's response to climate change.

Discussion

The findings of this study provided evidence of the complex nature of climate change discourse as evidenced from the dominant themes uncovered. Firstly, climate change skepticism is not rife in SSA. Only three stories on this topic were found in the study, and these were not straight-faced climate denial articles. One acknowledged that climate critics are there. But it fell short in identifying whether they are from Africa or elsewhere or articulating their argument. The other story explained that God is behind global warming, expressing a matter of faith and presenting no scientific arguments to challenge global warming. With African nations tied to their faith and belief in God, this kind of skepticism might warrant further exploration. The final story was a harsh response to a climate science critic. This response is proof that skepticism exists in Africa, but the coverage was very shallow. There may be a need to broaden the sample size and look for information in printed newspapers and digital platforms to widen the net. It may also be necessary to collect primary data through surveys considering that the focus was mostly on the impacts of climate change, not on the public's understanding of the issue.

The study also provided evidence that the topic is addressed using different sources of information and writing styles, ranging from traditional journalism to opinion. Online sources primarily carried hard news stories. There was only one opinion piece on human evolution and climate change identified in the three online news sources, compared to 29 hard news stories. However, the Cornell Nexus Uni sample included 27 opinion pieces, two hard news stories and one feature story.

Opinion articles were mostly written by subject matter experts who were driving a point for the audience to understand as it relates to climate change. These articles were typically well-researched papers that could be presented at conferences. They were mostly detailed as they advanced a position, be it on clean energy or sustainable agriculture. As a result, they needed to define climate change, its science and its impact in the framed narrative. This was in stark contrast with hard news stories from online news sources that went straight to the point without expounding on the subject matter. In contrast, hard news was typically very brief and quoted few sources. One example was a story about Presidents Ramaphosa and Macron meeting in South Africa. Although it fell under the general topic of climate change, the term "climate change" was only referenced once as one item to be discussed by the two leaders. If it had been an opinion piece it likely would have elaborated on which topics the two men were likely to discuss.

The lack of depth in news stories might be attributed to journalists themselves not being fully conversant in climate change issues. Their stories failed to provide context, explain background information or define basic terms like Paris Agreement so that issues are easily followed. It was also difficult to find articles on climate negotiations, yet many reporters from the region have attended meetings like the Conference of Parties (CoP). It appears many journalists do not follow the discussions closely, leaving pressing issues for the experts to enlighten the masses. This might be due to the journalists' lack of knowledge or lack of passion for climate change issues.

The study also brought to light varying degrees of interest in climate change by different countries on the continent. South Africa was more focused on renewable energy and concerns of not meeting its reduced carbon emissions target by 2030. Four of the 10 stories were on promoting renewable energy. Other stories addressed policy and climate financing with an eye toward reducing carbon emission and investing in clean energy. A good example is a story about shareholders taking Standard Bank to task to urge it to end financial investments in fossil fuel.

Eritrean stories leaned on showing political commitment in terms of steps that government is taking. Six of 10 stories promoted the government agenda. Since Shabait, the country's major news source, is housed in the Department of Information, it is no surprise that coverage focused heavily on politics rather than expounding on the impacts and effects of climate change on communities.

Coverage from Sierra Leone emphasized climate change awareness. Since that country is at the heart of coastal impacts, the media there are challenged to keep people in the know. This was expressed in the prevalence of communicating about journalist training and youth awareness initiatives as part of climate change awareness, with the goal of equipping journalists to do a better job.

The study also revealed that SSA media need to do more to effectively communicate climate change issues to enable ordinary people to understand the issue and its impact. Since climate change is still a new phenomenon and is open to some interpretation, reporters need to be more conversant in climate change science to report effectively.

Further, there were no environment or climate change sections in the online newsletters (News24, Awoko and Shabait) that were assessed. This indicates that SSA newsrooms have no specialized reporting and or regard for climate change as a critical subject. There is need for climate change related institutions to build partnerships with the media and build capacity of the media to understand climate related issues. Such an effort could make journalists more passionate about prioritizing climate change and other environmental concerns as urgent topics.

The study also revealed that agriculture, renewable energy and climate awareness enjoy a similar level of prominence coverage in the SSA region. The likely explanation is that agriculture is the life blood of Africa and employs many people. It is therefore going to attract media coverage once there is a known or perceived threat to agricultural enterprises, food production and security. Finally, climate financing is taking center stage since it has the potential to bring investments in the region's much longed-for industrial development by removing reliance on fossil fuel energy, especially through support for clean energy investments. Likewise, clean energy is perceived as the secure, healthy and sustainable future for energy generation, toward which the world is advancing.

Limitation of the study

This study was done using only online newspapers, which limited the type of stories accessed. Secondly, the stories were English language only. SSA has many French-speaking and two Portuguese-speaking countries. It could be that some relevant stories were not reviewed due to the language barrier.

Conclusion

The study showed evidence of a very low prevalence of climate change skepticism in sub-Saharan Africa based on an assessment of the news articles selected for review. The sample size was small; results might have been different with a larger sample. To gain a more accurate sense of the prevalence of climate change skepticism in the region, it could be ideal to carry out a qualitative survey to ascertain the views of environmentalists, policy makers, activists, journalists and ordinary people in the rural areas.

Further, the study identified dominant themes for covering the issue in the SSA region. This attests to the diverse nature of sectors interacting with climate change and stresses the importance of having the subject mainstreamed in various government policies and sectors. However, there is a considerable gap on climate change information flow. Communicating climate change has been a challenge. Rectifying this requires communication interventions that go beyond awareness messages that simply state climate change is real and happening now. Coverage needs to affect people's attitudes and provide hope so that citizens can participate in the mitigation and adaptation measures that are being championed to address climate change and its impacts.

To communicate well, media personnel also need progressive capacity building to help them understand the science of climate change and its dynamic nature. This training should be conducted for both reporters and editors. This is key as the media are the main avenue to reach all stakeholders, including policy makers, opinion leaders, the illiterate, smallholder farmers and poor women in rural areas who are still not aware of the phenomenon.

That aside, there is also a need for deliberate communication campaigns on climate change to increase awareness levels.

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