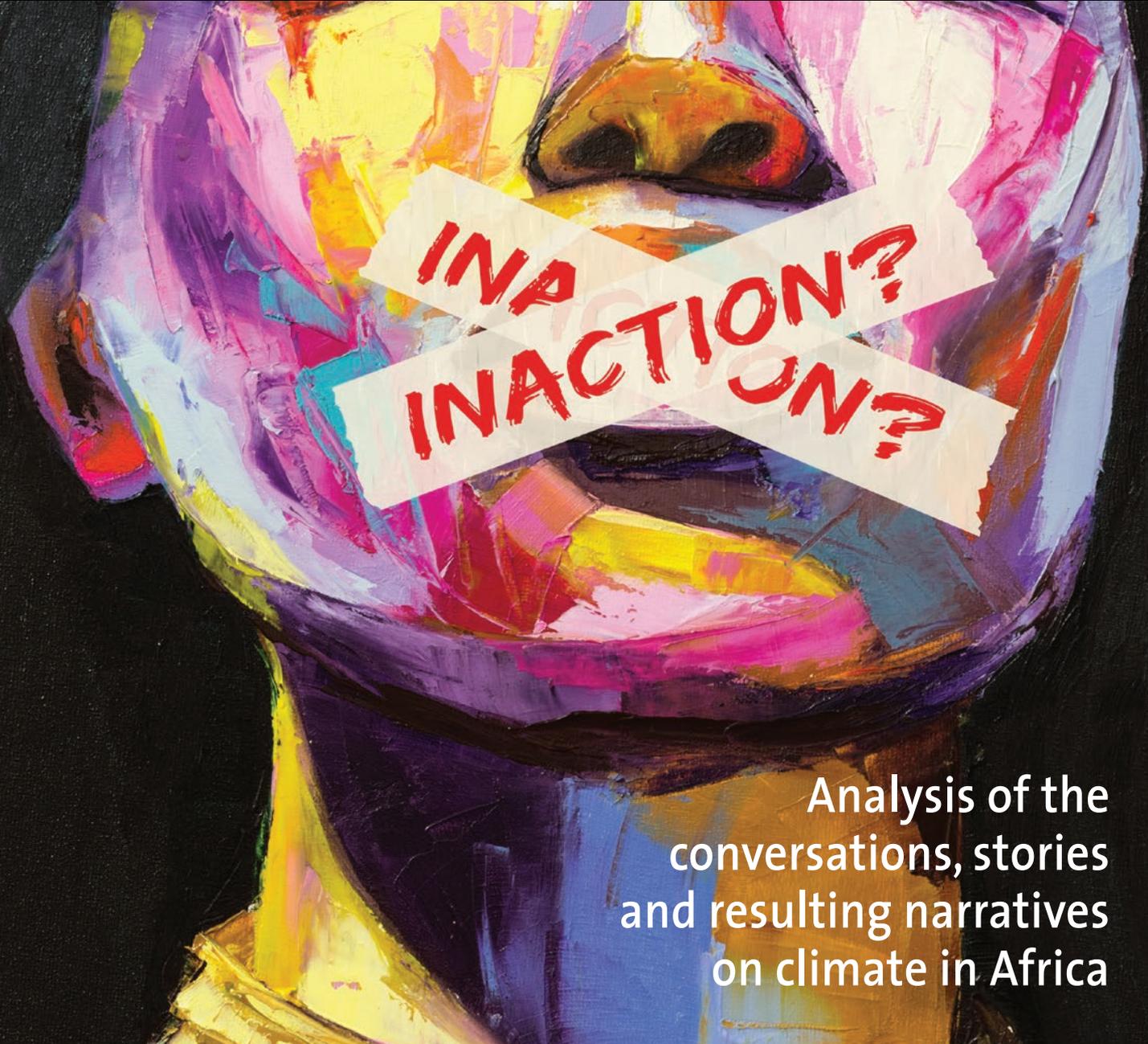


Climate Change in Africa

Are Africans sleepwalking to disaster?



INACTION?
INACTION?

Analysis of the
conversations, stories
and resulting narratives
on climate in Africa

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About this series

The ANF *Data Analysis Briefing Series* draws together data from Google searches, online mainstream news sources and Twitter to analyse the stories and underpinning narratives circulating within Africa and about Africa on a thematic basis.

About Africa No Filter

Africa No Filter is a donor collaborative that is working to shift stereotypical and harmful narratives within and about Africa. Through research, grant-making, community building and advocacy, our objective is to build the field of narrative change-makers by supporting storytellers, investing in media platforms and driving disruption campaigns. The donor collaborative is funded by Ford Foundation, Bloomberg, Andrew W. Mellon Foundation, Luminate, Open Society Foundations, Comic Relief, the Hilton Foundation, the British Council and the Hewlett Foundation.

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“ In 34 African countries, 4 in 10 respondents said they were “not familiar” with the concept of climate change. But the survey revealed a deeper information issue. Only about 28% of Africans were “climate change literate. ”



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Executive summary

To many in the developed world, Africa's participation in climate change is summarised in the BBC article, "How Africa will be affected by climate change", which asks, "Is Africa sleepwalking into a potential catastrophe?"¹

In international climate discussions, Africa tends to be framed at one of two ends of the narrative spectrum. In the "Africa as a victim" framing, we are constantly reminded that Africa will be the hardest hit continent, with the impacts of climate change exacerbated by high levels of poverty and the population's predilection for cutting down trees and extracting coal and oil. These stories use images of victims to pull on the heartstrings. They show fishermen with no fish, farmers with no crops, and neither with solutions to their predicaments.

At the other end of the spectrum, the "Africa as a protagonist" framing centres on big money deals and high-level meetings attended by grey-suited politicians and businessmen. The focus is on renewable energy projects, carbon taxes and climate funds. In this framing, Africa is painted as an active agent, although stories are still largely told through a lens that shows rich countries trying to help poor countries and poor countries getting more belligerent in their demands.

To better understand the conversations, stories and resulting narratives around climate change in Africa, this quantitative

study: carried out a literature review of academic writing on the subject; and compared online media from mainstream African news sources, conversations on Twitter, and searches on Google, between October 2020 and September 2021.

In the media and on Twitter, the top stories about climate change covered the same key countries: Kenya, South Africa, Nigeria, Madagascar, Ghana and Uganda. At the time, Madagascar was receiving a lot of media attention, as the country was experiencing severe drought and famine.

The general conversations on Twitter around climate change tended to focus on tensions between Africa and Westerners (sometimes with racial content). They were largely driven by non-African institutional accounts – development agencies that included Greta Thunberg News, or international news agencies.

Ironically, we found that the top individuals tweeting about climate change in Africa were not Africans. Many African activists we identified were either not tweeting at all, or very little. Those who were tweeting a fair amount were mostly retweeting content from the Global North, especially those of Greta Thunberg, whose outsized influence on global climate conversations is reflected in Africa. The data shows that, to change the dominant narrative about African action on climate change, Africans need to engage more fully in the debate.

On the next page are some of the key insights from the report.



Key insights

1. Top organisations tweeting about climate change in Africa are likely to be NGOs:

Both African and international NGOs are tweeting about climate change and Africa; for example, on the continent Climate Story Lab Africa (@CSL_Africa), Future Climate for Africa (FCFA) (@future_climate), and Greenpeace Africa (@Greenpeaceafric) made a cumulative 311 tweets over the five months during which we gathered Twitter data .

2. Top individual tweeters on climate change in Africa are unlikely to be African:

Few of the individuals tweeting about climate change in Africa are African, showing that narratives about Africa and climate change are not driven by Africans.

3. African climate change activists seldom tweet:

While we were not able to develop a definitive list, we identified 41 well-known climate change activists. However, only 15 of them were on Twitter and these were seldom tweeting. Those who did tweet more regularly, often retweeted Western stories, especially from Greta Thunberg.

4. Local climate change events are more dominant than international events in climate change news in Africa:

Although previous studies have shown that media coverage of climate change increases around big international climate change events, our study found that increased media coverage of climate change in Africa was associated more with local events, which indicates that African climate change events are garnering media attention.

5. Narratives about climate change vary from one country to another:

Articles about climate change in Madagascar were highly stereotypical and perpetuated disaster narratives, focussing on famine

and implying that most previous famines in Africa were caused by conflict. Articles about climate change in Kenya were evenly split between high impact “disaster news” and mitigation efforts. Media coverage of climate change in South Africa focussed on government meetings on climate change, but did not report on anything practical emerging from the meetings. Coverage of climate change in Nigeria was varied, and included activism, government activities, international meetings and high impact “disaster news”. Coverage of climate change in Ghana was more positive, focussing mainly on mitigation efforts and actions being taken to tackle climate change.

6. The countries most highlighted in tweets about African climate change (Kenya, South Africa, Nigeria, Madagascar, Ghana and Uganda) are similar to those covered in media from mainstream African news sources, albeit in a slightly different order:

This connection points to the ongoing role of mainstream media in defining the African narrative.

7. Geopolitical and racial tensions dominate tweets by individuals on climate change in Africa:

Many of the tweets about climate change by individuals showed contestation between Africa and the West about who is responsible and who should take action – often with racial components to the tweets. This suggests that a “blame game” is more prevalent than action, and racism is strongly prevalent in the kinds of narratives perpetuated about Africa.

8. Disaster tweets are prevalent:

Apart from the tweets described in point 5, many of the tweets on climate change in Africa emphasised disaster – especially famine in Madagascar, but also fires in Tunisia and Algeria.





1 Introduction

In a 2019 Afrobarometer² survey of over 45 000 people in 34 African countries, 4 in 10 respondents said they were “not familiar” with the concept of climate change. But the survey revealed a deeper information issue. Only about 28% of Africans were “climate change literate”, in the sense that they also associated climate change with negative changes in weather patterns and recognised that human activity plays a part in these effects.

ANF undertook this study to understand storytelling about climate change in Africa, and to establish whether it is feeding existing stereotypical narratives about the continent, or whether it is showing Africans as active agents in global climate change policymaking and mitigation.

According to previous research, even though climate is a pressing issue it is “often accorded less importance in Africa than more

immediately pressing socioeconomic issues such as unemployment, crime and poverty”³ – especially in the Global South. According to Google Trends data, relatively few people on the continent are actively searching for information about the issue. In August 2021 the most searched term in 13 African countries⁴ was “jobs”, implying that climate issues may not resonate with people here. Furthermore, there seems to be a dearth of accurate information and it has been argued that climate journalists do not understand climate science well enough to report effectively.⁵

However, Africa has long been part of climate change conversations, albeit that of all continents, Africa is regarded as the least to blame for climate change.⁶ This study therefore explored the narratives around climate change, what the key conversations are and who is driving them. We also sought to address key questions arising from the literature review and note any other features of climate change coverage in mainstream media. Further, we sought to help fill the gap in research related to conversations around climate change on social media (specifically Twitter).

2 Literature review

Studies of mainstream media coverage of climate change have mostly focussed on Western countries and have typically found that coverage “tends to be too sensational, technical or abstract to help people make connections between their everyday actions and impending long-term global changes”.⁷ Much of the existing African academic literature on the topic has focussed on Nigeria and South Africa,⁸ so this literature review is biased in that direction. However, we also found academic literature on coverage of the topic in Zimbabwe, Uganda, Namibia, Kenya, Ghana and Tanzania. We found only one article – based on a South African study – that explored how climate change in Africa was discussed on social media. The article suggested that Twitter dramatised climate change and focussed on political, economic and environmental stories.⁹

2.1 Common themes

Overall, the common themes emerging from the literature review are that, in Africa, media coverage of climate change is episodic, generally focussing on disaster stories or linking coverage to international events. The media seldom shows how countries respond to climate change, except in the case of Tanzania, and one Kenyan newspaper – *The Standard* – that had several articles focussing on renewable energy.

Nigeria

A 2021 four-country of media in Nigeria, Australia, India and the US study found that none of the three most-read English newspapers in Nigeria played the blame game over the course of 2019-2020; articles

typically argued that all countries are equally responsible for adding to and tackling climate change.ⁱ This is a shift from 2009 media reports, in which Nigeria placed the blame for climate change on developed countries;¹⁰ in particular, Nigerian media pointed out that these countries were failing to make adequate resolutions to slow down climate change and called for urgent action. The study also found Nigerian coverage was typically linked to specific climate change events and relatively low the rest of the time, even though reports often included the words “crises,” “emergency” or “urgent”.

Zimbabwe

A 2021 study of columnists in two Zimbabwean newspapers argued that the columnists used their positions to decipher climate change and call for action.¹¹ The columnists criticised the Zimbabwean government for bullying climate activists and misusing carbon tax revenue; but they also criticised international processes for failing to implement a climate fund to support developing countries. The contrasts between the studies of media coverage of climate change in Nigeria and Zimbabwe, illustrate that “[a]lthough climate change is a global phenomenon...distinct national constructions of the issue are possible”.¹²

South Africa

Another four-country study of media in Germany, India, South Africa and the United States, also done in 2021, found that media mainly covered climate change when linked to specific events; for South Africa, these were COP21 and Fridays for Future.¹³ Other studies of climate change coverage in South African media found that media focus was episodic and focussed on impacts¹⁴ or on international events and (failure of) agreements; and often used only Western sources. However, coverage did refer to national government policies and mitigation efforts.¹⁵ The studies found

i. According to the study, the other three countries’ media – Australia, India and the US – were more likely to point fingers.

that South African media barely showed how South Africans were actively responding to climate change. The framing of the issue was found to be much the same in mainstream press coverage, online journalism and social media coverage of climate change: focussing on specific events and on the politics of failed agreements, and barely touching on local issues.¹⁶

Uganda, Namibia and Kenya

According to a 2013 study, climate change coverage in Uganda tended to focus on “land, freshwater, atmosphere, forests, biodiversity, wildlife, fisheries, waste disposal, wetlands, urban areas and disasters” and used scare tactics.¹⁷ Editors argued that the issue was not of much interest to its audience, so it received very little attention, and featured only in articles about other topics such as floods or crop failures. Coverage in Namibia also used “alarmist repertoires”, focussed on foreign events and relied on reports from foreign news agencies.¹⁸ In Kenya, coverage also focussed on international events¹⁹ and “disaster stories”,²⁰ but mitigation stories were also prevalent, for example showing readers how to use more environmentally friendly approaches.²¹ One Kenyan newspaper, *The Standard*, was also found to cover many stories on renewable energy.²²

Ghana

In the past, the Ghanaian press has been criticised for low coverage of climate change.²³ However, insofar as coverage existed, the core focus was the impact of climate change

on agro-forestry; flooding and food security; poverty; and the country’s economy and ability to achieve development goals.²⁴ Problematically, the stories also tended to focus on the international action required to halt climate change, rather than the potential of local actions to mitigate climate change.²⁵ However, coverage also changed over time – from representing Ghana as a victim to reporting on “commitment from policymakers to address the problem with more urgency”.²⁶ This research also found that the Ghanaian media also expressed concern that Ghana’s emerging oil and gas economy might turn the country into a net emitter of carbon and thus a more major contributor to climate change.

Tanzania

A study of climate coverage in Tanzania was rather more optimistic, showing a steady increase in the number of stories and a wide range of stories compared to media studied in other African countries.²⁷ Articles about the impact and local adaptations to climate change, weather patterns, government climate change policies and strategies (especially financing and alternative energy), how politics, policy and economy are intertwined in climate change, climate change as related to cultural and religious issues, as well as high profile international events and agreements.²⁸ Importantly, in covering local adaptations and strategies for tackling climate change, Tanzanian media underscores climate change as a key issue for Tanzanians; in the other studies of African media coverage, local action was barely mentioned.





3 Methodology

Using quantitative data gathering techniques, we analysed the kinds of stories about Africa and climate change that were published, using media from mainstream African news sources, and the conversations about African climate change that took place on Twitter.

3.1 Key questions

The overall focus of the study was to identify: the content of articles and tweets (including text and images); who was speaking; and whether coverage coincided with particular events.

Based on the literature review, we explored whether mainstream media:

- Were too sensational, technical or abstract;
- Apportioned blame;
- Only quoted international figures;
- Only covered climate change in Africa when it coincided with specific international actions or climate change events, such as the G7 Summit on 11–13 June 2021;
- Only focussed on climate change impacts, or whether media reports included African agency in terms of adaptation and mitigation efforts, and/or government policies;
- Provided the same kind of coverage of all the countries in this study (focussing on Kenya, South Africa, Nigeria, Madagascar and Ghana), or whether there were marked country differences in coverage.

Regarding social media, and based on Bosch's²⁹ study, we examined whether both social media and mainstream media covering climate change dramatise political, economic and environmental stories and occur mostly around specific events.

3.2 Data collection

Various quantitative data collection methodologies were used as follows:

1. To understand what climate change questions Africans are concerned about, we analysed Google search trends to identify where in Africa most people were searching for climate information and what type of information they were searching for.
2. To understand mainstream media narratives about Africa and climate change, we collected 363 articles written in English, which had been tracked by GDELTⁱⁱ from African mainstream news sources between 1 October 2020 and 31 September 2021.ⁱⁱⁱ Then:
 - a. We identified the top sources disseminating these news articles, the article frequency and relationship to specific events.
 - b. We identified the top countries mentioned in the articles.
 - c. We selected the top five countries identified in the articles (Kenya, South Africa, Nigeria, Madagascar, and Ghana), randomly sampled 20 articles about each country and analysed the frames used in the headlines.
 - d. In those same five countries, using R-programming language, we identified common phrases of five words occurring in media about climate change in relation to each country. Removing duplicates or phrases that overlapped in one sentence, we then analysed the top 10 phrases per

country, filtering out overlapping phrases in the same sentence.

3. To understand what conversations Africans were having about climate change and who was driving those conversations on social media, we downloaded tweets written between 1 May 2021 and 30 September 2021 containing the terms "climate" and "Africa", or "climate" and any of the 54 African countries. We then analysed:
 - a. Who had tweeted the most about climate change, broken down into organisations and individuals; and
 - b. Which tweets had been retweeted most often, and the frames used in these tweets.
4. Although this data collection was not definitive, we tried to find the names of well-known African influencers and activists working on climate change, by looking at international media sites and blogs of development organisations covering climate change. We also used Google and the search terms "climate activist" and "Africa", or "climate activist" and the names of each of the 54 African countries to identify climate change activists in all African countries, although in most cases we were unsuccessful. Regarding those we did find, we then examined:
 - a. Whether the activists had Twitter accounts, and, if so;
 - b. How often they shared items about climate change; and
 - c. What the messages were in the items they shared.
5. Lastly, we:
 - a. Analysed all the different data sets to identify common or disparate themes in the data;
 - b. Identified gaps in the messaging; and
 - c. Explored the implications for the African narrative on climate change.

ii. Supported by Google, GDELT monitors the world's broadcast, print, and web news in every country in over 100 languages, and identifies the people, locations, organisations, themes, sources, emotions, counts, quotes, images and events, creating a free open platform for computing on the entire world.

iii. Hereinafter referred to as "mainstream media articles"

4 Data findings

The data findings consist of four sections: the first looks at the Google searches about climate change being made from specific African countries; the second section focuses on mainstream media coverage; the third section focuses on tweeting activity; and the final section looks at climate activists' using Twitter.

4.1 Google searches related to climate change

Of the 41 countries where Google searches related to climate change were recorded from 1 October 2020 to 30 September 2021, nine were African countries (see *Figure 1*). For those searching from the nine countries, the climate change issues of concern were as follows:

- Zimbabweans, who carried out the most climate change searches, wanted to

identify the leading effects of climate change.

- Tanzanians wanted to understand the physical impacts of climate change.
- Ethiopians also had a high number of searches, with the main theme being around educational assessment but we could not establish the meaning of this term in relation to climate change.
- Zambians were concerned with how the climate is changing and the reasons for variability.
- Ugandans were concerned about the impact on agriculture.
- Ghanaians' searches focussed on famine.
- South Africans, Kenyans, and Nigerians all focussed on the causes of climate change/global warming.

Significantly, none of the top searches was about how people could tackle or mitigate climate change; the focus was mainly on its impacts and causes. This suggests that, in general, Africans are still wanting to understand the problem of climate change, rather than showing agency around solutions.

Figure 1: Top Google search topics by African country, 1 October 2020 to 20 September 2021

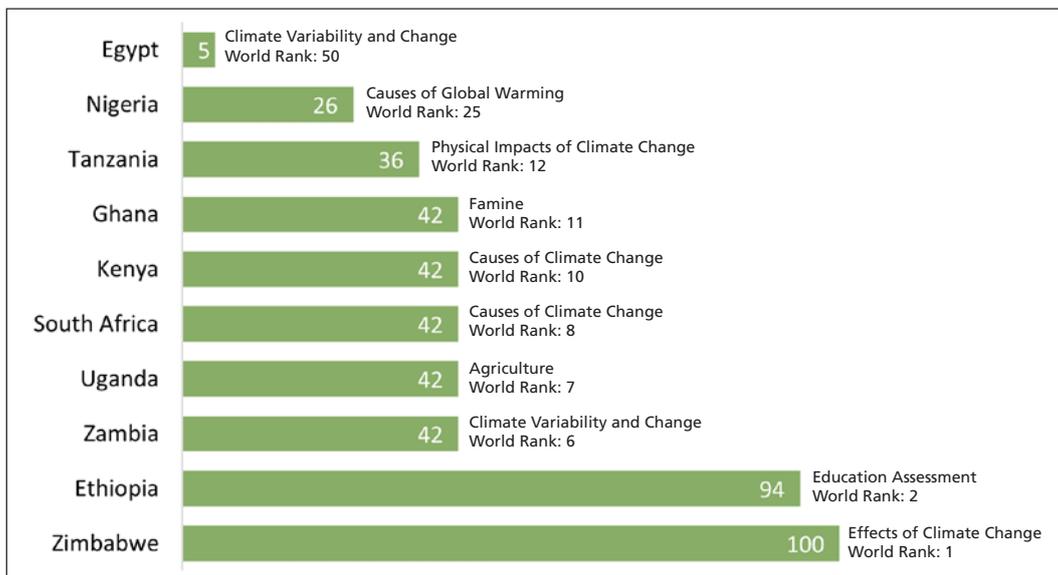
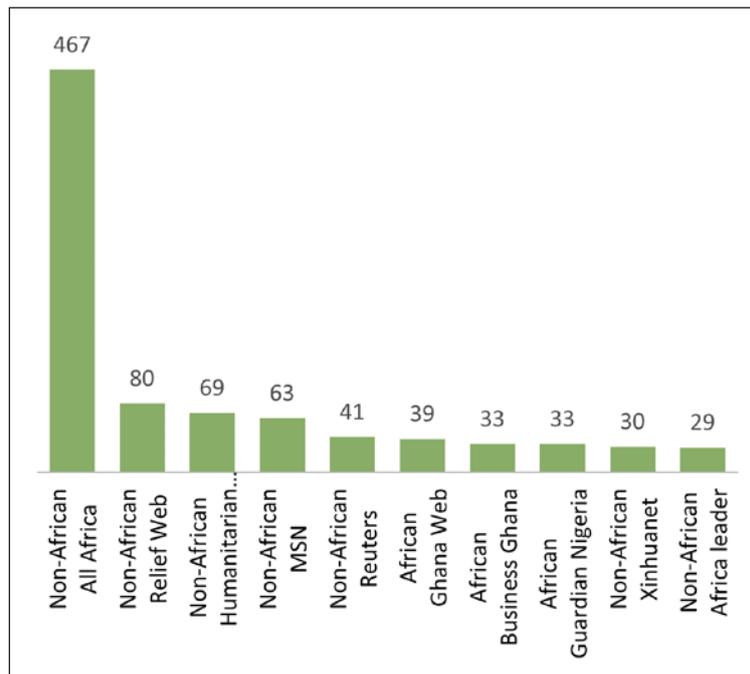


Figure 2: Top ten media outlets, 1 October 2020 to 30 September 2021



4.2 Mainstream media reports on climate change in Africa

In this section of the report, we sought to explore how the mainstream media were reporting about climate change in Africa, including: the top online media outlets; countries mentioned; patterns in frequency of coverage; and emerging narratives (in terms of headlines, articles, and key phrases).

Top online media outlets on climate change

We found that among the top 10 disseminators of stories about climate change on the continent, only three were based on the continent (*GhanaWeb*, *Business Ghana* and *Guardian Nigeria*), and they had just a few articles over the year. Most (467) stories were being shared by the US-owned news aggregator site, *allafrica.com* (see *Figure 2*). The next main organisations sharing stories are from the development sector, i.e. *Relief Web* (80) and *Humanitarian News* (69). However, because most of the stories came

from an aggregator site that draws its articles from African print and online media, it was difficult to establish the origin of the stories through data mining. This made it difficult to identify the diversity of voices contributing to the African climate change narrative and to establish the extent to which the narrative is driven by African voices.

Countries mentioned in relation to climate change

Of the 2 303 climate change articles identified between 1 October 2020 and 30 September 2021, the bulk mentioned Kenya (325) or South Africa (247) (see *Figure 3*). While the top three countries were expected, since they frequently appeared in our data as the most prolific producers of media, Madagascar was a surprise because it is a small country, with very little data. On digging deeper, we found that Madagascar was experiencing a severe drought and famine, which were linked to climate change; hence the country had become highly salient in the news.

Figure 3: Top countries covered in articles about climate change in Africa, 1 October 2020 to 30 September 2021

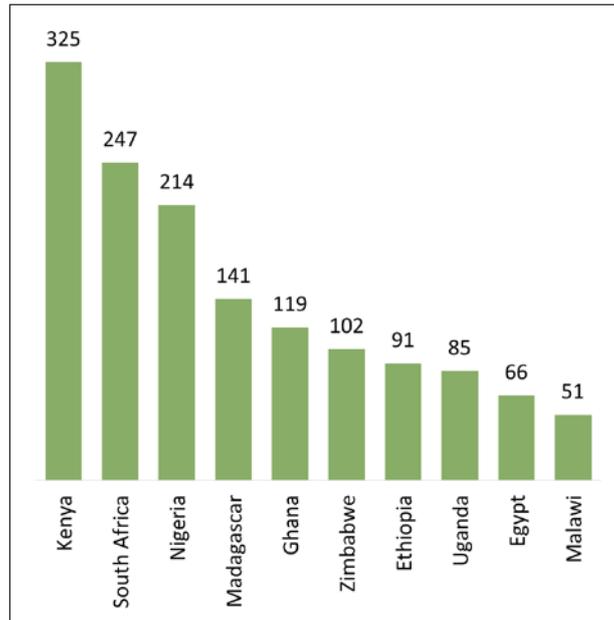
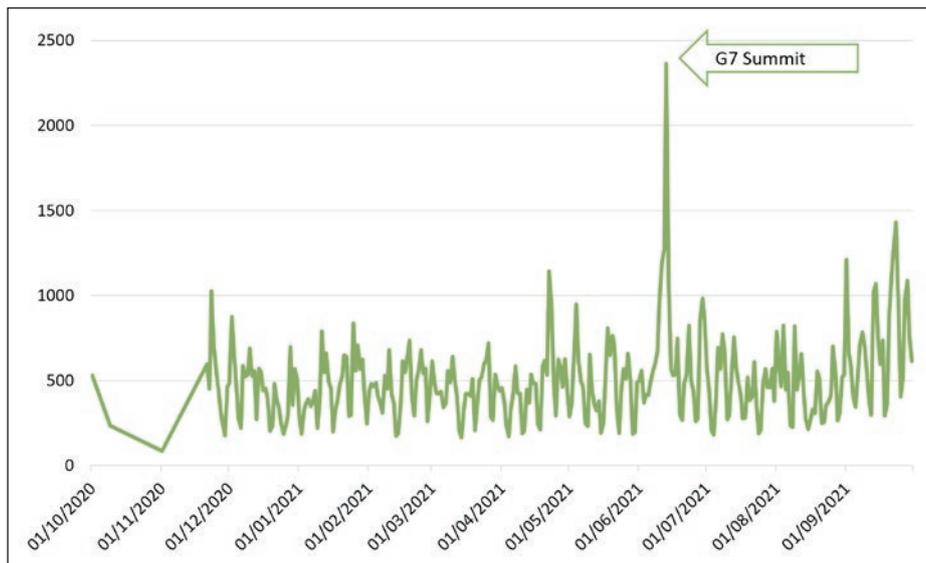


Figure 4: Number and timing of mainstream articles on climate change in Africa, 1 October 2020 to 30 September 2021



Based on *Figure 3*, we then selected the top five countries (Kenya, South Africa, Nigeria, Madagascar and Ghana) to explore data in more depth. We started with an analysis of how regularly the topic of climate change was covered and when coverage peaked.

Frequency and timing of climate change articles

Mainstream articles mentioning “Africa” and “climate” peaked from 11 to 13 June 2021, at the time of the G7 Summit, where climate issues were high on the agenda (see *Figure 4*).



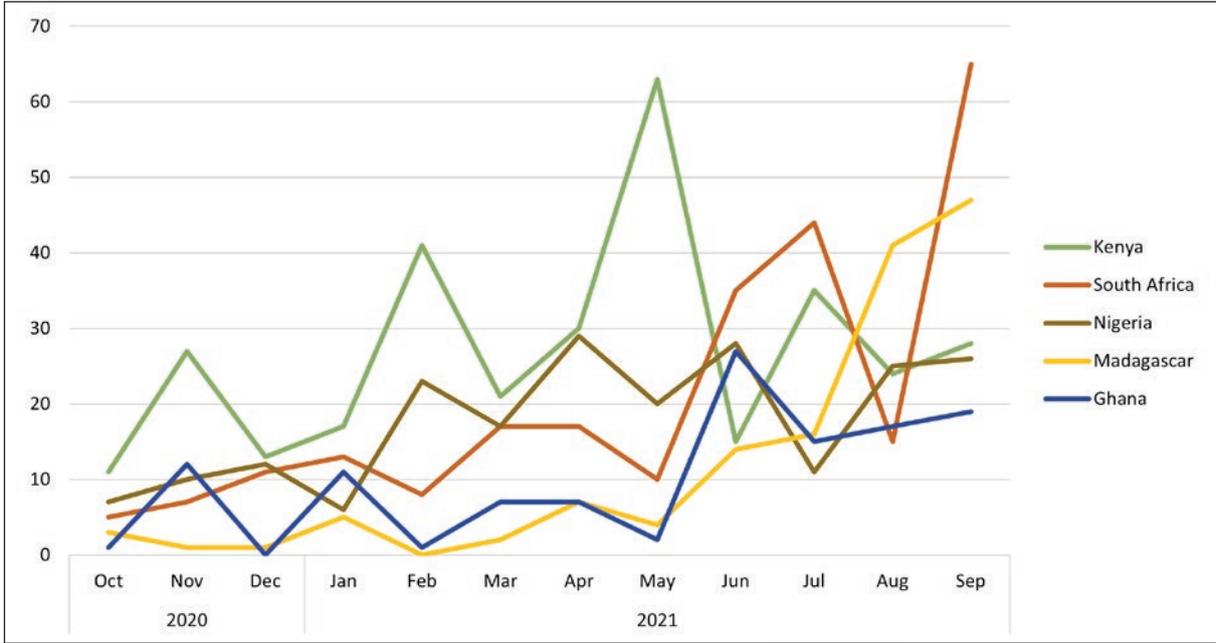
This seems to confirm previous studies,³⁰ which found that coverage in African media was episodic and linked to specific international events.

However when we looked at the data on a country-level, peaks for the top five countries did not relate to the G7 Summit (see *Figure 5*). For Kenya, the peak in climate change media occurred on 28 April 2021 when President Uhuru Kenyatta held talks with the US Secretary of State, Antony Blinken. In South Africa, coverage increased around the G7 Summit, but the peak was related to its cabinet adopting the Nationally Determined Contribution (NDC) to reduce emissions, on 22 September 2021, and the upcoming tabling of the 2021 Climate Change Bill to parliament subcommittees (planned for 1 November 2021). In Madagascar, increasing media concerns about drought and famine are reflected in the rapidly climbing figures. While Nigerian coverage fluctuated within a limited range, small peaks were discernible on 23 April 2021, when President Buhari spoke at the

G7 Summit, and on 22 June 2021, when Vice President Obasanjo spoke about defunding a gas project. In Ghana, the peak was related to the reaffirmation of Ghana’s partnership with the UK around climate adaptation and resilience, ahead of COP26.

The data for Kenya, South Africa and Madagascar was clearly episodic, as stated in previous academic literature;³¹ however, it was more closely linked to local events than international events. Previous studies argued that in Nigerian coverage of climate change, event-based reporting was very high, forming 66% of total articles;³² however, our study shows Nigerian coverage to gradually rise in 2020 and remain fairly steady (20 to 30 articles across 2021, except for July). Therefore, coverage of climate change seems to be becoming a key feature of Nigerian media articles, rather than based on specific events. The deviations from the findings of previous studies may be due to changes over time in types of coverage, with much more focus on local events.

Figure 5: Number and timing of mainstream articles on climate change per country, 1 October 2020 to 30 September 2021



Climate change in Africa headlines and articles content

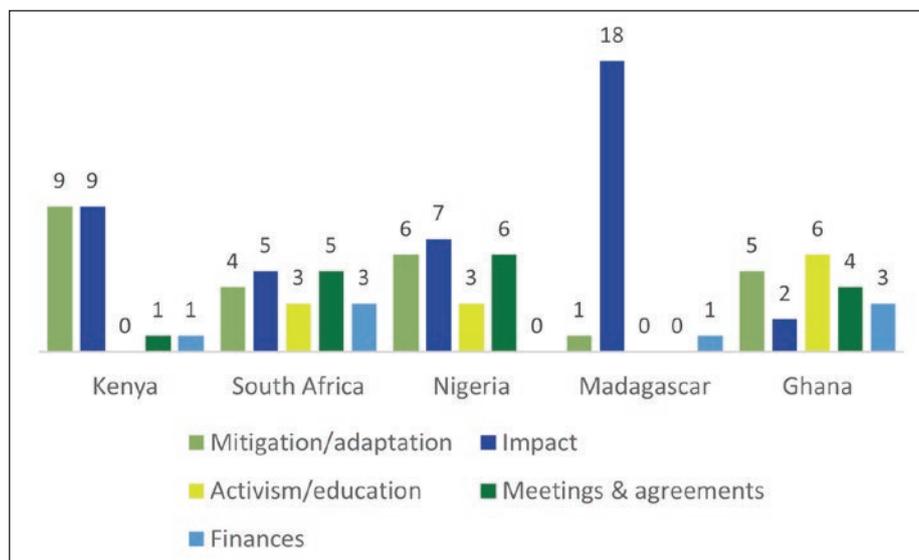
Based on 20 randomly selected articles (and their headlines) from mainstream media for each country, as shown in *Figure 6*, the most common frames identified across the five countries were:

- **impact** (41) – how climate change was affecting the country;
- **mitigation/adaptation** (25) – specific projects being undertaken, planned or proposed in each country to limit the impact of climate change or adapt to it;
- **meetings and agreements** (16) – government-level events (either intra-government or inter-government);
- **activism and education** (12) – efforts individuals or organisations were making to tackle and educate people about climate change; and
- **finances** (8) – discussions around how to fund climate change mitigation and adaptation efforts, or around specific sums of money that had been allocated.

While much of the previous research on African media coverage on climate change found that most coverage was about impact, our data shows that this is true only in the case of Madagascar. While impact was covered by media headlines for the other countries, it did not dominate coverage (23 articles out of 80 across the other 4 countries), and Ghana hardly covered impact at all. This suggests that climate coverage in African media is changing over time, with more focus on activities to address climate change, including planned or ongoing mitigation and adaptation projects, activism and education, and government meetings or events to discuss climate change plans.

In headlines related to Kenya, our research found that equal weight was given to impacts and mitigation/adaptation. Articles that did focus on impact prophesied doom in headlines such as, “As climate change threatens Kenyan tea, millions of workers seen at risk”;³³ “Like the speed of the wind’: Climate change causing Kenya lakes to rise

Figure 6: Frames identified in 20 randomly selected articles (and headlines) in mainstream media sources per country, 1 October 2020 to 30 September 2021



Case Study 1: Coverage of Kenyan seed science in Chinese media³⁷

Disappointingly, even when Kenya has made progress on climate adaptation, news coverage in one article by a Chinese media house focusses on the negative, for example, the stress Kenyan climate scientists are under (the headline “Kenyan scientists in ‘race against time’ to develop climate-smart seeds” is followed by several paragraphs presenting scientists’ woes). The narrative in this article dwells on crisis, even though the last sentence of the article states: “Elizabeth Magero, a plant inspector from the Kenya Plant Health Inspectorate Service, said that farmers in the east African nation would from next year start growing a number of new climate-smart maize seeds as some research is at an advanced stage”. Therefore, even when Kenyan scientists had a good story to tell, the media told it in a negative way. As such, despite much effort put into solutions, the narrative emerging from Kenya generally remains one of crisis.

to destructive highs”;³⁴ and, “Kenyan health experts say climate change fuelling disease burden”.³⁵ The shift towards articles on mitigation and adaptation is encouraging in that it points to solutions, even though these solutions had not always been agreed, financed and implemented; for example, an article headline in September 2021 announced that the Trans Nzoia county government had unveiled an “ambitious plan” to tackle climate change;³⁶ in the detail of the article, however, it becomes clear that finances for the project had not yet been secured, and implementers would need to persuade local communities

to use resources differently, to allow the environment to recuperate. The discrepancy between the headline and the article points to the media putting an emphasis on climate action, over and above planning.

Even though the Trans Nzoia story and the one in the Chinese media are not entirely positive, media coverage of Kenya has an increased number of stories highlighting adaptation and mitigation action in Kenya (as shown in *Figure 6*). By contrast, the South African narrative is more disabling.

Case study 2: Media coverage of South African government meeting³⁸

An allAfrica.com article headline, “Minister Barbara Creecy – resilience, gender and global climate action round table” puts forward the South African government’s position, but the content focusses mainly on climate change impacts, especially on women. For example, Creecy argues:

The different expectations placed on women in these communities with regards to responsibilities such as childcare, and tending crops meant that they felt overburdened when compared to their male counterparts, who are of the same social class.

She then outlines that South Africa is committed to action on climate change but

The principle of differentiated responsibility is important...technical and financial support for developing countries’ adaptation and mitigation strategies is crucial.

The narrative in this article illustrates that the South African government is not taking responsibility for being the 12th highest emitter of greenhouse gasses³⁹ and does not indicate how it will reduce these emissions through policy and alternative energy production.



Case study 3: *This Day* highlights action plan⁴⁴

An article in *This Day* with the headline “Sanwo-Olu unveils Lagos Action Plan to battle climate change challenges” made mention of numerous plans for tackling climate change, including rolling out trains and low emission busses; supporting government facilities to introduce solar power; and encouraging residents to compost, recycle and participate in waste-to-energy projects.

The article also placed responsibility on individuals; for example, the state governor “urged individual homes to move from fossil fuel generators to solar systems, saying multiple seemingly modest interventions successfully implemented across a wide variety of sectors will add up to substantial positive impact in terms of climate change adaptation and mitigation” and further argued “the goal now is to extend the awareness to the entire populace to imbibe the culture of climate awareness in their homes, workplaces and lifestyles”.

Therefore, while some large-scale plans were highlighted, without details about the budget and planning, it was left to individuals to carry the burden of bringing about the necessary changes.

While our research showed that many articles related to South Africa and climate change covered impacts, including drought, others highlighted meetings and events taking place to discuss climate action. However, the emerging narrative, generated by the South African government, was a “blame game”. As a result, even though media headlines about government meetings suggested a narrative of plan and actions, the content of the stories showed a focus on blame, and a lack of planning and action.

Similarly, the headline, “UK climate envoy to visit South Africa to discuss helping shift from coal”⁴⁰ also emphasised the need for developed nations to financially support South Africa in efforts to reduce emissions. Because the media stories have not discussed actual plans being implemented, a narrative emerges that, unlike the Kenyan narrative, no action is planned for or implemented. If the media had highlighted the substance of the plans, a different narrative would have emerged.

Headlines related to Nigeria showed similarities to those for Kenya: while many headlines were about impact, many also

described action, whether it be mitigation and adaptation efforts or government meetings. While research done in 2015 found that the climate change articles about Nigeria were playing a “blame game”,⁴¹ our study confirmed a 2019–2020 study,⁴² which found media arguing that Nigeria shared responsibility with other countries for finding ways to tackle climate change. Nevertheless, from the headlines related to Nigeria it was unclear how climate mitigation projects would be financed. In an article entitled “Govt makes clean cooking part of climate change response”,⁴³ the emphasis was on the necessity for Nigeria’s poor to move onto clean energy in the form of gas for cooking, which placed the responsibility for dealing with climate change on individuals. For example, the article argued that households must convert “from harmful cooking fuels such as fuelwood, charcoal and kerosene to cooking gas and efficient wood stoves” but did not explain how this would be made economically viable for poor households.

It seems that, although the headlines framed Nigeria as having mitigation/adaptation plans, the stories did not strengthen the narrative by giving details about the financing and

implementation of the plans. Therefore, the narrative was unclear: were these plans just good intentions, or did they have a budget and timeline? Was the government investing in mitigation and adaptation efforts, or was it just asking individuals to act?

With Madagascar's drought and famine, media headlines like the following were common: "Climate crisis in Grand Sud causing alarming increase in malnutrition".⁴⁵ Images of famine in Africa are highly familiar across the globe; as is the narrative that Africa faces a "constant struggle with violence, famine, and disease"⁴⁶ and is "enmeshed in a series of political and military imbroglios, and ethnic violence",⁴⁷ which are seen as conjoined. However, the articles about Madagascar that we examined in our study emphasised that famine was *not* related to conflict in the country.

Consider the following headlines, for example: "Madagascar faces one of the world's first climate change famines";⁴⁸ "Climate, not conflict. Madagascar famine is the first in modern history to be solely caused by global warming";⁴⁹ and "Madagascar on brink of world first 'climate change famine'".⁵⁰ Albeit that the headlines suggested a step away from the stereotypical narratives in which Africa is responsible for its own woes, and a step towards showing the famine as a global responsibility, they nevertheless underscored a narrative that all *previous* famines in Africa were due to conflict. In this way, Madagascar was presented as an outlier and the narrative of "Africa equals conflict plus famine" remained unchanged.

This stereotypical narrative was developed further by including the compounding factor of disease in the body of the article: "the COVID-19 pandemic has interrupted supply chains, increased unemployment and curbed access to food markets".⁵¹ Therefore, while the main reason for the famine was presented as climate change, the article still brought

together story strands from stereotypical narratives about Africa.

News articles about climate change and Ghana focussed on mitigation/adaptation, activism and education, and meetings and agreements, and thus came across as far more concerned with climate action than climate woes. For example, headlines included: "Two Ghanaian kids fly high country flag in cartoon network kids climate change initiative";⁵² "Switzerland, Ghana sign agreement for climate action";⁵³ and "Ghana ready to roll flagship climate financed renewable energy program".⁵⁴ These frames then counteracted the typical narrative of Africans being helpless victims, showing Ghanaians as having agency. Unlike the plans mentioned in some of the articles about Kenya and Nigeria, the articles about Ghana also specifically mentioned finances, indicating that the country was investing in solutions. For example, \$105 million was being provided by "the government of Ghana, the African Development Bank, the Climate Investment Fund and the Swiss Government as well as the private sector"⁵⁵ and the project was "expected to take off in 2022". Therefore, the climate change narrative emerging about Ghana was more positive than that emerging about the other African countries.

The narrative emerging from the headlines and articles analysed in this section is that Africa faces a climate crisis; in some countries, governments have put plans in place to deal with the problems, but in most of these countries more information is needed to assess whether governments are "walking the talk". The coverage of Ghana was an exception, as enough information was provided to indicate that the government is active and practical in tackling climate change. The narrative that emerged in the coverage of Madagascar was worrying: the articles linked famine, disease and conflict, perpetuating a stereotypical narrative about Africa, even



though the headlines acknowledged that Africa was not to blame. The articles on Madagascar also did not include likely actions or solutions taken to counter climate change, thus perpetuating the narrative that Africans lack agency.

Key phrases about climate change in media articles

Using the data from the top five countries, we examined frequently recurring phrases in the news articles about climate change in each country and analysed the top 10 phrases. In this section we argue that the repetition of related phrases across news providers indicates that one story is consolidating as a narrative.

Of Kenya’s 326 articles, with a cumulative total of 55 occurrences, 5 of the top 10 phrases repeated were about impacts (highlighted in green in *Table 1*) – including concerns about tea production (occurring 18 times); changes to the Tana River system (13); modelling effects of climate change (9); the impact of climate change on regional security, discussed by the UN Security Council (8); and a general phrase indicating that African farmers are being hit by climate change (7). However, with a cumulative total of 47 occurrences, five of the top 10 phrases are about mitigation efforts (in white in *Table 1*), including mentions of tackling the effects of climate change (14); a \$34 million project to tackle the effects of climate change (10); tackling climate change and conservation in a linked way (9); farmers embracing “regenerative farming” (7); and an insurance company called Pula providing farmers with insurance in the event of crop failure (7).

The data extracted from the key phrases supports data taken from the article headlines, which also pointed to the top articles focussing on both impacts and mitigation efforts. While it is concerning that the coverage of impacts outweighed coverage of solutions, as this perpetuates “disastrous Africa” narratives, the media attention given

to mitigation (including mentions of finances and farmers’ individual efforts) highlight African action in response to climate change.

Table 1: Commonly occurring phrases in media articles about climate change in Kenya, 1 October 2020 to 30 September 2021

Key phrase	Times mentioned
to ravage Kenya tea production	18
tackle effects of climate change	14
change on Kenya Tana River	13
\$34 million project to tackle	10
from climate change to conservation	9
modelled the effects of climate	9
agenda on security climate change	8
African farmers hit by climate	7
dryland farmers embrace regenerative farming	7
Pula offers lifeline to African	7

In the 248 articles linked to South Africa and climate change, many of the key phrases referred to “targets” (highlighted in green in *Table 2*), whether they be “ambitious”, “lacklustre” or “risky”; another similar word in fourth place in the list was “goals”. The narrative that emerged is that climate change activity in South Africa is centred on setting targets. Other top phrases referred to the South African government in some way, such as “presidential”, “policy”, “750bn” (being spend by government), and “climate report” (from government, supporting data from the headlines about South Africa and climate change, which centred on government activities (see *Figure 6*). The only other key phrase related to farmers’ “dreams” for crop insurance (highlighted in yellow in *Table 2*), which is about desired mitigation plans.



Table 2: Commonly occurring phrases in media articles about climate change in South Africa, 1 October 2020 to 30 September 2021

Key phrase	Times mentioned
pledges more ambitious climate targets	22
farmers dream of drought cover	15
Africa pushed by presidential body	12
year needed for climate goals	12
750bn a year needed for	11
lacklustre climate targets are a	10
targets are a risky proposition	10
adopts more ambitious emissions target	4
climate report paints grim picture	4
climate crisis policy South Africa	3

The key phrases used in articles about Nigeria (see *Table 3*) were much more varied than those used from articles about Kenya and South Africa; this also aligns well with the headline data, which showed a diversity in headline topics (see *Figure 6*). For example, the topmost key phrase was about climate activists who made fashion from waste, indicating that in media about Nigeria, climate action was not just about the government. However, many of the key phrases were about government meetings and a call to action for government leaders (see items highlighted in green in *Table 3*). The item highlighted in yellow was another call to action, but this time for religious leaders; those highlighted in blue indicated upcoming international climate change events; and those highlighted in orange were about the impact of climate change. The main narrative emerging from the key phrases from articles about Nigeria,

then, is that many different stakeholders are involved or should be involved in addressing climate change; while there were key phrases about impact, they did not form a strong part of the narrative.

Table 3: Commonly occurring phrases in media articles about climate change in Nigeria, 1 October 2020 to 30 September 2021

Key phrase	Times mentioned
activists create fashion from waste	9
Anne Marie Trevelyan meets experts	7
leaders should learn more about	7
religious leaders should learn more	7
climate change is affecting Nigeria	5
lose vegetation by 2039 unless	4
alerts citizens to the alarming	3
as climate summit draws closer	3
Doha amendment to Kyoto protocol	3
Egypt and Nigeria on climate	3

As with the headline data about Madagascar (see *Figure 6*), all the top phrases in the 142 articles about the country focussed on the impact of climate change, including famine related to weather conditions and famine related to COVID-19 (see *Table 4*). The narrative that emerges from both the headline data and the key phrases is about a set of problems, but none highlighted actions taken to address the issues. Rather than focussing on active steps that individuals, government and international agencies were likely taking, the articles evoked pity and fed stereotypes of passivity, leading to a negative narrative about local agency.

Table 4: Commonly occurring phrases in media articles about climate change in Madagascar, 1 October 2020 to 30 September 2021

Key phrase	Times mentioned
contributed to Madagascar food crisis	17
Madagascar on the brink of	16
million people in Madagascar to	10
and COVID causing food insecurity	9
brink of climate change induced	9
edge of starvation UN says	9
silent says Madagascar climate activist	7
climate change and alleviating poverty	5
urges tougher action on climate	3
WFP says as millions globally	3
become routine worse warn climate	2

The key phrases in the 120 media articles identified about climate change in Ghana (shown in *Table 3*), were similar to the headlines (shown in *Figure 6*), in that many were about mitigation, adaptation and resilience, as well as specific projects being undertaken and particular deals being struck with other countries. The narrative these stories created was that Ghanaians take climate change seriously and are actively involved in tackling it. Therefore, the narrative emerging from Ghana is the least stereotypical of the countries examined and shows a marked difference to the narrative about Madagascar.

Table 5: Commonly occurring phrases in media articles about climate change in Ghana, 1 October 2020 to 30 September 2021

Key phrase	Times mentioned
adaptation and resilience ahead of	11
and resilience ahead of COP26	11
reaffirm partnership on climate adaptation	11
science teachers in Ghana know	9
flagship climate financed renewable energy	6
wants mandatory climate change education	5
approves nine climate mitigation activity	4
climate smart cocoa and thriving	4
Ghana institute Youth Climate Council	4
Switzerland signs another climate offset	4

4.3 Climate change in Africa on Twitter

In this part of the study, we collected Twitter data from a 6-month period between 1 May 2021 and 30 September 2021 to assess which countries were being tagged, who was taking part in climate change discussions on the platform, and to understand the conversations on climate change in Africa. Tweets from 1 May 2021 to 30 September 2021 mentioning Africa or any of the 54 African countries and mentioning “climate” were used to guide this analysis.



Country analysis

An analysis of which African countries had been most tagged in tweets about climate change found Kenya at the top with 3 996 tweets (see *Figure 7*). Madagascar was up from fourth in the mainstream media to second on social media (2 760 tweets), underscoring the level of concern about the country. South Africa and Nigeria were next in sequence, while Uganda performed better on Twitter than in the mainstream media, and Ghana had less visibility.

Top tweeters

The mainstream media data showed that *allafrica.com* (@*allafrica*) was the primary source for mainstream news articles about Africa (see *Figure 2*); on Twitter, *allafrica.com* again made the strongest showing (see *Figure 8*). This indicates that the media outlet played a key role in raising the profile of African climate stories.

Most of the other tweeters consisted of climate or environmental non-governmental organisations (NGOs) on the continent; for example, *Climate Story Lab Africa* (@*CSL_Africa*), which finds positive stories about climate action on the continent;

research and development organisation, *Future Climate for Africa* (FCFA) (@*future_climate*); and activist organisation, *Greenpeace Africa* (@*Greenpeaceafric*). International NGOs also made a strong showing, with *United Nations Capital Development Fund* (@*UNCDFLoCAL*) providing funds for developing world climate adaption initiatives; and *World Bank Climate* (@*WBG_Climate*) “sharing ideas, news and research on climate change and disaster risk management”.⁵⁶ This indicates that climate and environmental NGOs are key drivers of conversation about climate change in Africa.

Most individuals tweeting about climate change in Africa were not Africans (see *Figure 9*). Christopher Cartwright, who posts “data, new research regarding climate change”, shared 845 tweets about Africa from 1 May 2021 to 30 September 2021. The top African tweeting about climate change was Dr Richard Munang, a self-described climate change expert, who works for the UN Environment Programme (UNEP) as the Africa Regional Climate Change Programme Coordinator. Other top Africans included Steff Migot, a Kenyan editor and blogger; Marijke van der Lee, about whom no further information

Figure 7: Top 10 African countries mentioned in climate change tweets, 1 May 2021 and 30 September 2021

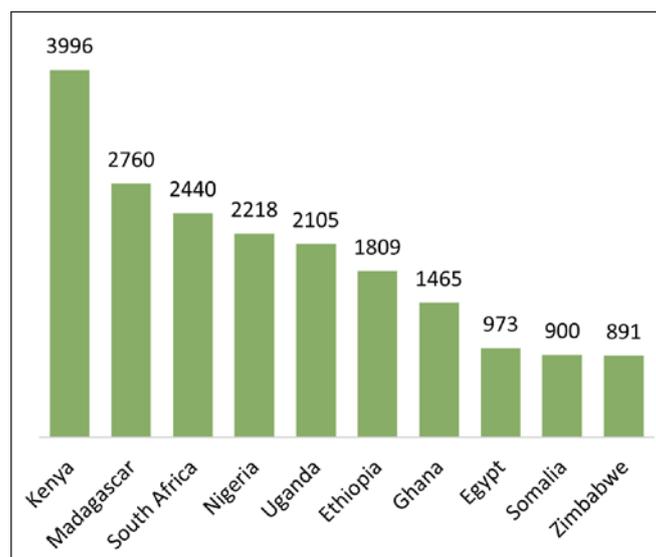


Figure 8: Organisational accounts tweeting about climate change, 1 May 2021 to 30 September 2021

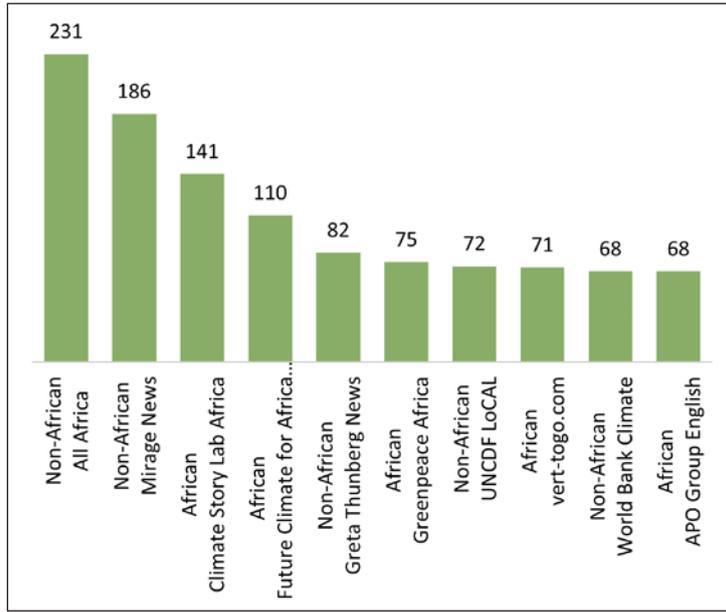
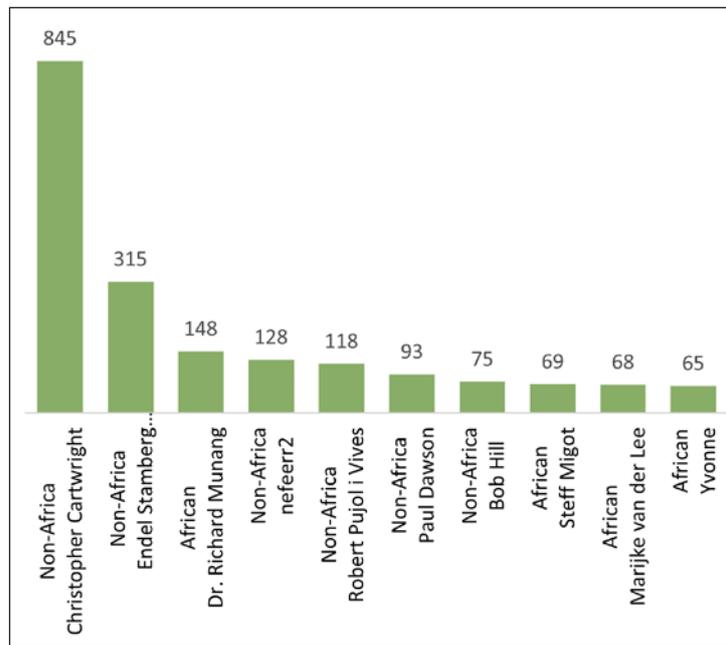


Figure 9: Individuals tweeting about climate change in Africa, 1 May 2021 to 30 September 2021



is available, but her account focusses on sharing African news articles; and a Kenyan development communicator, Yvonne.

The fact that the study revealed that tweets from individuals about climate change in Africa were not dominated by Africans is concerning, because it suggests that Africans are not in charge of the African climate change narrative. This will be discussed and analysed later in the report when we look at the extent to which highly publicised African climate activists were sharing on social media. A comparison of that data set with this yields more insight into the reasons behind why African individuals who are tweeting about climate change are not being retweeted.

Topmost shared tweets

The most retweeted climate tweets about Africa are about race and clashes between the West and Africa (see tweets 1, 4, 5, 6, 9 and 10 in *Table 6*). The top retweet argues that “white academia” is blaming Africa for climate change; while the sixth tweet from the top argues that climate change is a result of “capitalism stoking the flames of climate breakdown”. In the fourth tweet French Prime Minister Emmanuel Macron is accused of allowing an oil pipeline to be built in Uganda, which would damage a sensitive ecosystem. Another tweet (number 9) argues that Britain should build more coal-fired power stations because Africa is set to build 2 300. All these tweets point to ongoing conflict about race and development and the extent to which development in Africa is or will contribute to climate change. This speaks to many tensions around the issue, which go beyond just industrialisation.

The other top tweets were “disaster” tweets (see *Table 6*, tweets 2, 3, 5, and 7), including the drought and famine in Madagascar, similar to reports in the mainstream media. These tweets used words like “catastrophic”, “disaster” and “suffering”, which are related to stereotypical narratives about Africa.

Other “disaster” tweets included those about Algeria, said to be in “climate crisis” and Tunisia, a “wildfire hotspot”; however, these two countries were not highly prevalent in mainstream media articles about climate change in Africa and, except in the case of Madagascar, “disaster journalism” did not dominate mainstream media coverage. While these tweets fed into stereotypical narratives about Africa being a problem continent, they highlighted genuine, country specific problems. It is likely that other non-African countries were being tweeted about in a similar way, for example the wildfires in Australia at the beginning of 2020, or repeated wildfires in California over time.

Only one tweet (number 8) explicitly mentioned climate action, and included the name of a Zimbabwean activist, alongside Greta Thunberg. The dearth of tweets about actions being taken in response to activists’ calls is worrying, but a wider survey would need to look at tweets from other non-African countries, to establish whether this was unusual.

Overall, the tweets did not portray a positive narrative about the continent of Africa, as they focussed on conflict (including racial conflict) and disasters (which form part of a stereotypical narrative about Africa). Given that Ghana, and to some extent Nigeria, focussed on action, it would have been interesting to see tweets about some of the actions being taken. However, perhaps the stereotypical narrative emerges because many of the tweets were not made by Africans.

4.4 Climate change activists on social media in 22 African countries

As shown in section 4.3, many of those tweeting about climate change in Africa and receiving retweets are not African, which led us to wonder: Are any of the top African climate change activists on Twitter? If they are



Table 6: Most retweets of tweet on climate change in Africa shared between 1 May 2021 and 30 September 2021

No.	Tweet date and time	Twitter handle	Most retweeted tweets	Number of retweets	Profile name
1	2021/07/07 12:36	@killerguerilla	Oil companies set the ocean on fire less than a week ago but white academia looks to blaming Africa for climate change as always. https://t.co/YtllxNBfJD	6 476	Dubula
2	2021/08/27 10:12	@ErikSolheim	Climate disaster! Madagascar is on the brink of experiencing the world's first 'climate change famine'. Tens of thousands of people are already suffering 'catastrophic' levels of hunger and food insecurity after four years without rain. https://t.co/2mu8tBVY7a https://t.co/iRFPg71GMf	4 043	Erik Solheim
3	2021/08/11 12:37	@Riseupmovt	Algeria is burning! At least 65 killed! We are in a climate crisis! Please share this https://t.co/Sb8glRGGrE https://t.co/97gRXrWIRl	2 277	Rise Up Movement
4	2021/05/28 05:48	@Fridays4FutureU	Today is #TotalAGM France's climate killer aims to build the EACOP pipeline, drilling in Uganda's Murchinson Falls Park, displacing thousands of citizens and risking the chances for #1Point5 @EmmanuelMacron & @PPouyanne is this what climate leadership looks like? #StopEACOP! https://t.co/y5fomWV62y	2 233	Fridays For Future Uganda
5	2021/06/29 19:50	@FFMAPA	CLIMATE DISASTER IN MADAGASCAR More than 1.1 million people in southern Madagascar are unable to feed themselves because the country is suffering from its most acute drought in four decades. https://t.co/hTJOMOZZKK	2 118	Fridays For Future MAPA
6	2021/07/07 12:06	@ScarlettOWest	The entire continent of Africa is only responsible for 2-3% of global carbon emissions, whilst 100 companies are responsible for 71% of global carbon emissions. The blame doesn't lie with traditional practises; it lies with capitalism stoking the flames of climate breakdown. https://t.co/ybSyKqU3EQ	1 630	Scarlett <U+0001F30E>



No.	Tweet date and time	Twitter handle	Most retweeted tweets	Number of retweets	Profile name
7	2021/08/12 13:31	@ajplus	Tunisia reported its highest temperature in recorded history this week: 49°C (120°F). The heat has sparked wildfires, which are also ravaging Algeria, Greece, Italy and Turkey. Scientists say the human-caused climate crisis has now made the Mediterranean a 'wildfire hotspot.' https://t.co/xqBxviboi	1 257	AJ+
8	2021/08/20 00:10	@UNICEF	Nkosi from Zimbabwe, Mitzi from the Philippines, Tahsin from Bangladesh and @GretaThunberg from Sweden are calling for urgent climate action. In their words, what the world is doing is not enough. The climate crisis is a child rights crisis. https://t.co/l32wRocVZM	1 193	UNICEF
9	2021/08/09 08:57	@norfolkpainter	So, the UK has 3 coal-fired power stations & the Greens want them closed down. China has 1082, building hundreds more. Africa 2300 planned in a decade. Can these loons not see the 1% UK contribution to 'climate emergency' is a joke? The UK national grid is at breaking point now	1 149	Norfolk Painter. He paints, he tweets
10	2021/05/31 18:11	@TheRightMelissa	Get ready, Climate Change is now racism. The left is using black people as pawns to cloak their radical agenda as altruism towards 'poor down trodden blackie' It's so insulting. So blacks in Africa cope w/heat but blacks in the US need govt. programs to help them cope w/ heat? https://t.co/hBIMb59RXO	851	Melissa Tate

on Twitter, are their posts being retweeted? What is their level of visibility?

From extensive searches on mainstream media sites and blogs of international development agencies, alongside Google searches, we identified 41 climate change activists who have received attention in the media or recognition by international organisations; this is by no means an exhaustive list of all climate activists, or possibly even well-known ones, so

the data is tentative. We found information about climate activists from only 24 African countries, with the following countries having more than one activist: Kenya (5), Ghana (4), Nigeria (4), South Africa (4) and Uganda (3) (see *Appendix 1*). Of those identified, 16 had Twitter accounts, and only four had more than 10 000 retweets (see *Table 7*). Five of these activists (not included in *Table 7*) had less than 10 climate change tweets each. Many had small groups of followers; just three had

Table 7: Climate activists on Twitter, ranked by number of tweets related to climate change

Name	Twitter account	Start date	Climate change tweets	Non climate change tweets	Country	Re-tweets	Followers
Vanessa Nakate	@vanessa_vash	30 May 2019	1 379	2 685	Uganda	21 186	221 470
Remy Zahiga	@Remy_Zahiga	29 Aug 2015	715	1 693	DRC	13 434	6 006
Ina-Maria Shikongo	@IMariashikongo	13 April 2021	627	2 869	Namibia	10 535	645
Oladosu Adenike	@the_ecofeminist	26 Nov 2018	404	966	Chad	21 186	13 912
Leah Namugerwa	@NamugerwaLeah	26 Feb 2019	293	560	Uganda	4 794	29 023
Chibeze Ezekiel	@chibeze1	11 Sept 2010	105	329	Ghana	242	1 065
Kiara Nirghin	@kieranirghin	29 Jan 2018	6	69	South Africa	56	1 186
Angelique Pouponneau	@ANGIEPOPS11	17 July 2009	61	177	Seychelles	536	2 540
Agnes M. Kalibata	@Agnes_Kalibata	27 March 2013	59	836	Kenya	372	23 650
Desmond Alugnoa	@Desmond_Alugnoa	6 April 2012	16	69	Ghana	34	629

more than 20 000 followers. Vanessa Nakate from Uganda had the most followers, the most climate tweets, and the most retweets. Overall, the number of tweets was low. The data seems to indicate that Africa’s climate activists are not making it a priority to spread their message on social media.

Despite the low spread of their messages, we then delved into which tweet from each of the top five activists was the most retweeted to understand which of their messages had strong uptake.

Vanessa Nakate’s top tweet was a retweet from Greta Thunberg; it read:

Let’s be clear – what you are doing is not about climate action or responding to an emergency. It never was. This is communication tactics disguised as politics. Yesterday I adressed the

#AustrianWorldSummit along with Angela Merkel, António Guterres, Alok Sharma and others. <https://t.co/vuD4Tovjfd>

The same tweet was also Oladosu Adenike’s top tweet. This indicates that their own content did not gain as much traction as retweeting content from Greta Thunberg.

Remy Zahiga’s top tweet also repeated generic information that had circulated for some time and did not give it an African context:

The science is unequivocal; a global increase of 1.5C above the pre-industrial average and the continued loss of biodiversity risk catastrophic harm to health that will be impossible to reverse. Over 200 health journals call for urgent climate action. <https://t.co/EKISgSGn2N>





Ina-Maria Shikongo's tweet highlights her concern with the number of environmental activists who are killed around the world each year. The article she links to in her tweet is about the murder of a South African climate change activist Fikile Ntshangase, but she does not mention this in her tweet to highlight the relevance of the tweet to Africans:

Since the Paris Agreement on climate change was signed in 2015, the organisation says on average four activists have been killed each week. #DefendTheDefenders <https://t.co/57AGcelwTL>

Leah Namugerwa's top tweet responded to Greta Thunberg who was pointing out that

extreme weather events are becoming more frequent. Leah responds:

Right now everyone is talking about the climate emergency – and rightly so. But as soon as these tragedies are over we'll most likely forget about it and move on like before. Unless we treat the crisis like a crisis all the time, we will not be able to halt the climate emergency. <https://t.co/GgiwAeGeZb>

This shows African activists taking part in global conversations, but it does not put any emphasis in the discussion on the relevance for Africa, nor does it give an indication of an African narrative about climate change.

5 Conclusion

The data analysis from our study shows that media narratives about climate change in Africa varied by country. News articles about Ghana were the most focussed on climate action, and articles about Nigeria and South Africa had some focus on climate action; although the articles about South Africa were almost entirely about government officials speaking at official meetings, rather than any implementation plans. The media coverage of Madagascar provided a narrative that fitted into other stereotypical narratives about Africa, in that it focussed on famine and disaster, and implied that previous famines in Africa had been caused by conflict. The coverage of Kenya focussed equally on crisis and mitigation efforts, but details on the mitigation efforts were sparse. As such, no single narrative emerged from this study; instead the countries showed stark differences, especially Madagascar (with headlines and key phrases about disaster) and Ghana (with headlines and key phrases about mitigation efforts).

While previous studies found that African media coverage of climate change tracked to big international events, our data showed that, per country, it tracked to local events. This indicates that Africans are not just tagging along, regarding climate change, but are showing agency of their own.

In the case of organisations tweeting about climate change, tweets were strongly dominated by both African and international NGOs, as well as the media aggregator, allafrica.com. Worryingly, many of the top tweets made by individuals about Africa and climate change were not made by Africans,

implying that the African narrative on Twitter about climate change was primarily being led from the outside. The primary narratives emerging were: (i) racial and other conflict between the West and Africa over matters such as who is responsible for climate change and who needs to act based on that responsibility; and (ii) about disaster and disease – primarily in Madagascar, but also in Algeria and Tunisia – which reflected stereotypical narratives about Africa.

Given that our Twitter data indicated that Africans were not driving the narrative about climate change in Africa, we investigated who Africa's climate activists were and whether they were using social media. With an extensive search on mainstream media sites, international development agency blogs and Google, we found 41 climate activists who were well-known in their home countries and/or at international level; however, just 15 of these had Twitter accounts, and very few of these accounts had a significant number of followers or tweets and retweets. The most prolific African climate activists only garnered many retweets when they themselves retweeted tweets from elsewhere in the world, such as tweets by well-known Swedish climate activist Greta Thunberg.

Overall, the report shows that, while not all narratives about climate change in Africa perpetuate negative stereotypes about Africa, a significant number do. Just as worrying, individual Africans still do not seem to be taking the lead in developing an African narrative around climate change or climate activism, albeit that some African NGOs are at the forefront of tweeting. This suggests more African climate activists should participate on Twitter to develop an African narrative about climate change. The media also needs to tell the story of African agency on climate change, in terms of actual work being undertaken and implemented.



Endnotes

1. Richard Washington, 'How Africa Will Be Affected by Climate Change', *BBC News*, 15 December 2019, sec. Africa, <https://www.bbc.com/news/world-africa-50726701>.
2. Edem E. Selormey and Carolyn Logan, 'African Nations Are among Those Most Vulnerable to Climate Change. A New Survey Suggests They Are Also the Least Prepared. | Afrobarometer', *Afrobarometer*, 23 September 2019, <https://afrobarometer.org/blogs/african-nations-are-among-those-most-vulnerable-climate-change-new-survey-suggests-they-are>.
3. Susanne C. Moser and Lisa Dilling, 'Making Climate HOT', *Environment: Science and Policy for Sustainable Development* 46, no. 10 (1 December 2004): 36, <https://doi.org/10.1080/00139150409605820>.
4. Africa No Filter, 'Jobs, Sports Betting, and Covid-19 Continue Leading Google Searches in Africa - but Egyptians and Mauritians Were Most Interested in Tantalising Their Taste Buds in August', *Africa No Filter* (blog), 9 September 2021, <http://africanofilter.org/jobs-sports-betting-and-covid-19-continue-leading-google-searches-in-africa-but-egyptians-and-mauritians-were-most-interested-in-tantalising-their-taste-buds-in-august>.
5. Tanja Bosch, 'Blogging and Tweeting Climate Change in South Africa', *Ecquid Novi: African Journalism Studies* 33, no. 1 (1 February 2012): 44–53, <https://doi.org/10.1080/02560054.2011.636825>.
6. Kiln.it, 'Carbon Map – Which Countries Are Responsible for Climate Change?', *The Guardian (Online)*, 23 September 2014, sec. Climate crisis, <https://www.theguardian.com/environment/ng-interactive/2014/sep/23/carbon-map-which-countries-are-responsible-for-climate-change>.
7. Bosch, 'Blogging and Tweeting Climate Change in South Africa', 47.
8. Mike S. Schäfer and James Painter, 'Climate Journalism in a Changing Media Ecosystem: Assessing the Production of Climate Change-related News around the World', *WIREs Climate Change* 12, no. 1 (January 2021), <https://doi.org/10.1002/wcc.675>.
9. Bosch, 'Blogging and Tweeting Climate Change in South Africa'.
10. Ekwe Agwu and Chiebonam Justina Amu, 'Framing of Climate Change News in Four National Daily Newspapers in Southern Nigeria', *Agricultural Information Worldwide* 6 (2015): 11–17.
11. Mthokozisi Phathisani Ndhlovu, 'The Fifth Estate: Analyzing Climate Change Punditry in the Zimbabwean Newspaper Columns', *Environmental Communication* 15, no. 3 (3 April 2021): 418–29, <https://doi.org/10.1080/17524032.2020.1863826>.
12. Adam Yeeles, 'Media Studies: National Frames', *Nature Climate Change* 9, no. 9 (September 2019): 647, <https://doi.org/10.1038/s41558-019-0572-z>.
13. Antal Wozniak et al., 'The Event-Centered Nature of Global Public Spheres: The UN Climate Change Conferences, Fridays for Future, and the (Limited) Transnationalization of Media Debates', *International Journal of Communication* 15 (14 January 2021): 27, <https://ijoc.org/index.php/ijoc/article/view/14843>.
14. Carolyn Maire Cramer, 'The Framing of Climate Change in Three Daily Newspapers in the Western Cape Province of South Africa' (MPhil (Journalism), Stellenbosch, South Africa, University of Stellenbosch, 2008), <https://scholar.sun.ac.za:443/handle/10019.1/2204>.
15. Rebecca Pointer, 'Locked in Inertia: Climate Change Coverage in the *Sowetan* and *Cape Argus*' (Cape Town, South Africa: Centre for Film and Media Studies, University of Cape Town, 2013).
16. Bosch, 'Blogging and Tweeting Climate Change in South Africa', 50.
17. Brian Semujju, 'Climate Change in Ugandan Media: A "Global Warming" of Journalism Ethics', *Journal of African Media Studies* 5, no. 3 (1 September 2013): 344, https://doi.org/10.1386/jams.5.3.337_1.
18. Maria Shimhanda, 'Media Coverage of Climate Change in Namibia and South Africa: A Comparative Study of Newspaper Reports from October 2018 to April 2019' (Master of Science, Coventry, England, Department of Computing, Environment and Engineering, Coventry University, 2021), 19.
19. Amb Dr John O. Kakonge, 'Challenges and Opportunities for Increasing Media Coverage of Climate Change in Kenya', *Communication, Society and Media* 3, no. 2 (20 April 2020): 111, <https://doi.org/10.22158/csm.v3n2p111>.

20. Kakonge; Joel Michael Osindo, 'The Framing of Climate Change Issues in Kenyan Print Media: A Comparative Analysis of the *Daily Nation* and *The People Daily Newspapers*' (Master of Arts (Communication studies), Nairobi, Kenya, School of Journalism and Mass Communication, University of Nairobi, 2014), <http://erepository.uonbi.ac.ke/handle/11295/77990>.
21. Osindo, 'The Framing of Climate Change Issues in Kenyan Print Media', 26.
22. Kakonge, 'Challenges and Opportunities for Increasing Media Coverage of Climate Change in Kenya'.
23. Chinenye Nwabueze and Stella Egbra, 'Newspaper Framing of Climate Change in Nigeria and Ghana', *Applied Environmental Education & Communication* 15, no. 2 (2 April 2016): 111–24, <https://doi.org/10.1080/1533015X.2016.1164094>; Ijeoma D. Ajaero and Luke I. Anorue, 'Newspaper Framing and Climate Change Mitigation in Nigeria and Ghana', *African Population Studies* 32, no. 2 (27 September 2018), <https://doi.org/10.11564/32-2-1195>.
24. Atle Middttun et al., 'Comparing Media Framings of Climate Change in Developed, Rapid Growth and Developing Countries: Findings from Norway, China and Ghana', *Energy & Environment* 26, no. 8 (1 December 2015): 1271–92, <https://doi.org/10.1260/0958-305X.26.8.1271>.
25. Nwabueze and Egbra, 'Newspaper Framing of Climate Change in Nigeria and Ghana'.
26. Middttun et al., 'Comparing Media Framings of Climate Change in Developed, Rapid Growth and Developing Countries', 1284.
27. Emmanuel Elia, 'Media Coverage of Climate Change Information by the Tanzania Guardian and Daily News in 2015', *Information Development* 35, no. 4 (1 September 2019): 535–50, <https://doi.org/10.1177/0266666918770712>.
28. Elia.
29. Bosch, 'Blogging and Tweeting Climate Change in South Africa'.
30. c.f. Wozniak et al., 'The Event-Centered Nature of Global Public Spheres'; Pointer, 'Locked in Inertia: Climate Change Coverage in the Sowetan and Cape Argus'; Bosch, 'Blogging and Tweeting Climate Change in South Africa'; Shimhanda, 'Media Coverage of Climate Change in Namibia and South Africa: A Comparative Study of Newspaper Reports from October 2018 to April 2019'; Nwabueze and Egbra, 'Newspaper Framing of Climate Change in Nigeria and Ghana'; Kakonge, 'Challenges and Opportunities for Increasing Media Coverage of Climate Change in Kenya'.
31. Bosch, 'Blogging and Tweeting Climate Change in South Africa'; Pointer, 'Locked in Inertia: Climate Change Coverage in the Sowetan and Cape Argus'; Wozniak et al., 'The Event-Centered Nature of Global Public Spheres'; Shimhanda, 'Media Coverage of Climate Change in Namibia and South Africa: A Comparative Study of Newspaper Reports from October 2018 to April 2019'; Kakonge, 'Challenges and Opportunities for Increasing Media Coverage of Climate Change in Kenya'; Agwu and Amu, 'Framing of Climate Change News in Four National Daily Newspapers in Southern Nigeria'.
32. Ranjini Murali, Aishwarya Kuwar, and Harini Nagendra, 'Who's Responsible for Climate Change? Untangling Threads of Media Discussions in India, Nigeria, Australia, and the USA', *Climatic Change* 164, no. 3 (22 February 2021): 51, <https://doi.org/10.1007/s10584-021-03031-1>.
33. Nita Bhalla, 'Kenya: As Climate Change Threatens Kenyan Tea, Millions of Workers Seen at Risk', *AllAfrica.Com*, 11 May 2021, sec. News, <https://allafrica.com/stories/202105110047.html>.
34. Agence France-Presse, "'Like the Speed of the Wind': Climate Change Causing Kenya's Lakes to Rise to Destructive Highs', *News18*, 20 October 2020, <https://www.news18.com/news/buzz/like-the-speed-of-the-wind-climate-change-causing-kenyas-lakes-to-rise-to-destructive-highs-2984132.html>.
35. Africa Leader, 'Kenyan Health Experts Say Climate Change Fuelling Disease Burden', *Africa Leader*, 20 August 2021, <https://www.africaleader.com/news/270788401/kenyan-health-experts-say-climate-change-fuelling-disease-burden>.
36. Gerald Bwisa, 'Kenya: Trans Nzoia Unveils Ambitious Plan to Tackle Climate Change', *AllAfrica.Com*, 23 September 2021, sec. News, <https://allafrica.com/stories/202109230071.html>.
37. Xinhua Net, 'Kenyan Scientists in "Race against Time" to Develop Climate-Smart Seeds', *Xinhua Net*, 26 November 2020, http://www.xinhuanet.com/english/2020-11/26/c_139542868.htm.
38. Barbara Creecy, 'Minister Barbara Creecy – Resilience, Gender and Global Climate Action Round Table', *AllAfrica.Com*, 2 October 2020, sec. News, <https://allafrica.com/stories/202010020811.html>.



39. Joe Lo, 'On Expert Advice, South Africa Cuts Its 2030 Emissions Cap by a Third', *Climate Home News* (blog), 28 September 2021, <https://www.climatechangenews.com/2021/09/28/expert-advice-south-africa-cuts-2030-emissions-cap-third/>.
40. Thomson Reuters, 'UK Climate Envoy to Visit South Africa to Discuss Helping Shift from Coal', *The Mighty 790 KFGO* (blog), 16 September 2021, <https://kfgo.com/2021/09/16/uk-climate-envoy-to-visit-south-africa-to-discuss-helping-shift-from-coal/>.
41. Agwu and Amu, 'Framing of Climate Change News in Four National Daily Newspapers in Southern Nigeria'.
42. Murali, Kuwar, and Nagendra, 'Who's Responsible for Climate Change?'
43. Bennett Oghifo, 'Govt Makes Clean Cooking Part of Climate Change Response', *AllAfrica.Com*, 29 December 2020, sec. News, <https://allafrica.com/stories/202012290063.html>.
44. Segun James, 'Sanwo-Olu Unveils Lagos Action Plan to Battle Climate Change Challenges', *AllAfrica.Com*, 9 June 2021, sec. News, <https://allafrica.com/stories/202106090508.html>.
45. Action Against Hunger, 'Madagascar: Climate Crisis in Grand Sud Causing Alarming Increase in Malnutrition', *Humanitarian News*, 10 March 2021, Online edition, <http://humanitariannews.org/20210310/madagascar-climate-crisis-grand-sud-causing-alarming-increase-malnutrition>.
46. Ammina Kothari, 'The Framing of the Darfur Conflict in the New York Times: 2003–2006', *Journalism Studies* 11, no. 2 (1 April 2010): 209, <https://doi.org/10.1080/14616700903481978>.
47. Jo Ellen Fair, 'War, Famine, and Poverty: Race in the Construction of Africa's Media Image', *Journal of Communication Inquiry* 17, no. 2 (1 July 1993): 7, <https://doi.org/10.1177/019685999301700202>.
48. Kim Harrisberg, 'Madagascar Faces One of World's First Climate Change Famines', *Thomson Reuters Foundation News*, 7 September 2021, <https://news.trust.org/item/20210907151135-bzwoo/>.
49. Aryn Baker, 'Climate, Not Conflict. Madagascar's Famine Is the First in Modern History to Be Solely Caused by Global Warming', *Time*, 20 July 2021, <https://www.msn.com/en-us/news/world/climate-not-conflict-madagascars-famine-is-the-first-in-modern-history-to-be-solely-caused-by-global-warming/ar-AAMnbBF>.
50. Democracy Now!, 'Madagascar on Brink of World's First "Climate Change Famine"', *Democracy Now!*, 26 August 2021, Online edition, https://www.democracynow.org/2021/8/26/headlines/madagascar_on_brink_of_worlds_first_climate_change_famine.
51. Harrisberg, 'Madagascar Faces One of World's First Climate Change Famines'.
52. GhanaWeb, 'Two Kids Fly Ghana's Flag High in Cartoon Network Kids Climate Change Initiative', *GhanaWeb*, 14 July 2021, Online edition, <https://www.ghanaweb.com/GhanaHomePage/NewsArchive/Two-Ghanaian-kids-fly-high-country-s-flag-in-Cartoon-Network-kids-climate-change-initiative-1309282>.
53. Pie Kamau, 'Switzerland, Ghana Sign Agreement for Climate Action', *Africa Business Communities*, 25 November 2020, <https://africabusinesscommunities.com/news/switzerland-ghana-sign-agreement-for-climate-action/>.
54. Ghana News Agency, 'Ghana Ready to Roll Flagship Climate Financed Renewable Energy Program', *Business Ghana*, 27 August 2021, Online edition, sec. General, <https://www.businessghana.com/site/news/general/245178/Ghana%2oready%2oto%2oroll%2oflagship%2oclimate%2ofinanced%2orenewable%2oenergy%2oprogram>.
55. Ghana News Agency.
56. @WBG_Climate profile



APPENDIX 1: Climate change activists identified in mainstream media, international development blogs, and Google by country

Country	Name	Organisation
Angola	Josefa Leonel Correia Sacko	Commissioner for Rural Economy and Agriculture, African Union Commission
Botswana	Opha Pauline Dube	Professor, University of Botswana
Burkina Faso	Latifatou Compaoré	Climate activist
Cameroon	Nasako Besingi	The Struggle to Economize Future Environment (SEFE),
Chad	Hindou Oumarou Ibrahim	Association of Peul Women and Autochthonous Peoples of Chad
DRC	Remy Zahiga	Climate activist
Djibouti	Aicha Mohamed	Climate activist
Eswatini	Lindelwa Kunene	The Green Voice
Gambia	Jakomba Jabbie	Climate activist
Ghana	Mohammed Adjei Sowah	Mayor, City of Accra
	Mahama Kappiah	Executive Director, ECOWAS Centre for Renewable Energy and Energy Efficiency
	Desmond Alugnoa	Green Africa Youth Organization
	Chibeze Ezekiel	Climate activist
Ivory Coast	Anthony Nyong	Director for Climate Change and Green Growth, African Development Bank Group



Country	Name	Organisation
Kenya	Agnes Kalibata	President, Alliance for a Green Revolution in Africa UN Secretary General's Special Envoy for the 2021 Food System's Summit
	Mithika Mwenda	Co-Founder, Pan African Climate Justice Alliance
	Rahmina Paullete	Founder of Kisumu Environmental Champions
	Elizabeth Wanjuri Wathuti	The Green Generation Initiative
	Faith Thimba	Climate activist
Madagascar	Marie Christina Kolo	Green'N'Kool
Mauritius	Veer Qumar Mattabadul	Climate activist
	Shaama Sandooyea	Climate activist
Morocco	Ismail Chaaouf	Greenpeace Morocco coordinator
Namibia	Ina-Maria Shikongo	Fridays for Future (FFF)
Nigeria	Oladosu Adenike	Climate activist
	Esohe Ozigbo	Climate activist
	Daniel Gbujie	Team 54
	Lamboginny (née Yinka Lawanson)	Climate activist
Rwanda	Ineza Umuhoza Grace	The Green Fighter
Seychelles	Angelique Pouponneau	Climate activist
	Shafira Charlette	Go Now
South Africa	Ayakha Melithafa	Climate activist
	Kiara Nirghin	Scientist, Stanford University
	Yola Mgogwana	Climate activist
	Rocco Da Silva	Climate activist
Tunisia	Raslen Jbeli	Climate activist
Uganda	Vanessa Nakate	Rise Up Movement Africa
	Immaculate Akello	Climate activist
	Leah Namugerwa	Climate activist
Zambia	Beatrice Phiri	Climate activist
Zimbabwe	Nkosilathi Nyathi	Climate activist