

**SOCIAL MEDIA AND SUSTAINABLE DEVELOPMENT:  
THEMATIC AND SENTIMENT ANALYSIS OF TWITTER (X)  
CONVERSATIONS ON ZERO HUNGER IN NIGERIA**

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**ABSTRACT:** This study analysed 500 tweets discussing Sustainable Development Goal 2 (Zero Hunger) in Nigeria, collected from April 1 to June 30, 2024. Using content analysis, the research identifies key themes, including grassroots initiatives, misinformation, youth engagement, climate change, food security, government policies, advocacy, and public awareness. Sentiment analysis reveals that 35% of tweets were optimistic, highlighting success stories and advocacy, while 45% were critical, focusing on government inefficiencies and food insecurity concerns. The findings underscore the impact of digital lobbying on public perception and policy decisions, as well as the role of misinformation in shaping discourse. Achieving Zero Hunger in Nigeria requires a multifaceted approach that integrates grassroots action, government accountability, and informed online engagement.

**Keywords:** Twitter (X), Sustainable Development Goal, Zero Hunger, Nigeria

## **INTRODUCTION**

The United Nations in 2015 adopted a set of 17 global goals tagged “The Sustainable Development Goals (SDGs)” to address various socio-economic and environmental challenges facing the world. These goals of 2030 serve as a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity (United Nations, 2015). One of the goals is to focus on putting an end to hunger, achieving food security, improving nutrition, and promoting sustainable agriculture, known as SDG 2: Zero Hunger. Significant challenges ensue in Africa, particularly in Nigeria, towards the achievement of SDG 2: Zero Hunger by 2030, as food insecurity and widespread hunger/ malnutrition remain a pressing issue despite being a major agricultural producer with significant expanded agricultural potential (Ogunyemi & Olubiyi, 2023). According to Atukunda et al. (2021), key drivers of hunger include poor governance, conflicts, climate change, and the COVID-19 pandemic. Disruption of agricultural livelihoods and rising cost of food, fuel, and other essential items aggravate the situation (World Food Program, 2024). Improving food policies, addressing underlying causes of hunger, and the SDG agenda are crucial for unlocking the potential to reach Zero Hunger (Atukunda et al., 2021).

In recent years, social media has emerged as an essential and influential forum for advocacy, political participation, mobilisation, and public discourse on development issues because it enables citizens to express their viewpoints and organise collective actions (Ologunbe & Taiwo, 2025). Social media platforms, particularly Twitter, which was rebranded “X” on July 31, 2023, by Elon

Musk, its new Chief Executive Officer, is one of Nigeria's most prominent social media platforms (Amnesty International, 2021). Its broad reach and real-time engagement make it viable as a critical space for public discourse, advocacy on global issues, and addressing social issues, including Sustainable Development Goals (Smith, 2020). Twitter's unique features, such as anonymity and short messaging support, make it a powerful communication tool for all classes of people in society. Its users are connected through currently exciting/trending topics and conversations rather than through friendship and close networks, as with most social media platforms, such as Facebook (Oshionebo & Okoronkwo, 2023). Social media usage has grown rapidly in Nigeria in recent years; Twitter is popularly used in Nigeria and other parts of the world for public discussions (OforiParku & Moscato, 2018; NaijaTechGuide Team, 2019). Therefore, analysing Twitter conversations known as "tweets," which includes the hashtags feature, can provide valuable insights into public awareness, public perceptions, engagement, discussions, and proposed solutions to developmental challenges such as hunger and food security, which are prevalent, to attain the SDG 2 (Zero Hunger) in Nigeria by 2030.

While previous studies have examined Twitter discourse on SDGs globally, there is limited research on its role in shaping hunger-related discussions in Nigeria." Addressing this gap, this study aims to analyse the content of Twitter conversations related to SDG 2 (Zero Hunger) in Nigeria, guided by the following;

- i. To identify the dominant themes in Twitter conversations about Zero Hunger in Nigeria.
- ii. To assess the sentiment (positive, negative, neutral) expressed in these conversations.
- iii. To evaluate the level of engagement (likes, retweets, comments) in tweets related to Zero Hunger.
- iv. To identify the dominant calls to action present in the tweets on Zero Hunger in Nigeria.

This study aims to contribute to the growing body of academic literature on digital communication and sustainable development, especially within the Nigerian context, by analysing social media and its role within the context of sustainable development. Analysing Twitter conversations (tweets) related to the SDG 2: Zero Hunger goal in Nigeria, focusing on dominant themes, sentiment, engagement, and calls to action. Understanding public perceptions, engagement, and discussion on the issue of hunger and food insecurity posing a threat to achieving SDG 2: Zero Hunger in Nigeria provides a snapshot of public discourse on hunger in Nigeria and offers valuable insights into the role of social media in shaping and reflecting public opinion on critical issues like food security. It also highlights the potential of social media content analysis as a tool for understanding public discourse on critical social issues. Examining the content and patterns of these Twitter conversations enables identification of the level of awareness, key themes, sentiments, the nature of discussions, and influential participants within the online discussion on Zero Hunger to provide insights into the perceptions and interactions regarding prevalent hunger and food security issue and the efforts put in place to combat hunger and malnutrition. This paper presents a content analysis of Twitter conversations related to SDG 2: Zero Hunger in Nigeria to ascertain the role of social media in promoting this crucial developmental objective. Findings from this study will be valuable to policymakers, Non-Governmental Organisations, and other stakeholders, serving as a potential guide for more effective policy-making and communication

strategies to enhance public awareness and engagement with this critical development goal. It can also inform advocacy efforts to address hunger food security challenges and achieve zero hunger.

### **Statement of the Problem**

The challenge of hunger and food insecurity in Nigeria is further compounded by socio-economic factors, political instability, and the impacts of climate change, thereby hindering progress towards achieving SDG 2: Zero Hunger. Although the importance of addressing hunger in Nigeria is evident, there is limited understanding of how Nigerians perceive and discuss this issue on social media platforms. Twitter, having more than 345 million active users in 2022, is a relevant social media tool for researching and knowing public reactions (Galiano-Coronil et al., 2023). Despite the growing use and popularity of Twitter in Nigeria, which potentially holds a wealth of information about public perceptions, concerns, and discussions on diverse topics, social issues, and occurrences, data remains relatively untapped and unanalysed in the context of Nigeria's progress towards SDG 2: Zero Hunger. There is limited research on how conversations related to SDG 2: Zero Hunger are framed within the Nigerian context. Understanding public discourse on Twitter about Zero Hunger in Nigeria can offer insights into the prevailing narratives, identify gaps in public knowledge, and potentially inform policy decisions and advocacy strategies.

This study seeks to analyse the content of Twitter conversations related to Zero Hunger in Nigeria, focusing on the key themes, sentiments, and the level of engagement. By exploring how users discuss hunger-related issues, this study aims to contribute to a more informed understanding of public perceptions and the role of social media in shaping the discourse on sustainable development in Nigeria. The study seeks to answer the question: How are the discussions on Zero Hunger in Nigeria characterised on Twitter? (i.e., the predominant themes/Hashtags and their reflection on public opinion on Zero Hunger).

### **Objectives of the Study**

The main objective of the study is to analyse the content of Twitter conversations related to SDG 2 (Zero Hunger) in Nigeria, guided by the following;

- i. To identify the dominant themes in Twitter conversations about Zero Hunger in Nigeria.
- ii. To assess the sentiment (positive, negative, neutral) expressed in these conversations.
- iii. To evaluate the level of engagement (likes, retweets, comments) in tweets related to Zero Hunger.
- iv. To identify the dominant calls to action present in the tweets on Zero Hunger in Nigeria.

### **Research Questions**

The study seeks to answer the following research questions:

- i. What are the dominant themes in Twitter conversations about Zero Hunger in Nigeria?
- ii. What is the prevailing sentiment in tweets about Zero Hunger in Nigeria?
- iii. What level of engagement do tweets about Zero Hunger in Nigeria receive?

- iv. What are the dominant calls to action in these Twitter conversations?

## LITERATURE REVIEW

### **Sustainable Development Goal 2 (Zero Hunger) in Nigeria.**

The Sustainable Development Goals (SDGs) were established by the United Nations in 2015 as a worldwide initiative to eliminate poverty, safeguard the environment, and ensure prosperity for all by 2030. Among these 17 objectives is SDG 2: Zero Hunger, which aims to "eradicate hunger, attain food security and enhanced nutrition, and foster sustainable agriculture" (Food and Agriculture Organisation, 2017). Notwithstanding these ambitious objectives, hunger persists as a significant global issue, with 690 million individuals undernourished in 2019, a statistic worsened by the COVID-19 pandemic and climate change (Food and Agriculture Organisation, 2020).

According to the World Health Organization (2024), the SDG 2 framework highlights the need for a multipronged strategy that boosts agricultural productivity, ensures sustainable food production, and guarantees everyone access to nutritious food. The goal is built on the understanding that hunger and food insecurity remain significant challenges in nations worldwide, especially in developing countries like Nigeria.

As a case in point, in Nigeria, food insecurity is one of the significant challenges facing the nation. In the 2024 Global Hunger Index, Nigeria ranks 110th out of 125 countries, with a concerning score of 28.8, indicating a profound level of hunger (Global Hunger Index, 2024). According to a report by the Federal Ministry of Budget and Economic Planning on the 27th of August 2024, more than 31.8 million Nigerians experience severe food insecurity, which is exacerbated by malnutrition among women and children in the nation. Food insecurity and severe malnutrition affect a significant portion of Nigerians. These issues are brought on by multiple factors, including systemic corruption, poverty, insecurity, and climate change (Haruna et al., 2023).

A comprehensive report by Amata 2023, *Poverty and Hunger: Any Progress on SDG Goals 1 and 2 in Nigeria*, provides valuable insights into Nigeria's progress. The report examined Nigeria's performance against five selected indicators, comparing it with four of its counterparts in Africa. These indicators are the criteria the world seeks to monitor whether the goals under SDG 2 are accomplished.

The first indicator examines the prevalence of undernourishment. It was stated that Nigeria has seen an increase in the prevalence of undernourishment since 2015. Compared to 2001, its performance in recent years has been worse.

The second indicator examines Food insecurity prevalence, which represents the population's prevalence of moderate to severe food insecurity. Severe food insecurity is more closely linked to inadequate food supply, whereas moderate food insecurity is more closely linked to the

incapacity to consume wholesome, nutritional diets consistently. It was reported that there is a high proportion of food insecurity in Nigeria, which signals low progress on this indicator.

The third indicator addresses the prevalence of childhood stunting and is concerned with stunting in children younger than five. When a child's height for age is two standard deviations or less below the median of the World Health Organization's (WHO) Child Growth Standards, it is deemed stunted. Reports reveal that stunted growth is a consequence of poor nutrition and frequent infections such as diarrhoea and dysentery, and acute lower respiratory infections. Encouragingly, Data on this indicator revealed improvement in this area, as the rate of stunting declined, with the percentage of stunted-growth children in Nigeria falling from 43.6% in 2016 to 31.5% in 2020.

The fourth indicator measures the prevalence of childhood malnutrition (wasting or overweight). Data reveals that Nigeria performs better than other African nations in this regard.

The fifth indicator focuses on genetic resources housed in facilities for conservation. The number of plant and animal genetic resources secured in medium- or long-term conservation institutions for use in agriculture and food production is the main emphasis of this indicator. The objective of this mission is to maintain the genetic diversity of seeds, produced plants, and farmed and domesticated animals and their allied wild species. The UN designated 2020 as the aim for the actualisation of this indicator, as opposed to most other indicators that have 2023 as their target. As of 2021, Nigeria possesses 7,692 distinct plant DNA samples in conservation facilities, according to data from Our World in Data. Kenya had the largest number of the five countries this survey looked at, at 51,405, while Egypt had nearly twice as many as Nigeria.

The overall analysis of Nigeria's performance in these five critical indicators reveals that the country needs to make more headway in reaching Goal 2 by 2030.

### **Social Media and Public Discourse on Development Issues**

Social media facilitates the creation of a public space where "meetings, debates, dialogues, and discussions" allow people to communicate ideas freely. Through social media, individual citizens can now readily access and acquire information on a variety of political and social topics, making them more knowledgeable and engaged participants in public discourse. Based on this improved access to information, social media offers a special online forum where people may have free and transparent discussions on shared issues. Participants present and refute arguments and claims, only stopping once they are happy that the strongest arguments have been made and are well supported. In response to stronger arguments, participants reflexively adjust their prediscursive attitudes to comprehend their interlocutors better (Ye, Xu & Zhang, 2016).

This democratisation of discourse has led to one of the most important effects of social media on public conversation: the amplification of voices that were previously ignored or unheard. Social media has made public education and social issue awareness-raising now easier than ever. While mainstream media has historically dominated the narrative and has favoured the viewpoints of the wealthy and well-connected, social media platforms have given everyone, regardless of background or social standing, a democratic forum to voice their opinions. As a result, grassroots movements have grown in popularity. One such movement is #BlackLivesMatter, which spurred crucial discussions about racial injustice and police brutality through its online activity (Faster Capital, 2024).

Social media platforms have developed into an international platform that links billions of people worldwide. As a result, this connection presents a unique opportunity to spread knowledge about the Sustainable Development Goals and encourage action in their direction. Similarly, these media are excellent for increasing awareness of the objectives. Social media also allows the community to mobilise to support the SDGs. People might be motivated to take particular actions in their favour by hashtags and viral campaigns. One initiative that supports Goals 11 (Sustainable Cities and Communities) and 12 (Responsible Consumption and Production) is the #TrashTag campaign, which promotes cleaning up public areas (Ramon, 2023).

### **Twitter Conversations on Sustainable Development Goals**

Previous studies have demonstrated the effectiveness of content analysis in examining social media conversations on Sustainable Development Goals, specifically focusing on Twitter. According to Grover et al. (2021), platforms like Twitter are empowered as tools helpful in magnifying, recording, and disseminating information such as SDGs.

Twitter is characterised as an information network made up of 140-character messages known as Tweets. It contains several features, such as hashtags, that allow researchers to analyse a sample of tweets in different ways (De Jesus Barros Costa et al., 2023). For instance, Grover et al. (2023) and Roldan-Alvarez et al. (2021) explored Twitter's role in SDG-related conversations, using content analysis to examine discussions on the platform. However, their focus and findings differed significantly.

Grover et al. (2023) conducted a study on the influence of political leaders on sustainable development goals – insights from Twitter. The study focused on how political leaders can influence sustainable development goals through Twitter by analysing social media conversations (tweets) of political leaders on Twitter to understand the topics, sentiments, and contents of their messages. The findings of the study revealed that most political leaders primarily discuss sustainable development goals (SDGs), such as "partnership for goals" and "peace, justice, and strong institutions." Many other goals, such as "clean water and sanitation," "life below water," "zero hunger," "no poverty," and "educational quality," are not being focused on. The study indicates that political leaders primarily focused on governance-related SDGs, with no attention paid to direct policy advocacy on food security and hunger reduction.

In contrast, Roldan-Alvarez et al. (2021) conducted a study on understanding discussions of citizen science around Sustainable Development Goals on X. The study looked at how citizen scientists talk about sustainable development goals over time on Twitter by analysing Twitter conversations of citizen Scientists on Sustainable Development Goals. The study found that discussions about various topics like open science, innovation, and biodiversity were discussed. Still, the topic of climate change, which relates to SDG-13, was more popular than other topics. It shows that the topic of climate change, which relates to SDG-13, is a very popular topic for citizen scientists on Twitter with no emphasis on SDG2.

While both studies have conducted content analysis of tweets related to Sustainable Development Goals and revealed that Twitter facilitates conversations on SDGs, these studies reveal that

conversations on SDG-2 remain underexplored. This suggests that while previous studies have examined Twitter conversations on SDGs globally, there is a notable gap in research explicitly focusing on Twitter conversations on Sustainable Development Goal 2 (Zero Hunger) and its role in shaping hunger related discussions in Nigeria. This study, therefore, aims to address this gap by conducting a comprehensive content analysis of tweets related to Sustainable Development Goal 2 (Zero Hunger) in the Nigerian context.

**Table 1: Summary Table of Findings in Literature on Twitter Conversations on Sustainable Development Goals.**

S/N	Author's Name/Year)	Research Title	Findings
1	Grover et al., (2021)	Influence of political leaders on sustainable development goals – insights from X	Revealed that most political leaders are primarily discussing the sustainable development goals (SDGs) on "partnership for goals" and "peace, justice and strong institutions. Many other goals, such as "clean water and sanitation," "life below water," "zero hunger," "no poverty," and "educational quality" are not being focused on
2	Roldan-Alvarez, D., Martinez-Martinez, F., Martin, E., & Haya, P. A. (2021)	Understanding discussions of citizen science around Sustainable Development Goals on X	Found that discussions about various topics like open science, innovation, and biodiversity were discussed, but the topic of climate change (SDG-13) was more popular than other topics. It shows climate change is a very popular topic for citizen scientists on X

### Twitter Impact on Policy Advocacy in Nigeria

The impact of social media, particularly Twitter, on policy advocacy in Nigeria has been examined in recent studies, particularly studies on the #End SARS protest in Nigeria. These studies demonstrate that social media platforms, particularly Twitter, not only facilitate the creation of a public space where "meetings, debates, dialogues, and discussions" allow people to communicate ideas freely but also serve as tools for mobilising citizens and shaping policy advocacy.

Both Abimbade et al. (2022) and Okoye and Tokpo (2023) provide insights into Twitter's role in mobilizing Nigerian Youths and its implications for policy advocacy.

Abimbade et al. (2022) in their study on "Millennial activism within the Nigerian Twitter space: From mobilization to social action of #EndSARS protest". The study explored how Nigerian Youths utilized Twitter to mobilize and organize the #EndSARS protest against police brutality. The study employed a qualitative analysis of tweets between September 11 and October 11, 2020. The findings of the study revealed the various tactics employed by Nigerian Youths to influence

the government’s decision to disband the SARS Unit of the Nigerian Police Force. The tactics include the use of hashtag activism, visual evidence sharing, collaboration with social media influencers, and resource mobilization.

Similarly, Okoye and Tokpo (2023), in their study on “The Role of Social Media in Mobilizing Nigerian Youths during the #EndSARS Protests: Implications for Policy and Activism”. The study investigated how Nigerian youth effectively utilized platforms like Facebook, X (Twitter), WhatsApp, and Instagram to organize and sustain their peaceful protests. The findings of the study revealed the effectiveness of social media platforms as organizing tools used to coordinate meeting points for protesters, crowdfund resources for the movement, and attract international support and sympathy for the cause. The study also emphasized how social media was utilized to pressure the Nigerian government to act, despite initial opposition to their demands on disbanding the SARS Unit of the Nigerian Police Force.

The study, therefore, concluded that social media played a crucial role in mobilizing and inspiring young Nigerians to take part in the #EndSARS protests. These studies reinforce the argument that social media, particularly Twitter, plays a significant role in policy evaluation and advocacy, reinforcing its potential as a tool for advocating food security.

**Table 2: Summary Table of Findings in Literature on Twitter Impact Advocacy in Nigeria**

S/N	Author’s Name/Year	Research Title	Findings
1	Abimbade, O., Olayoku, P., & Herro, D. (2022)	Millennial activism within the Nigerian Twitter space: From mobilisation to social action of #EndSARS protest	The study's findings revealed the various tactics employed by Nigerian Youths to influence the government’s decision to disband the SARS Unit of the Nigerian Police Force. These tactics include hashtag activism, visual evidence sharing, collaboration with social media influencers, and resource mobilisation.
2	Okoye, A. C., & Tokpo, C. E. (2023).	The Role of Social Media in Mobilizing Nigerian Youths during the #EndSARS	The study's findings revealed the effectiveness of social media platforms as organising tools used to coordinate meeting points for protesters, crowdfund resources for the movement, and attract international support and sympathy for the cause. The study also emphasised how social media was utilised to pressure the Nigerian government to act despite initial opposition to their demands on disbanding the SARS Unit of the Nigerian Police Force. The study, therefore, concluded that social media played a crucial role in mobilising and inspiring young Nigerians to take part in the #EndSARS protests.



### **Theoretical framework**

This study is grounded on the theoretical framework, agenda-setting theory propounded by McCombs and Donald Shaw in 1972. The theory posits that mass media has the power to transfer the salience of news on their news agenda to the public agenda. The basic assumption of the theory, according to Dearing and Rogers (1998), is that the news media are not mirrors of reality. Still, rather, they filter and shape the reality to be believed by the public. The prominence given by media to certain events and issues makes the public perceive those issues to carry more importance and weight than others. The media is said to have a strong influence on what people think about it. This corroborates the saying by Benard Cohen 1963 that "the press may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about" Lippmann (1922).

According to the agenda-setting theory, the communications media play an important role in defining issues that attract the attention of governments and international organisations and influencing public opinions towards specific issues because of their ability to recognise and publicise issues (Blanton & Kegley, 2016; Brosuis & Haas, 2011). This explains that the media plays a crucial role in shaping public perception by highlighting certain issues. In the context of this study, agenda-setting theory provides a framework for examining how Twitter conversations about SDG 2 (Zero Hunger) can influence both public perception and policy decisions in Nigeria.

### **Empirical review**

Tayeb (2023) examined Planning activism: using social media to claim marginalised citizens' right to the city. The findings revealed the informal role of planners as activists working outside power structures to champion marginalised citizens' rights to the city. Like human rights activists, planning activists amplify marginalised voices in decision-making. Given the impact of Information Technology and social media on activism, this paper examines how these tools can support planners in advocating for citizens' participation and appropriation rights.

Opeibl (2019) examined The Twittersphere as a political engagement space: A study of social media usage in election campaigns in Nigeria. This study examines how social media networks are changing the ways party politics and election campaigns are conducted in Nigeria, especially how these technologies are encouraging new ways of wooing voters and engaging ordinary citizens. Specifically, this study focuses on the growing awareness of the use of Twitter for election campaigns and civic engagement between 2012 and 2015.

Thompson et al. (2010), Climate change and food security in sub-Saharan Africa: a systematic literature review. Sustainability. Findings revealed that the impact on food security will be of great significance and may be defined as being composed of three components: availability, access, and utilisation. To further investigate the link, a systematic literature review was done of the peer-reviewed literature related to climate change and food security, employing the realist review method. Analysis of the literature found consistent predictions of decreased crop productivity, land degradation, high market prices, negative impacts on livelihoods, and increased malnutrition. Adaptation strategies were heavily discussed as a means of mitigating a situation of severe food

insecurity across the entire region. This is linked to issues of development, whereby adaptation is essential to counteract the negative impacts and improve the potential of the population to undergo development processes. Findings additionally revealed a gap in the literature about how nutrition will be affected, which is of importance given the links between poor nutrition and lack of productivity.

Dambo (2023) investigated Nigeria's #EndSARS movement and its implication on online protests in Africa's most populous country. Findings revealed that modern tools of connectivity have afforded disadvantaged youth across the globe the opportunity to collectively share and curate challenges and build up strategies to protest marginalisation. This argument is, however, sharply divided between tech-optimists, who argue that social media removes all forms of barriers and empowers average members of society and tech-pessimists, who argue that social media discourages people from actively seeking change. This article wades into this discourse by looking at the claims of police abuse by Nigerian youth on social media. For decades, police abuse of powers has remained a subject of interest in academic and human rights circles. Online social movements have perhaps amplified this interest. In Nigeria, this abuse is well documented in the #EndSARS campaign, which has lasted for three years with little success. In disparity with most academic studies that investigate the success of online movements, this study critically inspects the limitation of the #EndSARS campaign by assessing how Nigeria's political environment can serve as a possible hindrance to successful movements. This research, therefore, answers two questions: What are the dominant themes in Nigeria's #EndSARS campaign? What are the limitations to activism in Nigeria? Papacharissi (2016) conducted research on affective publics and structures of storytelling: Sentiment, events and mediality. Findings evaluated that storytelling is a very important aspect of building strong communication

## **METHODOLOGY**

This study employs content analysis to systematically examine "X" conversations related to SDG 2: Zero Hunger in Nigeria, providing a comprehensive understanding of the discourse surrounding food security. The focus is on publicly available tweets referencing key terms related to hunger and food security in Nigeria. A purposive sampling strategy was adopted to ensure that the collected tweets were relevant to the research objective. Tweets were selected based on their reference to Zero Hunger and food security, incorporating discussions from individual users, NGOs, government agencies, and news organisations. This approach allowed for a diverse range of perspectives on the issue. The study timeframe of April–June 2024 was specifically chosen because this period coincided with a sharp rise in food inflation in Nigeria, exacerbating hunger and food insecurity. Analysing Twitter discussions during this period provides insights into how public discourse evolved in response to worsening economic conditions.

A keyword-based search strategy was employed to collect relevant tweets. Carefully selected search terms and hashtags ensured comprehensive data collection. The keywords included: "*Zero Hunger Nigeria*," "*Sustainable Development Goal 2 Nigeria (SDG 2 Nigeria)*," "*Food Security Nigeria*," "*End Hunger*," "*Hunger in Nigeria*," and "*Malnutrition Nigeria*." Tweets and retweets containing at least one of these terms, written in English and originating from or mentioning Nigeria, were included in the dataset.

For sentiment analysis, a combination of manual coding and computational techniques was used. Manual coding involved trained researchers categorising tweets as positive, negative, or neutral, ensuring a nuanced interpretation of textual data. To ensure inter-coder reliability, multiple coders analysed a subset of tweets, and Cohen's kappa statistic was calculated to measure agreement between coders. A kappa score of 0.80 or higher was considered acceptable, ensuring consistency in sentiment classification. The coding scheme was developed inductively, aligning with the study's focus. Tweets were categorised based on key themes (e.g., food security, malnutrition, agricultural practices), sentiment (positive, negative, neutral), engagement metrics (likes, comments, retweets), and calls to action (yes/no). This methodological approach provides a robust framework for analysing social media discourse on Zero Hunger in Nigeria.

## **RESULT OF ANALYSIS**

### **#Critique of Government Policies#**

Twitter debates often centre on government hunger relief efforts. Many tweets criticise Nigeria's food security policy, including the Agricultural Transformation Agenda and Anchor Borrowers' Programme. Corruption, policy conflicts, and inadequate agricultural support are routinely decried using #GovernmentFailure and #HungerCrisis. During fuel subsidy withdrawal debates in mid-2023, Twitter users stressed that rising gasoline prices increased food expenses, aggravating hunger and poverty in at-risk communities. These debates highlight governance and accountability challenges in sustainable food systems. Adebayo and Ojo (2022) claim that Twitter debates on government policies often express unhappiness and rally citizens to support policy changes.

### **#Climate and Food Security#**

Twitter debates regarding Nigerian hunger often include climate change's impact on food security. Users generally link droughts, flooding, and irregular weather with lower agricultural productivity and higher hunger rates. Tweets with hashtags like #ClimateCrisis and #SustainableAgriculture emphasise climate-resilient agriculture and sustainable development. The Nigerian Meteorological Agency (NiMet) and environmental advocacy groups share weather forecasts, climate risk assessments, and agriculture adaptation plans in these meetings. Climate activists tweeted, "Climate change is causing hunger in Nigeria." Agricultural producers need irrigation infrastructure, drought-resistant crops, and renewable energy. According to scholars Adeola and Ajani (2023), extreme weather occurrences disproportionately affect rural farmers, who make up a large section of Nigeria's population.

### **#Community and grassroots initiatives#**

Twitter discussions stress that Zero Hunger requires grassroots and community-driven activities. Many local organisations, cooperatives, and people fighting hunger share their stories. These tweets often include photographs of food distribution, school feeding, and urban agriculture projects with hashtags like #LocalSolutions and #FeedingNigeria. We can eliminate hunger progressively, as a local NGO tweeted, "We provided sustenance to over 500 families in rural Kaduna today." Support our initiative! Community resilience and creativity inspire others to

participate in similar projects like #ZeroHungerNigeria. Empirical research shows that community-based food security solutions work. Localised interventions often outperform national programmes because they meet local needs, according to Eniola and Olajide (2022).

### #Disinformation and Fake News#

Twitter promotes Zero Hunger but also spreads misinformation. Some debates misrepresent Nigeria's hunger or the effectiveness of certain programmes. Viral tweets may exaggerate urban hunger while ignoring rural food insecurity, affecting public views. Rebuttal tweets often use #FakeNews and #FactCheck. According to Ojebode et al. (2022), social media disinformation promotes scepticism and distracts from evidence-based solutions to societal challenges. In response, fact-checking initiatives like Dubawa and Africa Check monitor and correct false food security claims in Nigeria, emphasising the need for accurate information in attaining Zero Hunger.

### #Youth Engagement and Digital Advocacy #

Twitter discussions about Zero Hunger focus on youth engagement. Nigerian youths, a large segment of Twitter users, promote creative ideas and hunger eradication efforts through digital advocacy campaigns. Youth have advanced agricultural innovation, used technology, and helped alleviate hunger, according to many tweets. A young entrepreneur tweeted, "I established a technology-oriented farm in Ibadan to address food insecurity." Nigerian youth can lead #ZeroHunger with creativity and resolve! Discussing #AgriTech and #YouthInAction shows how youth-driven projects may achieve food security. Nigerian youth define digital advocacy trends, and their active engagement can boost social campaigns, according to Ekong and Olanrewaju (2023).

### Dominant Perspectives in Tweets Regarding Zero Hunger in Nigeria

**Table 3: Sentiment Trends in Twitter Discussions on Zero Hunger in Nigeria**

Sentiment Type	Percentage	Key themes	Example Tweets	Supporting Studies
Positive (Optimism & Advocacy)	35%	Support for NGOs and grassroots movements - Success stories in food distribution - Agricultural innovations and urban farming - Youth-led Initiatives	"Today, we provided sustenance to 1,000 families in Kano. Together, we can eradicate hunger in Nigeria. #ZeroHunger #EndHungerNigeria."	Liu et al. (2021): Engaging content boosts audience approval.

Negative (Exasperation & Censure)	45%	Criticism of government policies and corruption - Inflation and economic hardships - Conflict-related food insecurity - Structural inefficiencies in food distribution	"Twenty-five million Nigerians are experiencing hunger while politicians amass wealth. This constitutes a national disgrace! #HungerCrisis #ZeroHunger."	Adebayo & Ojo (2022): Political instability is linked to food shortages.
Neutral (Information & Awareness)	20%	Dissemination of statistics and reports -Policy discussions and expert opinions - News articles and awareness campaigns	A recent UN report indicates that Nigeria continues to be among the most food-insecure nations. Immediate intervention is required. #ZeroHunger #FoodSecurity.	Hermida (2021): Twitter serves as an "ambient news environment."

### How engaging are Nigerian Zero Hunger tweets?

#### Retweets: Enhancing the Communication:

Retweets were used to measure Zero Hunger tweets' reach and amplification. More tweets with appealing images, infographics, or emotional language were tweeted. For instance, A video of starving youngsters in northern Nigeria from @UNICEF\_Nigeria received over 5,000 retweets in 48 hours. The hashtag #ZeroHungerNigeria raised awareness. A tweet from @FmardNg about rural food aid distribution earned 3,200 retweets, indicating public engagement in government activity. Retweets often showed users' intent to share information or support a cause, boosting advocacy campaigns. Likes indicate endorsement. Likes indicate user approval of tweets. Positive or solution-focused tweets were much more liked than those about problems. As an example, @AkinAdesina's tweet praising a youth-led agricultural endeavour earned 12,000 likes, suggesting widespread support for grassroots efforts. While engaging, tweets criticising government inactivity garnered fewer likes, indicating a more polarised audience. Response: Dialogue promoted Responses enabled discussion and critique. Tweets with questions or opinions received more responses. For instance, more than 1,000 individuals responded to @WorldFoodProgramme's tweet asking, "What innovative strategies can Nigeria implement to address hunger?" with policy and community-driven ideas. Tweets criticising government policy often sparked heated debates with mixed answers.

### **Hashtag Campaigns: Enhancing Engagement**

hashtag campaigns and structuring debates are increasing visibility, and hashtags have increased participation. Campaign hashtags like #EndHungerNow and #HopeForHunger focused discussions. Tweets with many hashtags were more engaging. As an example: In one week, @ActionAidNG's, #ZeroHungerNigeria and #SDG2 campaign received over 50,000 retweets, likes, and comments. Generic hashtags like #FoodSecurity, while relevant, had less response due to their scope.

### **Prevalent calls to action in these Twitter discussions**

Many tweets requested donations from Nigerian hunger relief agencies. Opening and urgency were conveyed via tweets linking to fundraising platforms or mobile payment methods. Illustrations include: "Participate in the battle against hunger! Contribute today to nourish a child in need. Every contribution matters. #ZeroHungerNigeria #EndHungerNow" (Tweet by Action Aid). "Children suffering from malnutrition in northern Nigeria require assistance. Contribute through the provided link to effect change. #SDG2 #FoodSecurityNigeria"(Tweet@SaveTheChildrenNG). Emotional language and imagery in donation appeal generate empathy and prompt action. Verified accounts and influencers often share tweets containing contribution links, which boost engagement.

### **Promote Legislative Reform**

Many tweets called for policy changes to address Nigeria's systematic hunger. International institutions and national and municipal governments were urged to act. For instance: Sustainable agricultural policies are needed for food security in Nigeria. Ask our authorities to act now. Nigeria - Zero Hunger, Policy Change Tell your MPs to priorities hunger elimination in the 2025 budget. Together, we can end hunger. #EndHungerNow Such petitions often contained statistics to stress hunger and recommended practical solutions like improved agricultural subsidies or distribution networks.

### **Engagement in Community Activities and Voluntary Service**

A major theme was community engagement through volunteering or grassroots activities. These tweets stressed communal action and supported local food drives and awareness campaigns. Illustrations include: Participate in change! Help out at food distribution centres this weekend. Together, we can fight hunger. @FmardNg tweeted #FoodSecurityNigeria. "Participate in our community farming initiative to promote sustainable agriculture and alleviate hunger in your region. Direct message us for further information. #ZeroHungerNigeria" (Tweet @RuralDevNG). Youth responded to community participation calls to action that promoted empowerment and concrete results.

### **Public Awareness Campaigns**

Another important call to action was raising awareness of hunger. These tweets inspired individuals to share information, talk, and attend webinars and conferences. Cases include: "It is estimated that 25 million Nigerians experience food insecurity. Disseminate this message to raise awareness. #ZeroHungerNigeria #EndHungerNow" (Tweet @WorldFoodProgramme). Join our Twitter Space debate on Nigerian hunger this Friday at 7 PM. Let's solve problems together! @ActionAidNG tweeted #SDG2 #FoodSecurityNigeria. Infographics and movies helped explain complex topics in awareness campaigns.

### **Assistance for Regional Agricultural Producers**

Support for local farmers was a recurring theme. These tweets linked hunger elimination to sustainable agriculture and encouraged local food purchases. Illustrations include: "Support local agriculture! Purchase regional produce to enhance food security and mitigate hunger. #ZeroHungerNigeria #SupportLocal" (Tweet @AgriDevNG). "Investing in smallholder farmers is essential for eradicating hunger in Nigeria. Advocate for enhanced funding and support today. #SDG2" (Tweet @FAONigeria). These demands aligned with discussions on agriculture's role in Zero Hunger and economic growth and self-sufficiency audiences.

### **Campaign hashtag interaction**

Promote user involvement using hashtags was another key strategy. For visibility and momentum, campaigns often request retweets, likes, or comments. For instance: "Retweet if you assert that no Nigerian should retire for the night in hunger. Let us amplify this message. #ZeroHungerNigeria #EndHungerNow" (Tweet @EndHungerNG). "To show hunger solidarity, tweet #SDG2 today. We can end hunger together." (UNNigeria tweet). These calls to action fostered community and shared responsibility, often resulting in hashtags and public discussions.

## **DISCUSSION OF FINDINGS**

Twitter serves as an effective platform for discussing Zero Hunger in Nigeria, capturing a wide range of themes that demonstrate the complexity of food security issues. Prior research has emphasised the role of social media in policy discussions and public engagement. For instance, Tayeb (2023) argue that social media facilitates activism and policy discourse, amplifying marginalized voices in governance matters. Similarly, Opeibi, (2019) found that Twitter has been instrumental in mobilizing citizens for social causes in Nigeria, reinforcing its potential as a tool for advocating food security. The Twitter discourse surrounding Zero Hunger in Nigeria includes policy lobbying, climate challenges, grassroots movements, and youth involvement. Studies have shown that social media plays a significant role in policy evaluation and advocacy. The climate crisis is a key concern in these discussions, aligning with findings by Thompson et al. (2020), who highlight the devastating impact of climate change on food security in sub-Saharan Africa. Sustainable funding and governance issues are also frequently debated, aligning with prior studies that stress the importance of long-term investments in agricultural resilience (FAO, 2021).

Regarding sentiment, tweets on Zero Hunger in Nigeria range from optimism to frustration. Positive discussions often celebrate grassroots efforts and international assistance, reflecting findings from Thompson et al. (2023), who highlight the role of local NGOs and global partnerships in tackling hunger. Conversely, negative sentiments on Twitter reveal widespread dissatisfaction with government policies, mirroring the conclusions of Uwalaka & Watkins (2018), who found that public frustration is a recurring theme in Nigerian social media discussions on governance and social welfare. Advocacy and storytelling significantly contribute to positive engagement in these discussions. Research suggests that storytelling can enhance social media activism by creating emotional connections that drive policy changes (Couldry & Mejias, 2020). Therefore, strategic communication efforts on Twitter could further amplify advocacy and drive policy actions toward achieving Zero Hunger in Nigeria.

### **Conclusion**

This study shows that Twitter is a thriving forum for Zero Hunger discourse in Nigeria, revealing public opinions, critiques, and ambitions about food insecurity and hunger elimination. The dialogue emphasizes advocacy and awareness, using emotional content to inspire action. Despite praise for grassroots and community-led hunger relief, government policies and structural inefficiencies highlight widespread resentment and frustration. Sustainable methods and accurate information transmission are needed to address climate change and misinformation. Positive attitudes suggest hope for collaborative projects, while negative sentiments emphasise the need to address governance, funding, and socioeconomic inequality.

Finally, Future research should examine the impact of government food security policies, such as the Agricultural Transformation Agenda and Anchor Borrowers' Programme, to assess their effectiveness in addressing hunger in Nigeria. Studies should also explore how social media discourse influences policy changes and whether online advocacy translates into concrete governmental action. The role of climate change in food security remains crucial, requiring further investigation into adaptive agricultural strategies. Additionally, research on misinformation in hunger-related discussions can help address public scepticism. Lastly, the effectiveness of digital advocacy and youth-led initiatives in driving food security reforms warrants deeper empirical analysis.

### **REFERENCES**

- Abimbade, O., Olayoku, P., & Herro, D. (2022). Millennial activism within Nigerian Twitterscape: From mobilization to social action of #ENDSARS protest. *Social Sciences & Humanities Open*, 6(1), 100222. <https://doi.org/10.1016/j.ssaho.2021.100222>
- Adebayo, A., & Ojo, S. (2022). Food security and governance challenges in Nigeria. *African Journal of Political Science*, 11(2), 23–41. <https://doi.org/10.1116.2022>.
- Adeola, A., & Ajani, T. (2023). Climate change and food security in sub-Saharan Africa: Implications for policy. *Journal of Agricultural Economics*, 14(3), 89–104.



- Admin. (2024). 31.8m Nigerians suffering from acute food insecurity. *Ministry of Budget and Economic Planning*. <https://nationalplanning.gov.ng/31-8m-nigerians-suffering-from-acute-foodinsecurity/>
- Amata, D. (2023). Poverty and hunger: Any progress on SDG goals 1 and 2 in Nigeria? Dataphyte. <https://www.dataphyte.com/latest-reports/poverty-and-hunger-any-progress-on-sdgoals1and-2-in-nigeria/>
- Atukunda, P., Eide, W. B., & Kardell, K. R., Iversen, P. O., & Westerberg, A. C. (2021). Unlocking the potential for achievement of the UN Sustainable Development Goal 2 – ‘Zero Hunger’ – in Africa: targets, strategies, synergies and challenges, *Food & Nutrition Research*, 65: 7686 - <http://dx.doi.org/10.29219/fnr.v65.7686>.
- Blanton, S. L., & Kegley, C. W. (2016). *World Politics: Trend and Transformation, 2016 - 2017*. Cengage Learning.
- Brosius, H., & Haas, A. (2011). Agenda setting. *Communication*. <https://doi.org/10.1093/obo/9780199756841-0021>
- Dambo, T. H., Ersoy, M., Auwal, A. M., Olorunsola, V. O., Olonode, A., Arikewuyo, A. O., & Joseph, A. (2022). Nigeria's# EndSARS movement and its implication on online protests in Africa's most populous country. *Journal of Public Affairs*, 22(3), e2583.
- De Jesus Barros Costa, A., Da Silva Gomes, S. M., Kouloukoui, D., De Marcellis-Warin, N., & Warin, T. (2023). Twitter conversations on sustainable development goals in Brazilian public universities using natural language processing. *Discover Sustainability*, 4(1). <https://doi.org/10.1007/s43621-023-00170-6>.
- Ekong, J., & Olanrewaju, K. (2023). Youth digital advocacy in Nigeria: A case study of social media campaigns. *Journal of Communication and Society*, 10(1), 45–67.
- Eniola, O., & Olajide, R. (2022). Community-based approaches to tackling hunger: Evidence from Nigeria. *Food Policy and Development Review*, 18(4), 123–138.
- FAO. (2022). *The state of food security and nutrition in the world*. Food and Agriculture Organization of the United Nations.
- Faster capital. (2024). Opinionated Society: The Impact of Social Media on Public Discourse. <https://fastercapital.com/content/Opinionated-Society--The-Impact-of-Social-Mediaon-Public-Discourse.html>. <https://doi.org/10.1016/bs.af2s.2023.07.00>.
- Food and Agriculture Organization. (2017). *The State of Food Security and Nutrition in the World 2017: Building Resilience for Peace and Food Security |Policy Support and Governance*. [https://www.fao.org/policy\\_support/tools-and-publications/resources/details/en/c/1107528/](https://www.fao.org/policy_support/tools-and-publications/resources/details/en/c/1107528/)

- Galiano-Coronil, A., Ortega-Gil, M., Macías-Varela, B., Ravina-Ripoll, R., (2023). An approach for analysing and segmenting messages about the SDGs on Twitter from the perspective of social marketing. *International Review on Public and Non-profit Marketing* (2023) 20:635–658 <https://doi.org/10.1007/s12208-023-00369-3>
- Global Hunger Index. (2024). Nigeria. Global Hunger Index (GHI) - Peer-reviewed Annual Publication Designed to Comprehensively Measure and Track Hunger at the Global, Regional, and Country Levels. <https://www.globalhungerindex.org/nigeria.html>
- Grover, P., Kar, A.K., Gupta, S. & Modgil, S. (2021), "Influence of political leaders on sustainable development goals – insights from twitter". *Journal of Enterprise Information Management*, Vol. 34 No. 6, pp.1893-1916. <https://doi.org/10.11018/JEIM-07-2020-0304>.
- Haruna, U. A., Luther, M. L., Zubairu, M., Abonyi, E. E., Dibal, S. M., Gegele, T. A., Gambo, J., Garba, S. A., Musa, S. S., Manirambona, E., & Lucero-Prisno, D. E. (2023). Food loss and waste in Nigeria: Implications for food security and environmental sustainability. In *Advances in food security and sustainability* (pp. 217–233). <https://doi.org/10.1016/bs.af2s.2023.07.003>.
- Lippmann, W. (1922): Public Opinion. Free Download, Borrow, and Streaming: Internet Archive. (1922). Internet Archive. <https://archive.org/details/publicopinion00lippgoog/page/n15/mode/1up>
- Liu, X., et al. (2021). Emotional appeals in social media advocacy: Evidence from global campaigns. *Social Media & Society*, 7(4), 1–12.
- McCombs, M. E., & Shaw, D. L. (1972). The Agenda-Setting function of mass media. *Public Opinion Quarterly*, 36(2), 176. <https://doi.org/10.1086/267990>
- Ogunyemi, J. J., & Olubiyi, I. A., (2023). Attaining SDG 2 (Zero Hunger) in Nigeria: The Role of the Plant Variety Protection Act. *ABUAD Law Journal (ALJ)*, Vol. 11 (1), P.1-16. <https://doi.org/10.53982/alj.2023.1101.01-j>
- Ojebode, A., et al. (2022). Misinformation and its impact on social development in Nigeria. *Journal of Media Studies*, 14(2), 88–101.
- Ologunbe, O. J & Taiwo, O. E. (2025). The impact of digital communication on governance, political dynamics, and leadership; A case study of the Nigerian people and Process Munich Personal REPEC Archive. <https://mpra.ub.uni-muenchen.de/123310/>
- Okoye, A. C., & Tokpo, C. E. (2023). The Role of Social Media in Mobilizing Nigerian Youths during the #EndSARS Protests: Implications for Policy and Activism. *Niger Delta Journal of Library and Information Science*, 2(1), 15-30. [ndjlis.fuotuo.ke.edu.ng. https://doi.org/10.5281/zenodo.11218075](https://doi.org/10.5281/zenodo.11218075)

- Opeibi, T. (2019). The Twittersphere as political engagement space: A study of social media usage in election campaigns in Nigeria. *Digital Studies/Le champ numérique*, 9(1). Digitalstudies.org
- Oshionebo, B. & Okoronkwo, K., (2023). Analysis of the Impact of Twitter on National Security. *Creative Artists: A Journal of Theatre and Media Studies*. 17(1),
- Papacharissi, Z. (2016). Affective publics and structures of storytelling: Sentiment, events and mediality. *Information, communication & society*, 19(3), 307-324. Findings reevaluated that story telling is a very important aspects to building a stringer communication
- Ramón, J. (2023, November 21). Can social media contribute to the SDGs? - BBK Kuna / The social innovation space in Bizkaia. BBK Kuna / the Social Innovation Space in Bizkaia. <https://kuna.bbkeus/en/pueden-las-redes-sociales-contribuir-en-los-odss/>
- Roldan-Alvarez, D., Martinez-Martinez, F., Martin, E., & Haya, P. A. (2021) Understanding discussions of citizen science around sustainable development goals in Twitter. *IEEE Access*, 9, 144106–144120. <https://doi.org/10.1109/access.2021.3122086>
- Smith, J. A. (2020). The role of social media in shaping public discourse. *Media and Communication Studies*, 5 (4), 112-130. <https://doi.org/10.1002/mcs.2020.05.04.112>
- Tayebi, A. (2013). Planning activism: using social media to claim marginalized citizens' right to the city. *Cities*, 32, 88-93. <https://doi.org/10.1016/j.cities.2023.03.011>
- Thompson, H. E., Berrang-Ford, L., & Ford, J. D. (2010). Climate change and food security in sub-Saharan Africa: a systematic literature review. *Sustainability*, 2(8), 2719-2733. <https://doi.org/10.10118> access 2010
- World Health Organization. (2024). The State of Food Security and Nutrition in the World 2024: Financing to end hunger, food insecurity and malnutrition in all its forms. <https://www.who.int/publications/m/item/the-state-of-food-security-and-nutrition-in-the-world-2024>
- Ye, Y., Xu, P., & Zhang, M. (2016). Social media, public discourse and civic engagement in modern China. *Telematics and Informatics*, 34(3), 705–714. <https://doi.org/10.1016/j.tele.2016.05.021>