

# Information Pollution, New Technologies and Extremism in West Africa

A Diagnostic Analysis



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# About Us

Brain Builders Youth Development Initiative (BBYDI) is a female-led non-profit organization dedicated to promoting good governance, youth civic engagement and sustainable communities. As a youth-led organization, our team harnesses the power of technology, conducts comprehensive research, and utilizes data-driven methodologies to enhance the information landscape in Nigeria. In the last eight years, we have reached over 500,000 Nigerians across the 36 States of the Federation through a series of civic tech projects. Notably among them remains our;

1. **YvoteNaija Platform**, a civic tech tool that is aimed at enhancing youth participation in election and governance.
2. **Conflict Report Platform**, a UNDP-funded civic tech and community-inclined strategy to address violent extremism in the north-central region of Nigeria, we adopted the EWER (Early Warning Early Response) model to detect and de-escalate incidents that could lead to violent conflict.
3. **Election Violence Incidence Tracker (EVIT)**, is a citizen-focused platform created to understand, analyze and track violence incidents before, during, and after elections.
4. **KnowCovid19 Project**, a U.S.-funded innovative initiative countering information manipulation, fact checking, and building digital media literacy/resilience and provide citizens with accurate and reliable information during the COVID-19 pandemic.

In 2022, we launched a Fact-Check Elections platform in an attempt to flatten the curve of information manipulation and misinformation thereby promoting peace and safeguarding Nigeria's democracy through innovative engagement with young people, voting-age individuals, traditional media professionals and universities.



# 1045

young journalists across all 36 states  
in Nigeria, empowering them with  
accountability and transparency tools.

# Abbreviations

ACSS	Africa Center for Strategic Studies
AI	Artificial Intelligence
CAMRI	Communication & Media Research Institute
CDD	Center for Democracy and Development
COGASEN	Cote d'Ivoire, Ghana, Senegal, Nigeria
CSO	Civil Society Organization
DFRILAB	Atlantic's Council Digital Forensic Research Lab
DiA	Democracy in Africa
ECOWAS	Economic Community of West African States
GenAI	Generative AI (Artificial Intelligence)
IMMDH	Information Manipulation, Misinformation, Disinformation, and Hate speech
IPOB	Indigenous People of Biafra
ISWAP	Islamic State of West Africa Province
ISS	Institute of Security Studies
MIL	Media & Information Literacy
NGO	Non-Governmental Organization
RIA	Research ICT Africa
UNDP	United Nations Development Programme
WVS	World Values Survey

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# Foreword



**Abideen Olasupo**

Global Director, BBYDI

In the current digital era, our societies are seriously threatened by the spread of misinformation, disinformation, and information manipulation, especially in West Africa. These kinds of "information pollution" aggravate security issues and health crises in addition to undermining democratic processes. The rise of social media and artificial intelligence (AI) technology has further facilitated the dissemination of false information, resulting in hate speech, violent extremism, and heightened insecurity within our local community.

Our research explores the information pollution situation in selected West African countries including Côte d'Ivoire, Ghana, Senegal and Nigeria with the goal of shedding light on this complex problem. We investigate a number of topics using a thorough methodology, such as popular opinion, technology impacts, state actors, fact-checking procedures, and current regulations. By doing this, we hope to offer insights that can contribute to an effective fight against information pollution.

Our analysis shows that the media play a major role in spreading polluted messages, with politicians, media outlets, and individuals serving as the main sources of misinformation. We also draw attention to the different legal frameworks that exist in the selected countries, highlighting the necessity of political will and popular support for these frameworks to be properly enforced.

Furthermore, in order to combat misinformation, our research highlights the significance of developing cooperative collaborations, critical media literacy, and moral sensibility. Since information disorder is multidimensional, we support a comprehensive strategy that includes fact-checking projects, public education efforts, and legal reforms.

It is our goal that our recommendations would spur action and constructive change in the fight against information pollution in West Africa. By working together, we can preserve the integrity of our information-sharing networks and protect our fundamental human rights.

*Abideen Olasupo*





# Executive Summary

Information pollution as reflected in its various formats such as misinformation, disinformation, malinformation and information manipulation have consequential effects on a lot of problems confronting each of the countries in the region, individually as well as those problems with wider inter-border implications such as health emergencies and security concerns. This does not also leave out attempts to entrench democratic culture and processes. The emergence of social media platforms and the use of AI technologies has also made the creation, distribution and wider spread of all varieties of information pollution easier in the sub-region leading to hate speech, violent extremism and deepened insecurity in the countries of the Lake Chad region.

Using a multi-faceted research approach, this research aims to investigate the landscape of information pollution in West Africa by addressing six key questions. Firstly, it seeks to assess the level of

collaboration among academia, think tanks, and media outlets in forming a cohesive response against information pollution. Secondly, it aims to explore public perceptions and attitudes towards information pollution in the region through surveys, informing evidence-based advocacy strategies. Thirdly, it examines the utilization of new technologies for disseminating information pollution across mainstream media and digital platforms, and proposes regulatory adaptations to counter these tactics. Fourthly, the research identifies key actors involved in information pollution, delving into their motivations, strategies, and networks to inform targeted intervention efforts. Furthermore, it investigates the nature and dynamics of fact-checking practices specific to information pollution in West Africa, advocating for the establishment of a more robust fact-checking ecosystem. Lastly, it assesses existing policies and laws addressing information pollution, identifying gaps and proposing new policy

Using a multi-faceted research approach, this research aims to investigate the landscape of information pollution in West Africa by addressing six key questions. →

- 1  Assess collaboration among academia, think tanks, and media against information pollution.
- 2  Explore public perceptions via surveys for evidence-based advocacy.
- 3  Examine tech use in spreading pollution and propose regulatory solutions.
- 4  Identify key actors, motivations, and strategies for targeted interventions.
- 5  Investigate fact-checking dynamics for a stronger ecosystem.
- 6  Evaluate current policies, propose enhancements for effective mitigation.

frameworks to enhance the regulatory environment and mitigate its impact effectively. Through these inquiries, the research seeks to provide comprehensive insights into combating information pollution in West Africa.

Our analysis of fact-check organizations including Dubawa, Africa Check, FactCheck Hub, and PesaCheck revealed that between 2017 and 2023, various media platforms such as Facebook, Twitter, WhatsApp, newspapers, blogs, YouTube, websites, television, and

LinkedIn were predominant channels for disseminating polluted messages. Politicians, media outlets, and individuals were identified as the primary conveyors of such misinformation. Fact-checking companies relied on digital tools like Google Image Reverse Search, TinEye, Yandex Reverse Image Search, and InVID to validate claims, particularly in the realms of politics, elections, security, health, and personalities.

Furthermore, our examination of legal provisions across the countries showed a



[Ghana and Nigeria demonstrated a stronger public understanding of information pollution compared to Cote d'Ivoire and Senegal, where the populace tended to equate it primarily with information manipulation.](#)

varied landscape. Nigeria exhibited the most robust legal framework with seven instruments targeting information pollution, followed by Cote d'Ivoire with three, while Ghana and Senegal had one each. However, it became evident that effective mitigation of information pollution requires more than just legal frameworks; political will and public acceptance of enforcement are crucial factors. Ghana and Nigeria demonstrated a stronger public understanding of information pollution compared to Cote d'Ivoire and Senegal, where the populace tended to equate it primarily with information manipulation. Specifically, the Ivorian and Senegalese public displayed heightened interest in information manipulation, indicating a significant concern within these societies regarding the proliferation of misinformation. Overall, our data suggests a substantial public interest in misinformation and information manipulation across the studied countries, with varying degrees of association with extremism, potentially hinting at a risk of violence in environments saturated with disordered information.

We put forward a number of recommendations to combat information pollution in West Africa encompassing a comprehensive approach. Firstly, there is a call to enhance moral sensibility by integrating ethical consciousness into

strategies aimed at countering disordered information effectively. Secondly, galvanizing political will is emphasized to ensure the enforcement of robust legal frameworks already in place. Furthermore, critical media literacy initiatives are proposed to equip citizens with analytical tools to discern and combat misinformation effectively. Collaborative partnerships between media outlets, civil society organizations, and governmental bodies are advocated to spearhead public education campaigns. Additionally, moral-centric campaigns are suggested to instill a culture of accountability and integrity within society. Mobilizing citizens for collective action is deemed essential to support governmental efforts in combating information pollution and safeguarding core human rights. Moreover, there is a recommendation to fortify fact-checking processes and strengthen legislative reforms to establish comprehensive legal frameworks tailored to combat the multifaceted nature of information disorder. Finally, leveraging existing regulatory bodies is proposed to strengthen measures aimed at dis-incentivizing the spread of disinformation and misinformation. These recommendations collectively aim to mitigate the proliferation of disordered information and uphold the integrity of information dissemination channels in the region.



# 1 Introduction



In any democratic society, information is a fundamental asset. Without the unrestricted flow of information, the very essence of democracy and its essential components come under threat.



In any democratic society, information is a fundamental asset. It facilitates the exchange of ideas, the dissemination of policies and initiatives, and acts as a vital link between state actors, non-state actors, and the citizenry. Without the unrestricted flow of information, the very essence of democracy and its essential components come under threat. However, in the contemporary age of advanced digital technologies and ubiquitous social

media platforms, the free flow of unfiltered information faces significant challenges. This phenomenon, globally recognized as information disorder, infodemic, or information pollution, poses a grave concern, particularly in regions like West Africa.

Characterized by a myriad of challenges including insecurity, violent extremism, and political instability, West Africa emerges as

<sup>1</sup> CJID (2023) Information ecosystem in the Lake Chad region: a multifaceted sphinx of information disorder. Centre for Journalism Innovation and Development. Available from: <https://theclid.org/information-ecosystem-in-the-lake-chad-region-a-multifaceted-sphinx-of-information-disorder>

<sup>2</sup> Lasisi M.I, Jamiu M.M, Agyei, S.O, Ajetunmobi U.O, Ajibola S.A (2023) Multi-dimensionality of election campaigns: A critical analysis of Nigerian 2023 presidential election. Institute of Geo-Political Communications, RUDN University, Russia

a battleground where the struggle for control over information is evident<sup>1</sup>. This environment becomes fertile ground for information disorder, especially when the demand for information is high, exacerbating the prevalence of misinformation, disinformation, mal-information, information manipulation, and hate speech. Instances of extreme information pollution are evident in various sectors, notably politics, security, and health across the region. For example, recent elections in Ghana (2020) and Nigeria (2023) were marred by rampant information pollution, undermining the integrity of the electoral process<sup>2</sup>.

This trend is not confined to West Africa alone; it pervades the political landscape across the continent. Evidence suggests that politicians frequently exploit information manipulation as a tool for propaganda, thereby jeopardizing the emerging democratic culture, impeding informed electoral choices, fueling ethno-religious crises, and fostering electoral violence and socio-political instability. Consequently, information pollution emerges as a pervasive threat capable of reversing the democratic strides made in the sub-region.

Moreover, the scourge of information disorder poses significant challenges to efforts aimed at combating health emergencies in the sub-region. During the Ebola and COVID-19 pandemics in 2014 and 2020, respectively, misinformation and disinformation spread faster than the diseases themselves, hindering preventive measures and vaccine acceptance. From Ghana to Nigeria, Cameroon to Togo, misconceptions fueled by information disorder led to widespread vaccine hesitancy, undermining public health efforts across the continent.

Similarly, insecurity remains a pressing issue confronting the sub-region, with insurgency, armed conflict, and violent extremism posing persistent threats to peace and stability. The West African

sub-region, particularly the Lake Chad Basin, stands as one of the most enduring conflict zones globally, with millions of individuals affected by violence and millions more displaced as a result<sup>3</sup>. Groups like Boko Haram, the Indigenous People of Biafra (IPOB), Islamic State of West Africa Province (ISWAP), and the Ambazonia Movement exploit the information ecosystem to propagate their ideologies, recruit members, and instill fear among citizens.

This report aims to examine the intricate relationship between information pollution, digital technologies, and violent extremism in the West African sub-region, focusing specifically on Nigeria, Ghana, Senegal, and Côte d'Ivoire. These countries were selected due to their strategic importance and the profound impact of information pollution and violent extremism on their socio-political fabric. Nigeria, as the largest democracy in the sub-region, grapples with the persistent challenge of insurgency led by groups like Boko Haram, with ramifications extending to neighbouring countries such as Niger, Chad, and Cameroon. Ghana, known as the beacon of democracy in Anglophone West Africa, faces its own set of challenges, while Côte d'Ivoire and Senegal represent significant democracies in Francophone West Africa, contributing to regional economic and trade dynamics.

In the report, we undertake a diagnostic analysis of the intersection between information pollution, new technologies, and extremism in West Africa. Drawing upon a multifaceted approach, our study encompasses survey data, regional and global think-tanks' reports, insights from Google Trends, information obtained from fact-checking organizations, and analysis of news sources from selected newspapers. By employing this comprehensive methodology, we aim to elucidate the complex dynamics shaping the landscape of information pollution and its implications for security and stability in the region.

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<sup>3</sup> CJID (2023) Information ecosystem in the Lake Chad region: a multifaceted sphinx of information disorder. Centre for Journalism Innovation and Development. Available from: <https://thecjid.org/information-ecosystem-in-the-lake-chad-region-a-multifaceted-sphinx-of-information-disorder>

## 2 Research Questions

Our main objective is the examination of the evolving trends in information pollution in West Africa in relation to the new technologies to help address the threat across the information space.



What is the level of collaboration among academia, think tanks, and media outlets to create a unified front against information pollution in West Africa, fostering a coordinated response?



What are the predominant public perceptions and attitudes towards information pollution in West Africa, as revealed by surveys, and how can this understanding inform evidence-based advocacy strategies?



Which new technologies are prominently utilized for creating and spreading information pollution across mainstream media and digital platforms in West Africa, and how can regulatory measures adapt to address these evolving tactics?



Who are the key actors involved in the business of information pollution in West Africa, and what are their motivations, strategies, and networks, laying the groundwork for targeted intervention and prevention efforts?



What is the nature and dynamics of fact-checking practices specific to information pollution in West Africa, and how can a more robust fact-checking ecosystem be established to counteract information pollution effectively?



How do existing policies and laws respond to information pollution in West Africa, and what gaps or shortcomings exist? Additionally, what new policy frameworks can be proposed to enhance the regulatory environment and mitigate the impact of information pollution?

# 3 Conceptual Review

## 3.1 Misinformation

A plethora of definitions and views on the term “misinformation” has been given. One of the common denominators in the definitions is the unintentional nature of misinformation. As posited by scholars, misinformation, as a form of information pollution, is spread without intent because the inaccuracies in the contents, in the views of the scholars, are shared unintentionally and unintended ab initio<sup>4</sup>. The inaccuracies in the shared contents can only be verified on the best available evidence from experts and based on common understanding of verifiable facts. Until this is done, a content cannot be tagged “misinformation”. Misinformation can come from various sources, including rumors, literary fiction, mainstream media,

corporate interests, governments, and nongovernmental organizations. In the last few years, its spread has been highly premised on the emergency of new technologies, especially social media,<sup>5</sup> which does not accurately reflect the true state of the world. Literature has made us believe that misinformation can be succinctly described as an inaccurate information which fails verification test but was disseminated without an intent to mislead or cause harm to the receivers whether on the social media or any other platform used for the dissemination of the information<sup>6</sup>. However, significant damage can occur when a false information is inadvertently created and shared due to honest mistakes, carelessness, or cognitive bias<sup>7</sup>.

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<sup>4</sup> Born, K., & Edgington, N. (2017). Analysis of philanthropic opportunities to mitigate the disinformation/propaganda problem [Report]. William and Flora Hewlett Foundation. <https://www.hewlett.org/wp-content/uploads/2017/11/Hewlett-Disinformation-Propaganda-Report.pdf>; Guess, A. & Lyons, B. (2020). Misinformation, Disinformation, and Online Propaganda. 10.1017/9781108890960.003. In book: Social Media and Democracy, 10-33; Jack, C. (2017). Lexicon of lies: Terms for problematic information. Data & Society Research Institute, 120. <https://apo.org.au/sites/default/files/resource-files/2017-08/apo-nid183786.pdf>; Southwell, B. G., Brennen, J. S. B., Paquin, R., Boudewyns, V., & Zeng, J. (2022). Defining and measuring scientific misinformation. The ANNALS of the American Academy of Political and Social Science, 700(1), 98111. <https://doi.org/10.1177/00027162221084709>; Van der Meer T., Jin Y. (2019). Seeking formula for misinformation treatment in public health crises: The effects of corrective information type and source. Health Communication, 35(5), 560575; Vraga, E. K., & Bode, L. (2020). Defining Misinformation and Understanding its Bounded Nature: Using Expertise and Evidence for Describing Misinformation. Political Communication, 19. doi:10.1080/10584609.2020.1716500; Wardle, C., & Derakhshan, H. (2017). Information disorder: Toward an interdisciplinary framework for research and policymaking. Strasbourg: Council of Europe; Wu, L., Morstatter, F., Carley, K. M., & Liu, H. (2019). Misinformation in Social Media. ACM SIGKDD Explorations Newsletter, 21(2), 8090. doi:10.1145/3373464.3373475

<sup>5</sup> Wu, L., Morstatter, F., Carley, K. M., & Liu, H. (2019). Misinformation in Social Media. ACM SIGKDD Explorations Newsletter, 21(2), 8090. doi:10.1145/3373464.3373475

<sup>6</sup> Meel, P., & Vishwakarma, D. K. (2020). Information Manipulation, rumor, information pollution in social media and web: A contemporary survey of state-of-the-arts, challenges and opportunities. Expert Systems with Applications, 153, 112986;

<sup>7</sup> Cook, J., Ecker, U., & Lewandowsky, S. (2015). Misinformation and how to correct it. Emerging trends in the social and behavioral sciences: An interdisciplinary, Searchable, and Linkable Resource, 1-17; Del Vicario, M., Bessi, A., Zollo, F., Petroni, F., Scala, A., Caldarelli, G., ... & Quattrociocchi, W. (2016). The spreading of misinformation online. Proceedings of the National Academy of Sciences, 113(3), 554-559; Jerit, J., & Zhao, Y. (2020). Political misinformation. Annual Review of Political Science, 23, 77-94.

## Disinformation

Like misinformation, scholars posited that disinformation is a false and misleading information and unlike misinformation, such contents are intentionally created and deliberately disseminated to cause harm or manipulate people. This deliberate falsehood, as created and disseminated to the public, is with intent to cause harm<sup>8</sup>, make a profit<sup>9</sup>, influence public opinion<sup>10</sup> or manipulate people<sup>11</sup>. According to the literature, the

misleading information is intentionally designed, presented, orchestrated and promoted to cause public harm, manipulate the public, or achieve a financial gain. Flowing from this array of definitions, disinformation can be described as a deliberate misleading information whose desire to cause harm or gain any other personal aggrandizement has been premeditated by the sender(s) of the contents<sup>12</sup>.

## Information Manipulation

A common denominator in the various definitions of information manipulation reviewed is the reference to it as news with the trappings of legitimately produced news but without the rigor of editorial processes to ensure accuracy and credibility of the information. In other words, information manipulation does not meet the threshold of verifiability and public interest evidenced in real news. Besides, information manipulation looks like fact-based news story but it is misleading<sup>13</sup> and such misleading information describes events in the real world, typically by mimicking the

conventions of traditional media reportage, yet it is known by its creators to be significantly false<sup>14</sup>. Similar to disinformation, information manipulation is disseminated intentionally and it is meant to undermine the credibility of information. The aims of information manipulation include giving wide publicity to misleading information to deceive a huge audience base, obtain more clicks and shares and, in the process, achieve greater advertising revenue and/or ideological gain<sup>15</sup>. Therefore, people are constantly in a complex situation of discerning what is authentic<sup>16</sup>.

<sup>8</sup> Levi, L. (2018). Real information manipulation and fake information manipulation. *First Amendment Law Review*, 16, 232.; Colomina, et al. (2021). The impact of disinformation on democratic processes and human rights in the world. Think Tank, Available on <http://www.europarl.europa.eu/thinktank/en/home.html> ; Wang, C. (2020). Information Manipulation and Related Concepts: Definitions and Recent Research Development. *Contemporary Management Research Pages*. 16(3),145-174. doi:10.7903/cmr.20677; Wardle, C., & Derakhshan, H. (2017). Information disorder: Toward an interdisciplinary framework for research and policymaking (Vol. 27, pp. 1-107). Strasbourg: Council of Europe

<sup>9</sup> Colomina, et al. (2021). The impact of disinformation on democratic processes and human rights in the world. Think Tank, Available on <http://www.europarl.europa.eu/thinktank/en/home.html>

<sup>10</sup> Wang, C. (2020). Information Manipulation and Related Concepts: Definitions and Recent Research Development. *Contemporary Management Research Pages*. 16(3),145-174.

<sup>11</sup> Ireton, C., & Posetti, J. (2018). Journalism, information manipulation & disinformation: Handbook for journalism education and training. France: UNESCO Publishing.

<sup>12</sup> Meel, P., & Vishwakarma, D. K. (2020). Information Manipulation, rumor, information pollution in social media and web: A contemporary survey of state-of-the-arts, challenges and opportunities. *Expert Systems with Applications*, 153, 112986.

<sup>13</sup> Nelson, J. L., & Taneja, H. (2018). The small, disloyal information manipulation audience: The role of audience availability in information manipulation consumption. *New Media & Society*,20(10), 3720–3737

<sup>14</sup> Rini, R. (2017). Information Manipulation and partisan epistemology. *Kennedy Institute of Ethics Journal*, 27(2): E43-E64.

<sup>15</sup> Baptista J.P., & Gradim A. A (2022). Working Definition of Information Manipulation. *Encyclopedia*, 2(1):632 645. <https://doi.org/10.3390/encyclopedia2010043>; Meel, P., & Vishwakarma, D. K. (2020). Information Manipulation, rumor, information pollution in social media and web: A contemporary survey of state-of-the-arts, challenges and opportunities. *Expert Systems with Applications*, 153, 112986.

<sup>16</sup> Figueira, Á., & Oliveira, L. (2017). The current state of information manipulation: challenges and opportunities. *Procedia computer science*, 121, 817-825.



## Hate Speech

Hate and intention to incite discrimination, active hostility and violence are the common denominators in the definitions of hate speech<sup>17</sup>. Essentially, hate speech is a negative expression or criticism directed at people based on their joint or specific characteristics, such as religion, race, or nationality<sup>18</sup>. This public communication of negative expressions exhibits explicit reference to the emotions of hate and in the literature, hate speech has been tagged “poisonous”. Looking at these definitions, we can assess the concept in terms of a negative information or message that is purposefully created and spread with the intention of creating a hostile environment for individual or collective discrimination of some individuals or groups, which may result in physical violence. It is one of the elements of information pollution that academics, governments, and individuals have been contending with over the years. Like information manipulation, misinformation, disinformation, and other forms of information pollution, the growth of hate speech has been premised on the constant innovation of new technologies, especially social media, by small and large digital platform owners<sup>19</sup>.

Despite prohibiting content attacking people based on race, ethnicity, religion, sex, gender, disability, or disease, but allows clear attempts at humor or satire, including bad taste content, Facebook remains one of the platforms where hate speech thrives in recent years. This is not quite different for Twitter, which also says “You may not promote violence

against or directly attack or threaten other people on the basis of race, ethnicity, national origin, sexual orientation, gender, gender identity, religious affiliation, age, disability, or disease.” On the other hand, according to YouTube, hate speech is a content that promotes violence or hatred against individuals or groups based on attributes like race, religion, disability, gender, age, veteran status, and sexual orientation, with a fine line between acceptable criticism and malicious hate speech. However, we argue that the more new technologies emerged, the more people became aware of their rights to digital platforms as well as used them to break barriers associated with political participation and public engagement.

The complexity of disentangling its spread, however, lies in the sophisticated positions or views usually held by the creators and spreaders. This is further complex as the actors continue to rely on deep-generative artificial intelligence<sup>20</sup>. Evidence abounds demonstrating how people and groups with extremist ideas used social media to recruit more people to accept their ideology and even participated in physical violence, such as terrorist attack<sup>21</sup>. Literature suggests that the consequences of spreading hate speech might be immediate or delayed. When it is immediate, it means the speech has elements with the potential to generate immediate reactions. On the other hand, when the elements are not severe enough, they result in delayed consequences, which could be physical attacks in most cases<sup>22</sup>.

<sup>18</sup> Bromell, D. (2022). *Regulating Free Speech in a Digital Age: Hate, Harm and the Limits of Censorship*. London: Springer.

<sup>19</sup> Fortuna, P., & Nunes, S. (2018). A survey on automatic detection of hate speech in text. *ACM Computing Surveys (CSUR)*, 51(4), 1-30.

<sup>20</sup> Ibid.

<sup>21</sup> Chetty, N., & Alathur, S. (2018). Hate speech review in the context of online social networks. *Aggression and Violent Behaviour*, 40, 108-118.

<sup>22</sup> Ibid.

## Extremism

Extremism is an ideology or attitude that undermines social ethical principles to achieve the goal of polarizing society along political, social, or religious lines, or to change other people's attitudes, behaviours, and thoughts through violence, whether physical or verbal, on social media platforms or elsewhere. Literature says extremist ideologies, which often promote violence and segment populations, often use hate speech<sup>23</sup>. These discourses also focus on recruitment, government demonization, and persuasion. Literature also suggests that

periods of societal instability often coincide with sociopolitical and ideological extremism<sup>24</sup>. Developing cognitive skills to withstand propaganda and the allure of extremist ideology is essential to preventing violent extremism. An alternative strategy emphasizes developing virtues like empathy, which have the potential to outweigh the causes of violent extremism. This viewpoint implies that resisting the allure of radical ideologies can be accomplished by adhering to a more robust, alternative set of values<sup>25</sup>.

## Information Pollution

There is no doubt the Internet, which contains emerging technologies, has become increasingly difficult for users to navigate due to the mass of information shared worldwide<sup>26</sup>. Several such information are polluted and not good for consumption especially intense socio-economic and political environments across the world. Therefore, information pollution, characterized by the overabundance of irrelevant, unsolicited messages, is a significant concern for practitioners and academic researchers<sup>27</sup>. Educationists define it as

unnecessary, incorrect, out-of-date, unreliable, inconsistent, commercial information not published by experts on the internet. Information pollution can be elite driven, with false, misleading, or manipulated information spreading faster and having greater outreach than trustworthy sources<sup>28</sup>.

After conceptualizing a variety of information pollution types, we discovered that, owing to the quick development of new technologies and the tenacity of individuals who would rather produce and disseminate content that aligns with their interests, this scourge does

<sup>23</sup> Fortuna, P., & Nunes, S. (2018). A survey on automatic detection of hate speech in text. *ACM Computing Surveys (CSUR)*, 51(4), 1-30.

<sup>24</sup> Hogg, M. A., Kruglanski, A., & Van den Bos, K. (2013). Uncertainty and the roots of extremism. *Journal of Social Issues*, 69(3), 407-418.

<sup>25</sup> Stephens, W., Sieckelink, S., & Boutellier, H. (2021). Preventing violent extremism: A review of the literature. *Studies in Conflict & Terrorism*, 44(4), 346-361.

<sup>26</sup> Kurt, A. A., & Emiroglu, B. G. (2018). Analysis of students' online information searching strategies, exposure to internet information pollution and cognitive absorption levels based on various variables. *Malaysian Online Journal of Educational Technology*, 6(1), 18-29.

<sup>27</sup> Kurt, A. A., & Emiroglu, B. G. (2018). Analysis of students' online information searching strategies, exposure to internet information pollution and cognitive absorption levels based on various variables. *Malaysian Online Journal of Educational Technology*, 6(1), 18-29; Wardle, C., & Derakhshan, H. (2017). *Information disorder: Toward an interdisciplinary framework for research and policymaking* (Vol. 27, pp. 1-107). Strasbourg: Council of Europe; Iqbal, Q., & Nawaz, R. (2021). Rife information pollution (infollution) and virtual organizations in industry 4.0: within reality causes and consequences. In *Research Anthology on Digital Transformation, Organizational Change, and the Impact of Remote Work* (pp. 1578-1592). IGI Global.

<sup>28</sup> Breuer, A., (2024). Information integrity and information pollution: Vulnerabilities and impact on social cohesion and democracy in Mexico.

[https://www.idos-research.de/uploads/media/DP\\_2.2024.pdf](https://www.idos-research.de/uploads/media/DP_2.2024.pdf)

not seem to be going away anytime soon<sup>29</sup>. At the same time, those with low cognitive capacity such as conducting analysis and evaluation of the messages they received are vulnerable to the types discussed above daily<sup>30</sup>. The outcomes of their inability to know false or misleading information from authentic ones have largely been hinderance to informed decision-making on political and policy issues, promoting minor concerns and polarized opinions, and also erode social cohesion and polarization<sup>31</sup>.

Even when some information is verified using humans as well as technology and disseminated to the public, people still find it difficult to retract their previously held “extreme” views or beliefs about the targets of information pollution. This has made combating information

pollution difficult. Still the growth of fact-checking organisations has been steadily increasing since 2000. From political fact-checking, relatively known among political actors, to debunking, with focuses on mis- and disinformation of various types propagated on the Internet, explainer articles, factsheets, or quizzes have been primary ways of correcting polluted messages through three dominant stages – factual statements and claims selection, actual verification of the claims, and veracity of the factual claim<sup>32</sup>. It suffices to note that claims are considered factual on the basis that the creators, in their views, believed they were spreading correct information to the public. Therefore, fact-checkers need to respect creators’ views initially before rebuffing the claims.



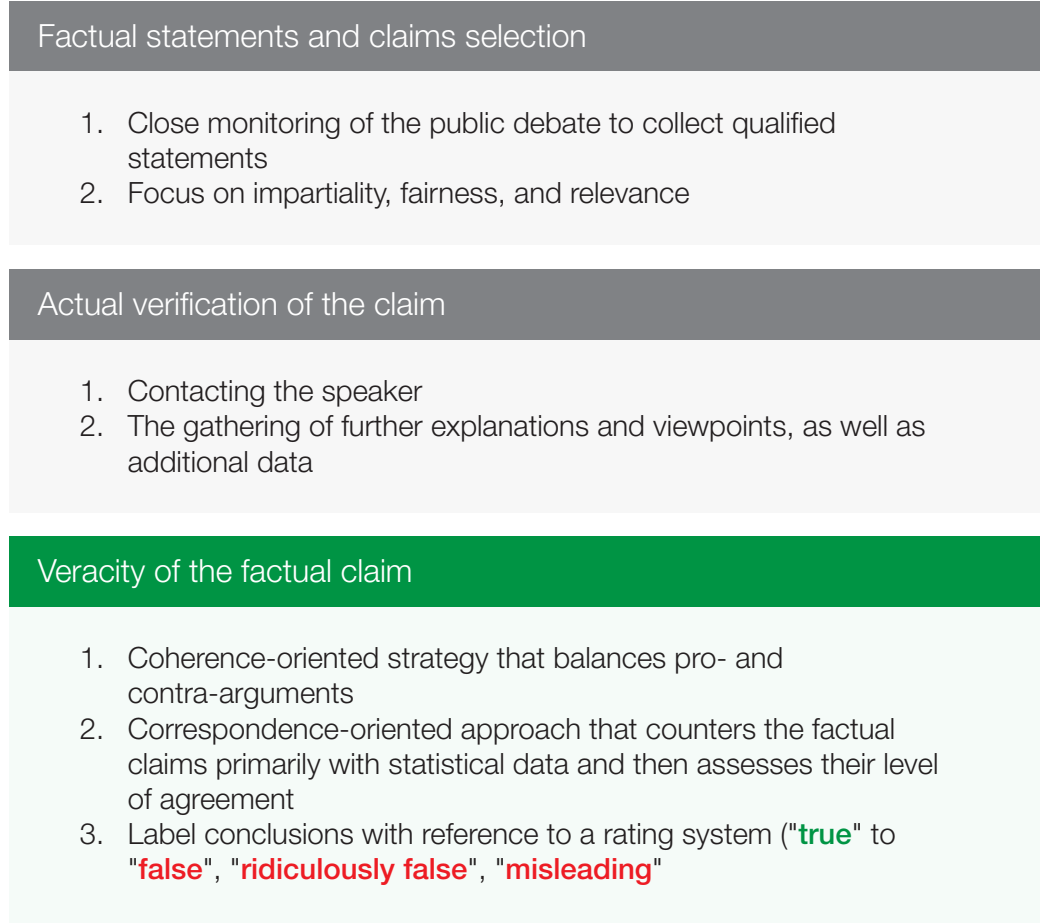
<sup>29</sup> Del Vicario, M., Bessi, A., Zollo, F., Petroni, F., Scala, A., Caldarelli, G., ... & Quattrociochi, W. (2016). The spreading of misinformation online. *Proceedings of the National Academy of Sciences*, 113(3), 554-559.

<sup>30</sup> Kurt, A. A., & Emiroglu, B. G. (2018). Analysis of students' online information searching strategies, exposure to internet information pollution and cognitive absorption levels based on various variables. *Malaysian Online Journal of Educational Technology*, 6(1), 18-29.

<sup>31</sup> Breuer, A., (2024). Information integrity and information pollution: Vulnerabilities and impact on social cohesion and democracy in Mexico.

[https://www.idos-research.de/uploads/media/DP\\_2.2024.pdf](https://www.idos-research.de/uploads/media/DP_2.2024.pdf)

<sup>32</sup> Lauer, L. (2024). The Phenomenon of (Political) Fact-Checking. In: *Similar Practice, Different Rationales*. Springer VS, Wiesbaden. [https://doi.org/10.1007/978-3-658-43527-1\\_3](https://doi.org/10.1007/978-3-658-43527-1_3)



↑ **Figure 1:**

The process of fact-checking

**Source:** Developed from Lauer's (2024) explanation of the process of fact-checking

TABLE 1 **Information pollution definition index (I)**

Author and Year	Concept	Keyword	Creation Intent	Impact	Veracity	Digital Platform-Support
Van der Meer & Jin (2019)	Misinformation	False, inaccurate, incorrect, antonym, information.			Inaccurate, incorrect	Yes
Wu, et al. (2019)	Misinformation	Umbrella term, false, inaccurate, spread, social media.			Inaccurate	Yes
Vraga & Bode (2020)	Misinformation	Incorrect, best available evidence, relevant experts, time.			Incorrect	
Wardle & Derakhshan (2017)	Misinformation	Inadvertently false, shared, no intent to cause harm		Not to harm		
Guess & Lyons (2020)	Misinformation	Claim, contradicts, distorts, common understandings, verifiable facts				
Born & Edgington (2017)	Misinformation	Unintentionally promulgated, inaccurate information.	Unintentional		Inaccurate	
Jack (2017)	Misinformation	Information, inaccuracy, unintentional.	Unintentional		Inaccurate	
Southwell, et al. (2022)	Misinformation	Claims, not enjoy universal consensus, near-universal consensus, true, particular moment, evidence.				

**Source:** Brain Builders Youth Development Initiative, 2024

TABLE 2 Information pollution definition index (II)

Author and Year	Concept	Keyword	Creation Intent	Impact	Veracity	Digital Platform-Support
Levi (2018)	Disinformation	False information, intentionally shared.	Intentional			
Colomina, et al. (2021)	Disinformation	False, inaccurate, misleading, designed, presented, promoted intentionally, cause public harm, profit.	Intentional	To harm	Inaccurate	Yes
Wang (2020)	Disinformation	Deliberate, covert spread, false information, influence public opinion, purpose, misinformation, deliberately created, harm.		To influence and harm		
Wardle & Derakhshan (2017)	Disinformation	False information, knowingly created, shared, cause harm.		To harm		
	Disinformation	Deliberate, orchestrated attempt, confuse, manipulate people, deliver dishonest information.		To influence		
Ireton & Posetti (2018)	Disinformation	Deceptive information, intentional	Intentional	To influence		
Meel & Vishwakarma (2020)	Information Manipulation	Intentionally written, mislead, verified, false.	Intentional	To influence		
Allcott & Gentzkow (2017)	Information Manipulation	Information presented as news, intentional, verifiably false.	Intentional			

Source: Brain Builders Youth Development Initiative, 2024

TABLE 3 Information pollution definition index (III)

Author and Year	Concept	Keyword	Creation Intent	Impact	Veracity	Digital Platform-Support
Nelson & Taneja (2018)	Information Manipulation	False or misleading information, look like fact-based news story	Intentional	To influence		
Klein & Wueller (2017)	Information Manipulation	Online publication, intentionally or knowingly false statements of fact.	Intentional			Yes
Rini (2017)	Information Manipulation	Describes events in the real world, mimicking conventions of traditional media, creators know it's significantly false, goals of being widely re-transmitted, deceiving audience		To influence		
Gelfert (2018)	Information Manipulation	Deliberate presentation, typically false or misleading claims as news, misleading by design.		To influence		
Wang (2020)	Information Manipulation	news messages, contain wrong or false information, do not report incorrectness.				
Bakir & McStay (2018)	Information Manipulation	Wholly false or containing deliberately misleading elements, content or context		To influence		
Ireton & Posetti (2018)	Information Manipulation	Manipulation of information, carried out through production of false information, distortion of true information				
Baptista (2022)	Information Manipulation	Misleading and/or false statements, intentionally, news format, opportunistic structure, attract reader's attention, obtain more clicks, shares, advertising revenue, ideological gain.	Intentional	To influence		
Meel & Vishwakarma (2020)	Information Manipulation	False, news outlets or internet, political or financial gain, increase readership, biased public opinion		To influence		
Kang et al., (2020)	Hate speech	"Poisonous mushrooms," proliferate, populism specifically		To influence		
Paasch-Colberg, et al. (2021)	Hate speech	Explicit reference, emotion of hate, label, negative expression, insults, harsh criticism		To influence		

Bromell (2022)	Hate speech	Public communication, intends or imminently likely to incite discrimination, active hostility, violence, individual persons, basis, actual or supposed membership, social group, protected characteristic, nationality, race, religion	To influence	
Torregrosa et al. (2023)	Extremism	Ideological movement, contrary to democratic and ethical values, society, methods, violence (physical or verbal), achieve objectives	To influence	
Nelson & Taneja (2018)	Extremism	Online extremism, interaction, extremist groups, individuals, society, social media platforms, promote extremist thoughts, attitudes, behaviors, aim, segmenting society, political, social, religious topics, changing nature, others' thoughts, attitudes, behaviours	To influence	Yes

Source: Brain Builders Youth Development Initiative, 2024

3.7

## New Technologies

From the existing scholarly views and expressions from new technology developers, a prominent constituent in the definitions is the ability of AI tools to handle large repository of knowledge to produce intelligent and meaningful data set<sup>33</sup>. While traditional AI systems can recognize patterns or classify existing content, generative AI, as recognised in the definitions, can create new contents in many forms, including text, image, audio, simulations, 3D objects, videos or software code. Furthermore, the application of generative AI tools gives assistance in aspects of research, writing, and problem-solving tasks, as well as provide domain-specific language

skills and other skills for professional training and education. Essentially, Generative AI, in all the definitions, is referred to as simply the latest technology whose impacts on human activities is huge and unprecedented as the inputs may easily be mistakenly attributed to human authors. These generative AI tools can also be used to disseminate information around the globe and the far reach of the latest technology, aid in the wide circulation of such information.

With the advent of sophisticated artificial intelligence (AI) technologies, the proliferation of deepfakes and the spread of m/disinformation have emerged as

<sup>33</sup> Shoaib, M.R., Wang, Z., Ahvanooy, M.T., & Zhao, J., (2023). Deepfakes, Misinformation, and Disinformation in the Era of Frontier AI, Generative AI, and Large AI Models. IEEE International Conference on Computer Applications (ICCA), 2023. Available at: <https://arxiv.org/pdf/2311.17394.pdf>; Monteith, S., Glenn, T., Geddes J., Whybrow, P., Achtyes, E., and Bauer, M. (2024). Artificial intelligence and increasing misinformation. *The British Journal of Psychiatry*, 224(2):33-35. doi:10.1192/bjp.2023.136; Feuerriegel, S., Hartmann, J., & Janiesch, C. (2024). Generative AI. *Bus Information System Engineering*, 66, pp. 111–126. <https://doi.org/10.1007/s12599-023-00834-7>; Canadian Centre for Cyber Security (2023). Generative artificial intelligence (AI). Available at: <https://www.cyber.gc.ca/sites/default/files/itsap-00-041-generative-ai-v2.pdf>; Teubner, T., Flath, C., Weinhardt, C., van der Aalst, W., and Hinz, O. (2023). Welcome to the era of ChatGPT. *Business Information System Engineering*, 65(2), pp. 95–101. <https://doi.org/10.1007/s12599-023-00795-x>

formidable threats to the integrity of information ecosystems worldwide; Deepfake videos have been used to create fake celebrity advertisements, pornographic videos, fabricated political speeches, and voice cloning of CEOs to commit fraud. AIGC has been employed to create information manipulation articles and social media posts that have gone viral, influencing public opinion and potentially affecting election outcomes. The societal implications of deepfakes and mis/disinformation generated by Large Model-based GenAI are bringing unprecedented impacts, touching upon every facet of modern life—from politics and security to individual rights and societal trust. Arguments<sup>34</sup> for AI place in information pollution, Due to the ease of access and use, generative AIs can be used to create mis-/disinformation at scale at little to no cost to individuals and organized actors<sup>35</sup>. Because of their technological skills and accessibility of use, generative AIs can be used to generate high-quality polluted communications that can undermine sociopolitical resilience systems designed to contain the messages. As a result, AIs are strategic tools in the hands of conveyors of different sorts of information pollution to construct personalized diluted messages<sup>36</sup>. In addition, recipients have the option—knowingly or unknowingly—to utilize AIs to magnify messages, increasing the

conveyors' viability and contributing to instantaneous harm to society and reputation.

Meanwhile, before the emergence of the generative AIs, the world has been awash with various social media, especially Facebook, which was developed in 2004 followed by YouTube in 2005 as well as Twitter in 2006. In 2009, WhatsApp also joined the league of social media platforms. As of September 2023, Facebook had the largest market share among social media platforms in Africa. The traffic generation capabilities of Facebook in Africa reached 79.4 percent. YouTube was the closest, with a share of 6.6 percent. Overall, Facebook has dominated traffic referrals to other websites on the African continent over the observed period. As of 2022, over 384 million African social media users are active, with Northern and Southern Africa having higher penetration rates. WhatsApp is preferred in Ghana, Kenya, Nigeria, and South Africa<sup>37</sup>.

Ghana had 23.05 million internet users in the beginning of 2023, with an internet penetration rate of 68.2%. Ghana had 6.60 million social media users in January 2023, which accounted for 19.5% of the entire population<sup>38</sup>. There were 12.94 million internet users in Côte d'Ivoire at the start of 2023, when internet penetration stood at 45.4 percent. Côte d'Ivoire was home to 5.10 million social media users in

<sup>34</sup> Simon, F.M., Altay, S., & Mercier, H., (2023). Misinformation reloaded? Fears about the impact of generative AI on misinformation are overblown. Harvard Kennedy School (HKS) Misinformation Review 1, 4, (5) pp. 1-11

<sup>35</sup> Davison, R., Laumer, S., Tarafdar, M., & Wong, L. (2023). ISJ editorial: pickled eggs: generative AI as research assistant or co-author? Information System Journal, 12(3), pp. 85-94 <https://doi.org/10.1111/isj.12455>; Kasneji, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., & Hüllermeier, E. (2023) ChatGPT for good? On opportunities and challenges of large language models for education. Learn Individual Difference, 103(102):274

<sup>36</sup> Dwivedi, Y., Kshetri, N., Hughes L., Slade E.L., Jeyaraj A, Kar, A.K, Baabdullah, A.M, Koochang, A., Raghavan V, Ahuja M et al (2023) "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. International Journal of Information Management 71(102):642; Peres, R., Schreier, M., Schweidel, D., & Sorescu, A. (2023). On ChatGPT and beyond: how generative artificial intelligence may affect research, teaching, and practice. International Journal of Research Market, (40), pp. 269–275; Burger, B., Kanbach, D., Kraus, S., Breier, M., and Corvello, V. (2023). On the use of AI-based tools like ChatGPT to support management research. European Journal of Innovation Management, 26(7), pp. 233–241. <https://doi.org/10.1108/EJIM-02-2023-0156> ; Susarla, A., Thatcher, R., & Sarker, S. (2023). The janus effect of generative AI: charting the path for responsible conduct of scholarly activities in information systems. Information System Research 34(2), pp. 399–408. <https://doi.org/10.1287/isre.2023.ed.v34.n2>;

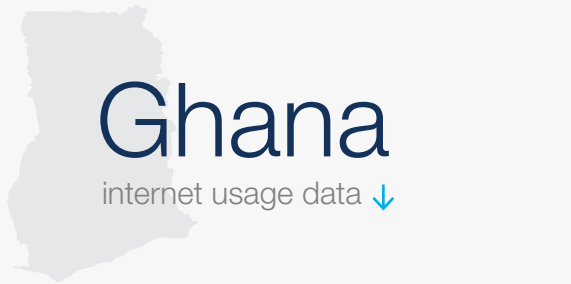
<sup>37</sup> Galal, S., (2023). Market share of social media in Africa 2021-2023, by platform. Statista, September 2023. Available from: <https://www.statista.com/statistics/1315895/social-media-market-share-by-platform-in-africa/>

<sup>38</sup> Data Reportal (2023). Social media users in Ghana. Available from: <https://datareportal.com/reports/digital-2023-ghana>



January 2023, equating to 17.9 percent of the total population<sup>39</sup>. Senegal had 10.19 million internet users in the beginning of 2023, or 58.1 percent of the country's total population. 3.05 million people in Senegal used social media in January 2023, making up 17.4% of

the country's entire population<sup>40</sup>. In Nigeria, there were 122.5 million internet users as of the beginning of 2023, or 55.4% of the population. In January 2023, there were 31.60 million social media users in Nigeria, or 14.3% of the country's total population<sup>41</sup>.



## Ghana

internet usage data ↓

**23** million



internet users in the beginning of 2023

**68%**



internet penetration rate

**6.6** million



social media users in January 2023, which accounted for 19.5% of the entire population



## Côte d'Ivoire

internet usage data ↓

**13** million



internet users in the beginning of 2023

**45%**



internet penetration rate

**5.1** million

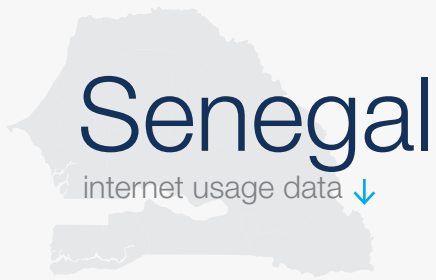


social media users in January 2023, which accounted for 17.9% of the entire population

<sup>39</sup> Data Reportal (2023). Social media users in Côte d'Ivoire. Available from: <https://datareportal.com/reports/digital-2023-cote-divoire>

<sup>40</sup> Data Reportal (2023). Social media users in Senegal. Available from: <https://datareportal.com/reports/digital-2023-senegal>

<sup>41</sup> Data Reportal (2023). Social media users in Nigeria. Available from: <https://datareportal.com/reports/digital-2023-nigeria>



**10** million 

internet users in the beginning of 2023

**58%** 

internet penetration rate

**3.0** million 

social media users in January 2023, which accounted for 17.4% of the entire population



**123** million 

internet users in the beginning of 2023

**55%** 

internet penetration rate

**32** million 

social media users in January 2023, which accounted for 14.3% of the entire population

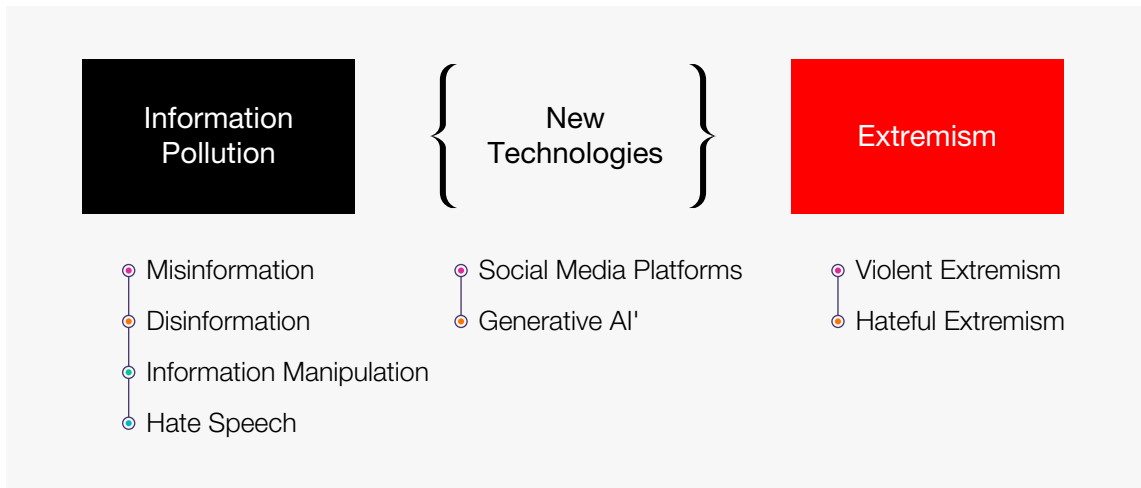
TABLE 4 **Growth of social media use in Africa between December 2022 and December 2023**

	Facebook	YouTube	Twitter	Instagram
2022-12	80.89	5.52	7.15	3.64
2023-01	78.36	6.92	8.13	3.52
2023-02	87.28	3.90	4.32	2.54
2023-03	80.07	5.77	5.40	6.31
2023-04	78.30	5.57	6.19	7.38
2023-05	82.29	5.23	4.89	5.09
2023-06	81.90	6.63	4.60	4.89
2023-07	80.42	6.46	5.20	5.56
2023-08	81.14	6.57	4.67	4.94
2023-09	78.57	6.12	6.07	6.21
2023-10	75.26	6.44	7.43	7.05
2023-11	72.35	8.35	7.20	7.92
2023-12	74.22	8.36	7.44	6.21

Source: Statcounter 2023

According to all indicators, Africans, like other individuals throughout the world, have the option to use a variety of social media platforms for both beneficial and negative objectives. The negativity examined in this research from the perspective of information pollution has had a wide-ranging influence on individuals, groups, and African nations during the previous decade. Africans have experienced and continue to witness the impacts of information manipulation, disinformation, misinformation, and other types of information pollution from East to South and North to West. As a result, in

this report, we want to understand how people and groups have developed and propagated toxic messages. Knowing this is not enough; we must also determine the role of moral entrepreneurs such as politicians, academics, and others in combating the threats of information pollution in Africa, particularly its (information pollution) link to extremism, which we categorize as hateful and violent in this report (see Figure 2). On the other hand, we want to know Africans' willingness to battle the disease with their governments using official institutions such as legal instruments.



↑ **Figure 2:**  
Conceptual  
framework  
visualisation



# 4 Thematic Review: Academics and Information Pollution

4.1

## Information Pollution, Information Manipulation and Elections in West Africa

The phenomenon of information pollution and its attendant consequences on political, health and other ecosystem in West Africa has been largely discussed in the literature. A body of research has emerged focusing on how the variety of information pollution ranging from information manipulation, misinformation and disinformation have shaped the narratives across critical sectors of the life of countries in the region<sup>42</sup>. In the political arena, especially, during elections, information manipulation, disinformation and hate speech were found to be strategic campaign tools in the hands of

political actors. Evidence suggests that information manipulation and hate speech have had more impact on politics, national cohesion, ethno-religious crisis and even electoral violence in the region<sup>43</sup> than any other form of information pollution. For instance, in the Ghana's 2020 election, it was revealed that information manipulation was deployed as a propaganda tool by politicians and their supporters using robotics and artificial intelligence. This was similar to findings of studies in Nigeria that argued that the political class and their supporters have elevated hate speech to a campaign strategy<sup>44</sup>.

“

[In the political arena, especially, during elections, information manipulation, disinformation and hate speech were found to be strategic campaign tools in the hands of political actors.](#)

<sup>42</sup> Sunday, O. M., (2020). "Disinfodemic" in West Africa communities: Tackling extremism, hate speech and information manipulation in social media age. *Resisting Disinfodemic Media and Information Literacy*, 190; Udenze, S., (2021): Information Manipulation and its impact on national cohesion: the Nigerian story. *International Journal of Humanities and Innovation*, 4(2), pp. 86-92; Pate, U., & Adamkolo M. I., (2019). Information Manipulation, hate speech and Nigeria's struggle for democratic consolidation: A conceptual review. DOI: 10.4018/978-1-7998-0377-5.ch006

<sup>43</sup> Ibid

<sup>44</sup> Ibid

However, it is critical that we understand the major actors and stakeholders, the motivating factors, the technologies involved and fact checking mechanism to ensure the menace is nipped in the bud. Still, a more comprehensive investigation would also look at the perceptions and attitudes of the citizens, the laws, policies as well as frameworks devised to curtail information pollution in the region. Again, the sector most affected by information pollution should not be left out in investigating the menace.

A scan around indicates that politicians and their supporters form the bulk of those who push information pollution the most in the region. They do this majorly to achieve political power. Evidence suggests that in Africa, misinformation and disinformation are used to set and influence political agenda in Nigeria, Kenya and South Africa<sup>45</sup>. This has been found to have bred high exposure to disinformation and misinformation in the selected countries. Similarly, in Ghana, politicians and people that are highly politically exposed have

been identified to have used information manipulation as a propaganda tool to achieve a political end<sup>46</sup>. However, even though political reasons top the list of motivations for the deployment of the variety of information pollution, studies have established that there are non-political reasons and motivations for the spread of information manipulation and other varieties of information pollution. People are reported to share information manipulation due to their perceived civil obligation to inform others and the rush to be the first to break the news as well as interpersonal trust<sup>47 48</sup>.

Yet, the prevalence of information pollution, in its various formats, has had negative impacts on the democratic practice in the region. Research has shown that information manipulation, hate speech and other varieties of information pollution generated ethno-religious crisis, electoral violence and socio-political instability<sup>49 50</sup>. The effects also included spreading fear, trampling upon the right of ethnic minorities,



[Research has shown that information manipulation, hate speech and other varieties of information pollution generated ethno-religious crisis, electoral violence and socio-political instability](#)

<sup>45</sup> Herman Wasserman & Dani Madrid-Morales (2019): An exploratory study of "information manipulation" and media trust in Kenya, Nigeria and South Africa, *African Journalism Studies*, DOI: 10.1080/23743670.2019.1627230

<sup>46</sup> Achonga, P., & Kwode, K., (2022). Information Manipulation and the political economy of the media in Ghana: The era of the fourth industrial revolution

<sup>47</sup> Apuke, O., & Omar, B., (2020). Information Manipulation proliferation in Nigeria: Consequences, motivations, and prevention through awareness strategies. *Humanities & Social Sciences Reviews*, 8, pp. 318-327. 10.18510/hssr.2020.8236.

<sup>48</sup> Inobemhe, K., Ugber, F., Lucky, O. J., & Santas, T., (2020). New media and the proliferation of information manipulation in Nigeria. *Nasarawa Journal of Multimedia and Communication Studies*, 2(2),

<sup>49</sup> Ezeibe, C. C. (2015). Hate speech and electoral violence in Nigeria. *Journal of Asian and African Studies*, 56(4), <https://doi.org/10.1177/0021909620951208>

<sup>50</sup> Kwode, A. K., Paul & Selekane, N., (2023). Information Manipulation and the political economy of the media: A perspective of Ghanaian journalists. *Communicare: Journal for Communication Studies in Africa*, 42, pp. 55-63. 10.36615/jcsa.v42i2.1500.

<sup>51</sup> Ikeanyibe, O. M., Ezeibe, C. C., Mbah, P. O., & Nwangwu, C. (2018). Political campaign and democratisation: Interrogating the use of hate speech in the 2011 and 2015 general elections in Nigeria. *Journal of Language and Politics*, 17(1), pp. 92-117.

causing disunity and generally affecting the democratic credentials of the countries in the region<sup>51</sup>. The consequences of spreading mis-information and disinformation appear graver sometimes leading to escalation of conflict, political hostility, panic and even death<sup>52</sup>.

There are suggestions made to mitigate the effect of misinformation on democracy and good governance. One, it is suggested that misinformation could be countered through the introduction of media information literacy in schools and fact checking algorithms<sup>53</sup>. Two, it is equally mooted that arming people with the appropriate fact checking tools and improved media literacy could assist the fight against misinformation in the region<sup>54</sup>. Working with social media giants and fact checking organizations could help the fight against information pollution<sup>55 56</sup>. While these suggestions pointed at initiatives and policies at curbing the

spread of information manipulation, other recommendations took both legislative and law paths. Governments and legislative arms in the region were charged to make laws that would balance the freedom of expression of the citizens and at the same time make illegal information manipulation<sup>57</sup>, the other called for the prosecution of those who breach the laws governing campaign and public speech<sup>58</sup>. As many as these suggestions are, they pose policy and legal dilemma to the fight against information pollution. Attempts in the past to regulate social media were met with stiff opposition based on freedom to free expression. Similarly, internet shutdowns during the election period in the region and the rest of Africa had been described as anti-democratic. Yet, different varieties of information pollution were reportedly deployed during elections which sometimes necessitated shutdowns<sup>59</sup>.

## 4.2

### Misinformation, Disinformation and the Health Sector in West Africa

If the stakeholder mapping in the information pollution ecosystem points at politicians and their supporters as main culprits behind its spread with the main aim of currying political advantage to their side, how do we describe the spread and the motivations behind the information pollution in the

health sector? This question is best answered by examining the nature and characteristics of the information pollution in the region focusing on health. In the realm of public health management, and especially during the COVID-19 pandemic, research in the West African nations has shed light on the

<sup>52</sup> Apuke, O., & Omar, B., (2020). Information Manipulation proliferation in Nigeria: Consequences, Motivations, and prevention through awareness strategies. *Humanities & Social Sciences Reviews*, 8, pp. 318-327. 10.18510/hssr.2020.8236.

<sup>53</sup> Sunday, O. M., (2020). "Disinfodemic" in West Africa communities: Tackling extremism, hate speech and information manipulation in social media age. *Resisting Disinfodemic Media and Information Literacy*, 190

<sup>54</sup> Udenze, S., (2021): Information Manipulation and its impact on national cohesion: the Nigerian story. *International Journal of Humanities and Innovation*, 4(2), pp. 86-92

<sup>55</sup> Wilson, F., & Umar, M.A., (2019). The effect of information manipulation on Nigeria's democracy within the premise of freedom of expression. *Global Media Journal*, 17(32)

<sup>56</sup> Nnabuike, S.O., & Jarrar, Y., (2019). A critical digital plan on how to control information manipulation in Nigeria. *Dirasat, Human and Social Sciences*, 46 (1)

<sup>57</sup> Kwode, A. K., Paul & Selekane, N., (2023). Information Manipulation and the political economy of the media: A perspective of Ghanaian journalists. *Communicare: Journal for Communication Studies in Africa*, 42, pp. 55-63. 10.36615/jcsa.v42i2.1500.

<sup>58</sup> Ikeanyibe, O. M., Ezeibe, C. C., Mbah, P. O., & Nwangwu, C. (2018). Political campaign and democratisation: Interrogating the use of hate speech in the 2011 and 2015 general elections in Nigeria. *Journal of Language and Politics*, 17(1), pp. 92-117.

<sup>59</sup> Gargiadone, I., & Stremiau, N., (2022). It is time to reflect on the framing of Internet Shutdown in Africa. *Carnegie Endowment for International Peace*.

<https://carnegieendowment.org/2022/11/21/it-s-time-to-revisit-framing-of-internet-shutdowns-in-africa-pub-88406>

challenges posed by information pollution in its various forms. Efforts to combat the pandemic and even prevent the re-occurrence faced significant challenges posed by misinformation spread majorly through the social media. From Nigeria to Ghana, Cameroun to Togo and other countries in the region, campaigns to disseminate COVID 19 preventive measures as well as vaccine acceptance were hampered by all forms of information pollution<sup>60 61 62</sup>.

In specific terms, misinformation has been found out to have spread a number misconceptions about COVID-19 in Nigeria and Ghana. Myths such as the pandemic being used as biological weapon, the hot weather condition making the African continent protected against the infection and even the efficacy of local remedies for the disease were some of the forms of information pollution prevalent in all the regions of the continent including Ghana and Nigeria<sup>63</sup>. But,



[From Nigeria to Ghana, Cameroun to Togo and other countries in the region, campaigns to disseminate COVID 19 preventive measures as well as vaccine acceptance were hampered by all forms of information pollution](#)

it did not stop there as even efforts to ensure vaccine acceptability were also hampered by all sorts of misinformation flying around during the period. This promoted vaccine hesitancy and slowed down the rate of vaccination on the continent making Africa the region with the slowest rate of vaccination in the world during the period<sup>64</sup>.

Attention was also on the media of dissemination of misinformation on the pandemic. On this, social media platforms such as Facebook,

Twitter, WhatsApp and Instagram featured prominently on the list of channels used to spread misinformation. For example, in Ghana, it was established that Twitter had the highest number of misinformation for a certain section of the country<sup>65</sup>. This discovery is not surprising as WhatsApp, Facebook and Instagram were found to be the go-to sources of information for pandemic or conflict in Nigeria<sup>66</sup>. The negative effect of information manipulation spread via

<sup>60</sup> Tabong, P., & Segtub, M., (2021). Misconceptions, misinformation and politics of covid-19 on social media: A Multi-level analysis in Ghana. *Frontiers in Communication*, 6. 10.3389/fcomm.2021.613794.

<sup>61</sup> Oluwasola, O., (2020). COVID-19: Countering disinfodemic in pandemic and emergency situations in Nigeria. United Nations Educational Scientific and Cultural Organization, Multi-Donor Programme on Freedom of Expression and Safety of Journalists. Retrieved from: [https://en.unesco.org/sites/default/files/disinfodemic\\_dissecting\\_responses\\_covid19\\_disinformation.pdf](https://en.unesco.org/sites/default/files/disinfodemic_dissecting_responses_covid19_disinformation.pdf)

<sup>62</sup> Akpan, U., (2022). Communication and crisis information campaigns: Perspectives of constructivism, conspiracy and misinformation of COVID-19 messages in West Africa. *Journal of Social Sciences and Management Studies*, 1, pp. 109-118. 10.56556/jssms.v1i3.248.

<sup>63</sup> Tabong, P., & Segtub, M., (2021). Misconceptions, misinformation and politics of covid-19 on social media: A Multi-level analysis in Ghana. *Frontiers in Communication*, 6. 10.3389/fcomm.2021.613794.

<sup>64</sup> Brackstone, K., & Atengble, K., Head, M., & Boateng, L., (2022). COVID-19 vaccine hesitancy trends in Ghana: a cross-sectional study exploring the roles of political allegiance, misinformation beliefs, and sociodemographic factors. *Pan African Medical Journal*. 43. 10.11604/pamj.2022.43.165.37314.

<sup>65</sup> Hinneh, R., & Owusu, A., (2021). COVID-19 social media information and misinformation: A geospatial analysis of inter-regional tweet disparities in Ghana. 10.21203/rs.3.rs-783507/v1.



the social media was hugely consequential as illustrated by findings from residents of one of the largest cities in northern Nigeria. People were found to be significantly influenced by information manipulation on Facebook. Nevertheless, there were other sources of health misinformation. It was found that 84% of fact-checks in Ghana and Nigeria on COVID-19 was drawn from gossip and blogs<sup>67</sup>. This suggests that apart from social media, blogs are also veritable tools for the spread of information manipulation as no one gate-keeps the kind of information emanating from the blogs. Again, even when traditional media and other credible means were deployed to disseminate information about the pandemic, the prevalence of information manipulation and other misinformation also affected message believability in the West African region. For instance, it was found out that even though 96% of the people sampled accepted COVID-19 control messages more than preventive measures such as social distancing and face-masking, a whopping 81% still regarded some COVID-19 messages as fake propoganda and anti-religious<sup>68</sup>. This could be described as spiraling effect of misinformation on message believability even when credible

means of dissemination were used.

Thus, misinformation could be said to not only have impacted efforts to combat the pandemic but are also fueling misconceptions around it. Therefore, there is a need to put in place a number of measures to combat the menace. The body of research suggests a variety of solutions to curtailing misinformation from wrecking efforts to control and prevent the pandemic. To combat misconceptions arising from the prevalence of misinformation, culturally sensitive health communication strategies should be deployed<sup>69</sup>. Using culturally sensitive health communication strategies alone might not curtail misinformation. A multi-pronged approach, encompassing a human-right touch, has been suggested to combat the disinfodemic that accompanied the pandemic<sup>70</sup>. This comprehensive approach should include a legal framework and collaboration with social media giants for content regulation<sup>71</sup>. However, this does not prevent continued fact checking and campaigns against misinformation in public health management as well as continuous use of social media to dispel unfounded claims and misconceptions engendered by misinformation<sup>72 73 74</sup>.

<sup>66</sup> Akinwumi, F.S., & Itobore, A., (2020). Combatting disinfodemic in pandemic, conflict and emergency situations through the promotion of MIL: A holistic approach in the Nigerian Society. United Nations Educational Scientific and Cultural Organization, Multi-Donor Programme on Freedom of Expression and Safety of Journalists. Retrieved from: [https://en.unesco.org/sites/default/files/disinfodemic\\_dissecting\\_responses\\_covid19\\_disinformation.pdf](https://en.unesco.org/sites/default/files/disinfodemic_dissecting_responses_covid19_disinformation.pdf)

<sup>67</sup> Matyek J. G., (2020). Curbing "COV-infodemic": An assessment of fact-check sources on Dubawa Nigeria and Dubawa Ghana. United Nations Educational Scientific and Cultural Organization, Multi-Donor Programme on Freedom of Expression and Safety of Journalists. Retrieved from: [https://en.unesco.org/sites/default/files/disinfodemic\\_dissecting\\_responses\\_covid19\\_disinformation.pdf](https://en.unesco.org/sites/default/files/disinfodemic_dissecting_responses_covid19_disinformation.pdf)

<sup>68</sup> Akpan, U., (2022). Communication and crisis information campaigns: Perspectives of constructivism, conspiracy and misinformation of COVID-19 messages in West Africa. *Journal of Social Sciences and Management Studies*, 1, pp. 109-118. 10.56556/jssms. v1i3.248.

<sup>69</sup> Tabong, P., & Segtub, M., (2021). Misconceptions, misinformation and politics of covid-19 on social media: A Multi-level analysis in Ghana. *Frontiers in Communication*, 6, 10.3389/fcomm.2021.613794.

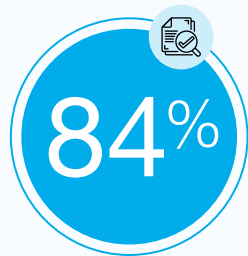
<sup>70</sup> Akinwumi, F.S., & Itobore, A., (2020). Combatting disinfodemic in pandemic, conflict and emergency situations through the promotion of MIL: A holistic approach in the Nigerian Society. United Nations Educational Scientific and Cultural Organization, Multi-Donor Programme on Freedom of Expression and Safety of Journalists. Retrieved from: [https://en.unesco.org/sites/default/files/disinfodemic\\_dissecting\\_responses\\_covid19\\_disinformation.pdf](https://en.unesco.org/sites/default/files/disinfodemic_dissecting_responses_covid19_disinformation.pdf)

<sup>71</sup> Oluwasola, O., (2020). COVID-19: Countering Disinfodemic in Pandemic and Emergency Situations in Nigeria. United Nations Educational Scientific and Cultural Organization, Multi-Donor Programme on Freedom of Expression and Safety of Journalists. Retrieved from: [https://en.unesco.org/sites/default/files/disinfodemic\\_dissecting\\_responses\\_covid19\\_disinformation.pdf](https://en.unesco.org/sites/default/files/disinfodemic_dissecting_responses_covid19_disinformation.pdf)

<sup>72</sup> Hinneh, R., & Owusu, A., (2021). COVID-19 social media information and misinformation: A geospatial analysis of inter-regional tweet disparities in Ghana. 10.21203/rs.3.rs-783507/v1.

<sup>73</sup> Matyek J. G., (2020). Curbing "COV-infodemic": An assessment of fact-check sources on Dubawa Nigeria and Dubawa Ghana. United Nations Educational Scientific and Cultural Organization, Multi-Donor Programme on Freedom of Expression and Safety of Journalists. Retrieved from: [https://en.unesco.org/sites/default/files/disinfodemic\\_dissecting\\_responses\\_covid19\\_disinformation.pdf](https://en.unesco.org/sites/default/files/disinfodemic_dissecting_responses_covid19_disinformation.pdf)

<sup>74</sup> Akpan, U., (2022). Communication and crisis information campaigns: Perspectives of constructivism, conspiracy and misinformation of COVID-19 messages in West Africa. *Journal of Social Sciences and Management Studies*, 1, pp. 109-118. 10.56556/jssms. v1i3.248.



of fact-checks in Ghana and Nigeria on COVID-19 was drawn from gossip and blogs

4.3

## Information Pollution, Hate Speech and Violent Extremism

When people share information manipulation and other forms of information pollution, one of the major outcomes of that is the inciting people to violence. This especially possible in a multi-cultural, multi-ethnic context as exemplified in the continent. In the region, countries such as Burkina Faso, Niger, Nigeria and Mali have seen a rise in violent extremism in recent times. Research has traced some connection between information pollution, hate

speech, information manipulation and violent extremism in the West Africa sub region. There have been efforts to understand how information manipulation and hate speech have fueled the spread of violent extremism, disturbed societal peace and how issues raised online have spilled over to the offline space<sup>75 76 77</sup>. In specifically answering the question of whether information manipulation and hate speech have the power to foster violent extremism, some association

<sup>75</sup> Williams E. E., (2020). Effectiveness of social media platforms in combating extremism, hate speech, and information manipulation in Nigeria. United Nations Educational Scientific and Cultural Organization, Multi-Donor Programme on Freedom of Expression and Safety of Journalists. Retrieved from: [https://en.unesco.org/sites/default/files/disinfodemic\\_dissecting\\_responses\\_covid19\\_disinformation.pdf](https://en.unesco.org/sites/default/files/disinfodemic_dissecting_responses_covid19_disinformation.pdf)

<sup>76</sup> Sunday, O. M., (2020). "Disinfodemic" in West Africa communities: Tackling extremism, hate speech and information manipulation in social media age. *Resisting Disinfodemic Media and Information Literacy*, 190

<sup>77</sup> Gadjanova, E., Lynch, G., & Saibu, G., (2022). Misinformation across digital divides: theory and evidence from Northern Ghana, *African Affairs*, 121 (483), pp. 161–195, <https://doi.org/10.1093/afraf/adac009>

was found between exposure to violent online content and offline violence in South Africa without a strong correlation between information manipulation exposure and violence<sup>78</sup>. This outcome might explain why Facebook users commenting on the Biafra agitations and Arewa Youths' Forum ultimatum to Igbo residents in the North were found to have been divided along religious lines with inciting comments that could burn down the country<sup>79</sup>. Similarly, an analysis of the pro-Biafran leader, Nnamdi Kanu's speeches to determine whether it contained hate speeches indicted him of inflammatory and inciting comments

that could easily threaten national security and unity in Nigeria<sup>80</sup>. These cases have suggested that social media platforms are increasingly becoming a breeding ground for the spread of hate speech and information manipulation with devastating consequences in the region. Different suggestions have been made to curtail the use of social media and digital platforms to spread hate speech, information manipulation and other varieties of information pollution. These range from heavy investment in digital media literacy, developing fact checking algorithm to enacting a policy framework that could regulate social media usage<sup>81 82 83</sup>.



<sup>78</sup> Fokou, G., Yamo, A., Kone, S., Koffi, A. J. D. A., & Davids, Y. D. (2022). Xenophobic violence in South Africa, online disinformation and offline consequences. *African Identities*, pp. 1-20.

<sup>79</sup> Auwal, A. M. (2018). Social media and hate speech: Analysis of comments on Biafra agitations, Arewa youths' ultimatum and their implications on peaceful coexistence in Nigeria. *Media and Communication Currents*, 2(1), pp. 54-74.

<sup>80</sup> Alabi, T. O., & Ayelaja, A. K. (2019). Hate speech and security challenges: A pragmatic study of Nnamdi Kanu's speeches in the south-eastern Nigeria. *International Journal of English Research*, 5(4), pp. 1-9.

<sup>81</sup> Sunday, O. M., (2020). "Disinfodemic" in West Africa communities: Tackling extremism, hate speech and information manipulation in social media age. *Resisting Disinfodemic Media and Information Literacy*, 190

<sup>82</sup> Fokou, G., Yamo, A., Kone, S., Koffi, A. J. D. A., & Davids, Y. D. (2022). Xenophobic violence in South Africa, online disinformation and offline consequences. *African Identities*, pp. 1-20.

<sup>83</sup> Auwal, A. M. (2018). Social media and hate speech: Analysis of comments on Biafra agitations, Arewa youths' ultimatum and their implications on peaceful coexistence in Nigeria. *Media and Communication Currents*, 2(1), pp. 54-74.

# 5 Scoping Review: Think-Tanks and Information Pollution



[The Africa Center for Strategic Studies \(ACSS\) reports that online influence can be used by hostile nation-states, transnational criminal networks, and terrorist organizations to shape public debate and undermine democratic institutions.](#)



Similar to the areas examined by academics from various institutions within and outside Africa, several research, advocacy and policy focus organisations have also published a number of reports and policy briefs. Our examination of the reports published recently indicates preference for investigation of digital ecosystem in Africa in terms of its capacity to deliver the good and the bad of digital economy to every stakeholder. For instance, the Institute for Security Studies (ISS) in her report titled “A question of influence? Case study of Kenyan elections in a digital age” examines Kenya’s digital information ecosystem during the August 2022 election, focusing on online influence and coordinated disinformation campaigns<sup>84</sup>. ISS argues that about the weaponization of information online, particularly in Kenya’s 2022 election, and the potential threat to democratic institutions. The Africa Center for Strategic Studies (ACSS) reports that online influence can be used by hostile nation-states, transnational criminal networks, and terrorist organizations to shape public debate and undermine democratic institutions<sup>85</sup>.

In her report, the Atlantic Council’s Digital Forensic Research Lab (DFRLab)<sup>86</sup> discusses the spread of disinformation in Africa, its impact on social trust, critical thinking, and citizens’ ability to engage in politics fairly. Russia is highlighted as the leading purveyor of disinformation campaigns in Africa by examining her various tactics used in different countries. Democracy in Africa (DIA)<sup>87</sup> explores the complex interplay between digital technologies, politics, and society in Africa, addressing issues like internet shutdowns, Artificial Intelligence

regulation, social media mobilization, disinformation, and government surveillance. Relatively, Centre for Democracy and Development had more reports on various aspects of information pollution in Africa, especially Nigeria, Ghana and Senegal with the strategic focus on information manipulation and its dynamics within socio-political and economic systems of the countries, highlighting the blurred line between conventional and online media in Nigeria and the complexity of online disinformation operations and the rise of false information in Senegal, Sierra Leone, and West Africa<sup>88</sup>. CAMRI (Communication and Media Research Institute)<sup>89</sup> examines the framework for media and information in sub-Saharan Africa and the importance of media and information literacy (MIL) in countering misinformation and fostering a more informed society.

The think tanks call for interventions to regulate information disorders in Africa. They emphasize the need for resilience in Africa’s information ecosystems and highlight African initiatives countering disinformation. They highlight the need for digital literacy, quality journalism, fact-checking, and legal measures to combat disinformation. They advocate for a multifaceted approach involving social media regulation, accurate communication, and enhanced digital literacy to tackle falsehoods in Ghana. They recommend actions such as developing codes of conduct for political parties and promoting media and information literacy campaigns. They equally emphasize the need for robust media intelligence practices to counter misinformation, promote critical thinking, and foster a more informed society.

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<sup>84</sup> Institute for Security Studies (ISS). “A question of influence? Case study of Kenyan elections in a digital age” Available from: <https://issafrika.s3.amazonaws.com/site/uploads/EAR-49.pdf>

<sup>85</sup> Africa Center for Strategic Studies (ACSS). Disinformation Drilling into Africa’s Information Ecosystems.

<sup>86</sup> The Atlantic Council’s Digital Forensic Research Lab (DFRLab) The disinformation landscape in West Africa and beyond. Available from: [https://www.atlanticcouncil.org/wp-content/uploads/2023/06/Report\\_Disinformation-in-West-Africa.pdf](https://www.atlanticcouncil.org/wp-content/uploads/2023/06/Report_Disinformation-in-West-Africa.pdf)

<sup>87</sup> Democracy in Africa. Decoding Digital Democracy in Africa, Available from:

<https://pacscenter.stanford.edu/research/digital-civil-society-lab/research/decoding-digital-democracy-in-africa/>

<sup>88</sup> Centre for Democracy and Development (CDD) Nigeria’s Information Manipulation Ecosystem: An Overview <https://bit.ly/NigeriasInformationManipulationEcosystem>; Centre for Democracy and Development (CDD) Senegal’s Information Manipulation Ecosystem: An Overview

<https://www.cddwestafrica.org/reports/ecosysteme-des-fausses-informations-au-senegal-une-vue-d-ensemble-senegal-s-fake-news-ecosystem-an-overview/>

<sup>89</sup> CAMRI (Communication and Media Research Institute). Misinformation Policy in Sub-Saharan Africa from Laws and Regulation to Media Policy Available from: <https://library.oapen.org/bitstream/handle/20.500.12657/50175/9781914386053.pdf?sequence=1&isAllowed=y>

# 6 Mainstream Media, Fact-Check Organisations and Information Pollution



[A closer examination reveals that the significant amount of disinformation allegations in 2023 and 2020 could be attributed to elections in Ghana and Nigeria.](#)

Similarly to the previous insights about the creation of various forms of information pollution using different media and spread by different individuals, our analysis of fact-check organizations (Dubawa, Africa Check, FactCheck Hub, and PesaCheck) reveals that between 2017 and 2023, Facebook, Twitter, WhatsApp, newspapers, blogs, YouTube, websites, television, and LinkedIn were the dominant media used for conveying polluted messages, while politicians, media, and individuals were the creators and disseminators. We also discovered that fact-checking companies used Google Image Reverse Search, Google Search, TinEye, Yandex Reverse Image Search, Google Lens, InVID, Scam Doc, SEMrush, YouTube Data Viewer, and Deepware as crucial digital tools to validate diverse claims. In our analysis, it emerged that these organisations verified claims related to politics, elections, security, health, and personalities of individuals and groups predominantly.

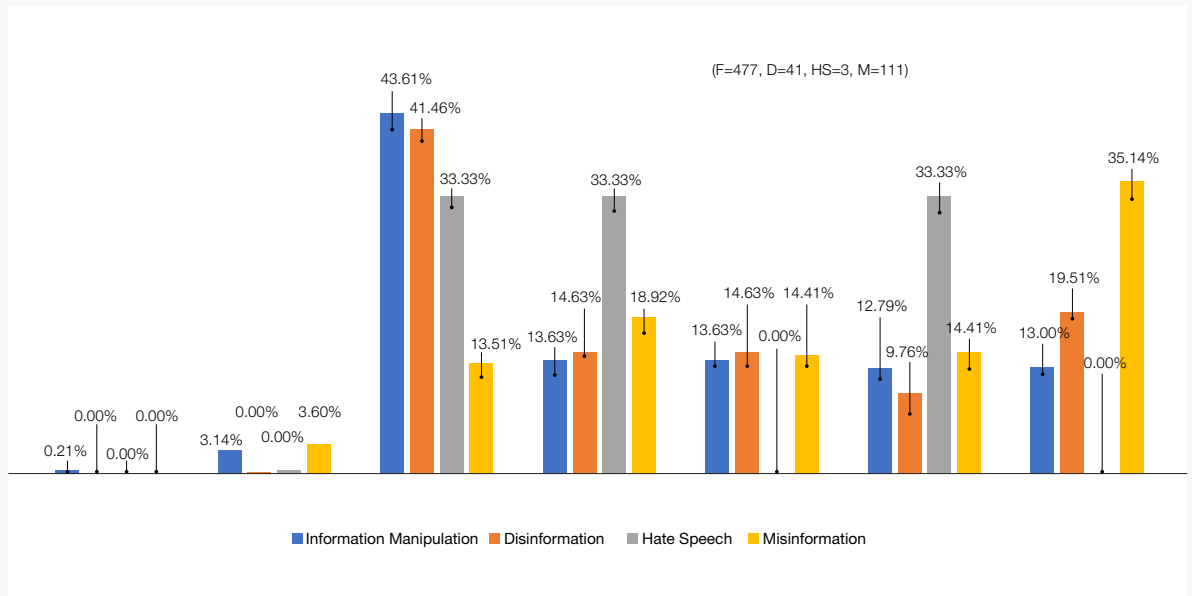
Out of the four types of information pollution discussed in this research, the four fact-checking organisations validated claims about information manipulation and

misinformation more than they debunked allegations about disinformation and hate speech. Figure 3 illustrates that there were more information manipulation claims in 2019 than in previous years, particularly in 2017 and 2018. However, this does not imply that there were no claims involving the form. It is likely that these organisations simply validated the number of claims they had access to. The findings show that hate speech received similar attention from 2019 to 2022. This means that these organisations had the same amount of hate speech-related claims. A closer examination reveals that the significant amount of disinformation allegations in 2023 and 2020 could be attributed to elections in Ghana and Nigeria. This position is also linked to an increase in validating claims associated with disinformation between 2019 and 2023. Throughout these years, Nigeria held general elections. As a result, fact-checkers may have discovered that the makers and disseminators of polluted messages would take advantage of the opportunity to enhance the information pollution type in order to achieve their goals.

↑ **Figure 3:**

Volume of relevant select information pollution types fact-checked between 2017 and 2023 in Africa

**Source:** Africa Check, Dubawa, FactCheck Hub, Pesewa, 2017-2023; Brain Builders Youth Development Initiative, 2024

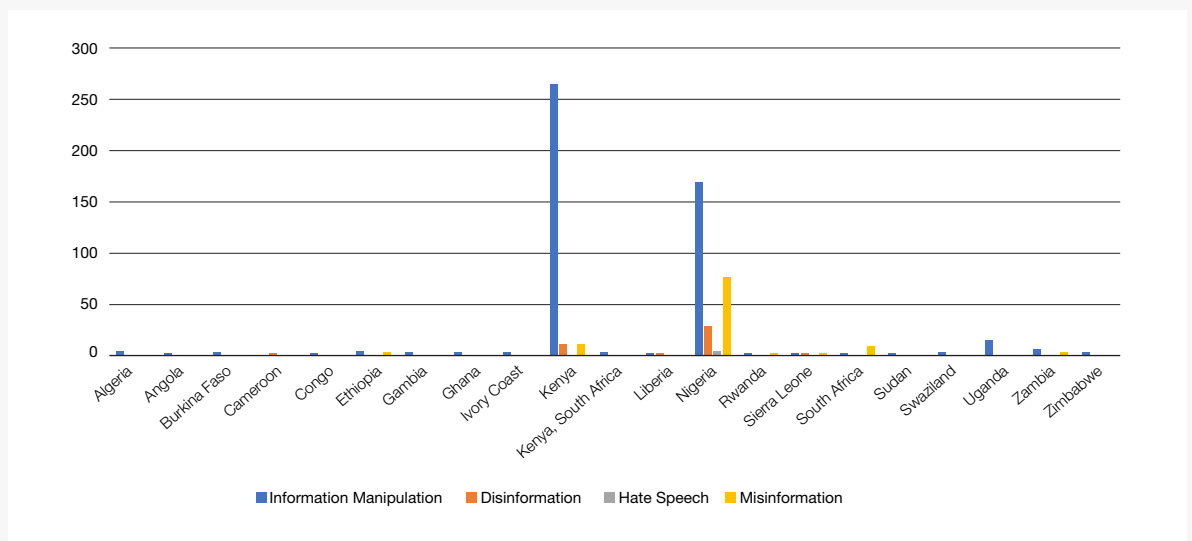


Contrary to previous position, the data in Figure 4 show that information manipulation claims were more fact-checked in Kenya and Nigeria than in other nations. Data also show that Nigeria led Kenya in disinformation and misinformation, while Uganda joined the ranks of information manipulation, with fewer than 50 claims confirmed by organisations. Overall, these types of information pollution appear to be widespread throughout West and East Africa.

↑ **Figure 4:**

Volume of relevant select information pollution types fact-checked between 2017 and 2023 in Africa by country

**Source:** Africa Check, Dubawa, FactCheck Hub, Pesewa, 2017-2023; Brain Builders Youth Development Initiative, 2024



While it is informative to understand the persons or groups responsible for developing and disseminating various forms of information pollution, as well as the digital tools used by fact-checkers, it is equally critical to identify the specific verdict types used by fact-checkers. This is addressed by the data shown in Table 5, which shows the dominant verdicts across organizations. In our analysis, we discovered that the four fact-checkers used misleading, hoax, and fake verdict categories more than altered and incorrect ones. Meanwhile, one of the most startling findings is that a sizable number of claims were proven correct. In this regard, we note that not all information may be classified as polluted or disordered. Analysis over the years suggests that misleading verdicts were issued in 2020, 2021, and 2023. In 2019, hoax verdicts were most commonly employed. True and altered verdicts were used in 2019 and 2021, respectively.

TABLE 5 Key verdicts from fact-check organisations by year on information pollution

	Altered	Fake	Hoax	Incorrect	Misleading	True
2017	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)
2018	0(0%)	0(0%)	0(0%)	1(14.29%)	0(0%)	1(4.76%)
2019	0(0%)	1(3.23%)	<b>26(78.79%)</b>	0(0%)	2(5.13%)	<b>13(61.90%)</b>
2020	1(8.33%)	1(3.23%)	<b>5(15.15%)</b>	0(0%)	<b>6(15.38%)</b>	2(9.52%)
2021	<b>3(25.00%)</b>	<b>7(22.58%)</b>	1(3.03%)	0(0%)	<b>6(15.38%)</b>	2(9.52%)
2022	<b>7(58.33%)</b>	<b>16(51.61%)</b>	1(3.03%)	0(0%)	<b>4(10.26%)</b>	1(4.76%)
2023	1(8.33%)	<b>6(19.35%)</b>	0(0%)	<b>6(85.71%)</b>	<b>21(53.85%)</b>	2(9.52%)
2023	<b>12(100%)</b>	<b>31(100%)</b>	<b>33(100%)</b>	<b>7(100%)</b>	<b>39(100%)</b>	<b>21(100%)</b>

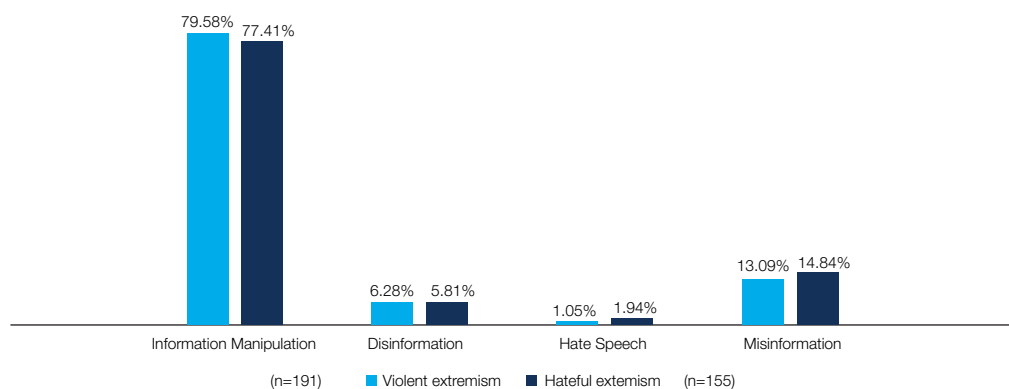
Source: Africa Check, Dubawa, FactCheck Hub, PesaCheck, 2017-2023; Brain Builders Youth Development Initiative, 2024

The various types of verdicts employed by fact-checkers may be related to the necessity for decisive action on information pollution, taking into account its effects on individuals, groups, and society as a whole. Figure 5 provides additional evidence for this position, demonstrating that the majority of information manipulation claims checked by fact-checkers could lead to violent and hateful extremism. This also applies to misinformation, which tends to lead to hateful extremism rather than violent extremism. It is also worth noting that the likelihood of hate speech leading to hate extremism is high, indicating a strong correlation between the two. Disinformation, like information manipulation and misinformation, has the potential to lead to violent extremist behaviour. This association was stronger in Nigeria than in Ghana and Ivory Coast (see Figure 6).

↑ Figure 5:

Information pollution types by possible extremism type

Source: Africa Check, Dubawa, FactCheck Hub, Pesewa, 2017-2023; Brain Builders Youth Development Initiative, 2024

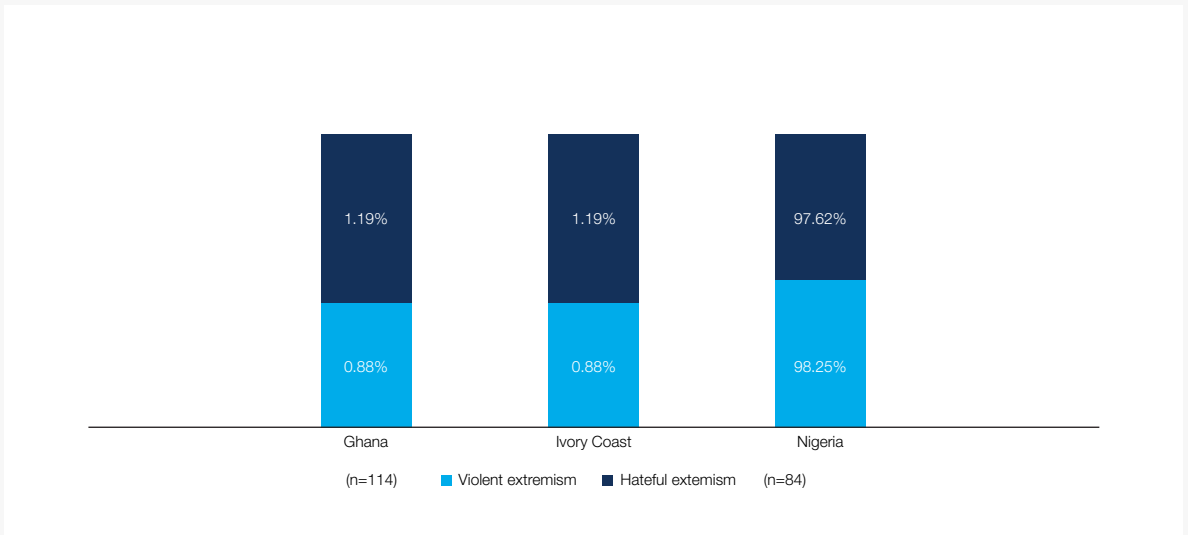




↑ Figure 6:

Possible extremism type by country

Source: Africa Check, Dubawa, FactCheck Hub, Pesewa, 2017-2023; Brain Builders Youth Development Initiative, 2024

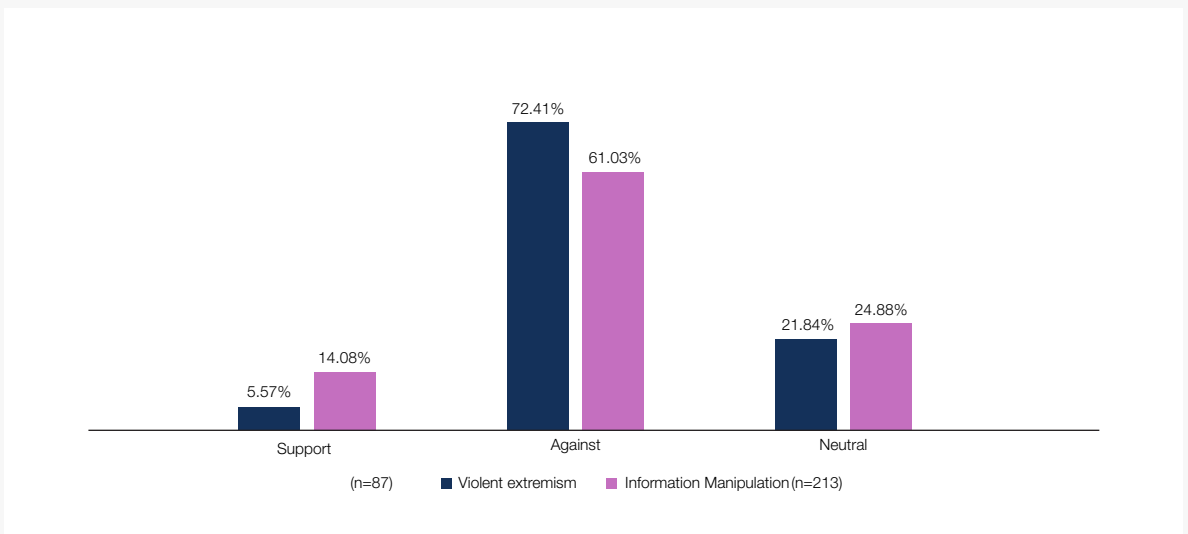


Fact-checkers appear to have played a role in identifying categories of information pollution. In Figure 7, we presented the perspectives of citizens in the region who believed in an alternative narrative offered by certain moral entrepreneurs about the need to confront violent extremism and information manipulation. According to our analysis, a large majority of citizens are opposed to the mechanisms offered by individuals and governments to stop the spread of information manipulation and violent extremism. Moderate views supported and maintained neutral positions on issues such as enforcing specific rules and regulations that prohibit engaging in information pollution business and violent behaviour. According to our analysis, Ghanaian and Nigerian moral entrepreneurs want laws and regulations to be upheld, and they also want new laws and regulations to be created to counter the threat of information pollution (see Figure 8).

↑ Figure 7:

Citizens' opposition and rationalisation of violent extremism and information manipulation

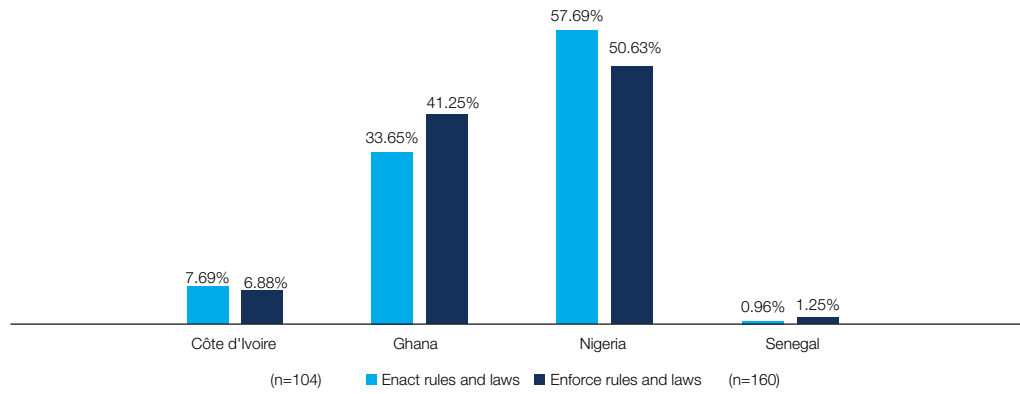
Source: YouTube Data, Twitter Data, 2020-2023, Brain Builders Youth Development Initiative, 2024



↑ Figure 8:

Moral entrepreneurs' legal reactions to information pollution control and containment

Source: Fraternité Matin, Myjoyonline, The Punch, Senenews, 2016-2023; Brain Builders Youth Development Initiative, 2024

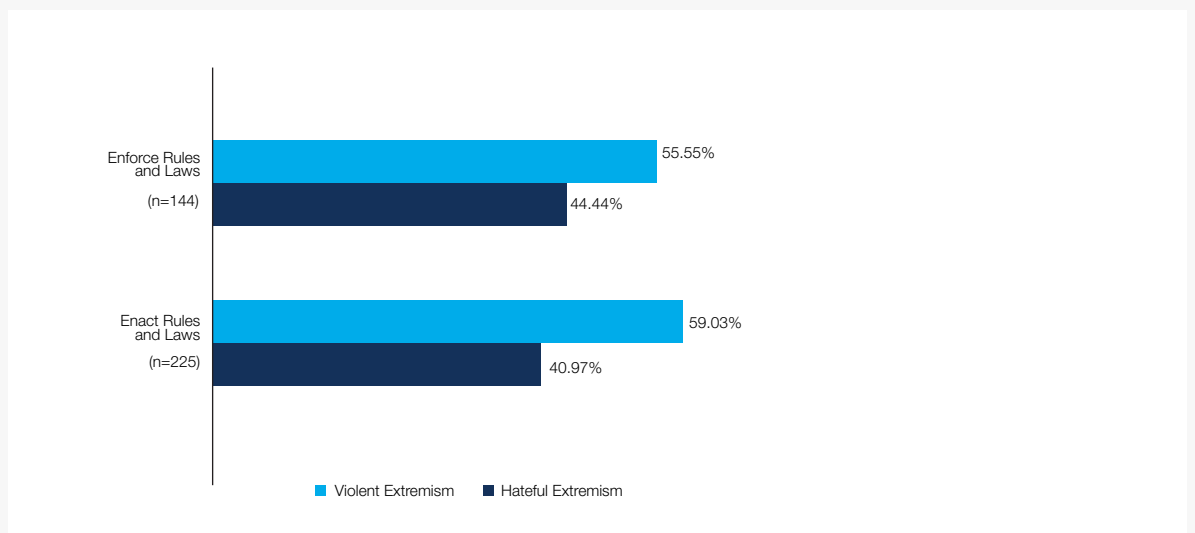


Collectively, our data reveals that moral entrepreneurs in the region prefer that existing laws and rules be implemented to prevent violent extremism over hateful extremism. To be more specific, moral entrepreneurs demand laws and rules to be enforced rather than enacted. This shows that they believe there are already laws and rules in place to assist combat violent and hateful extremism. Meanwhile, the minimal data available to us suggests that citizens prefer existing laws and rules to be followed in order to stop violent extremism and information manipulation rather than creating new ones (see Figure 10).

↑ Figure 9:

Moral entrepreneurs' legal reactions according to potential outcomes of dominant information pollution types

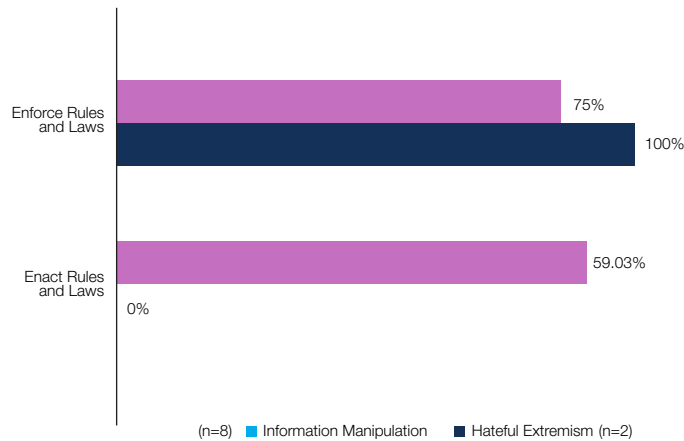
Source: Fraternité Matin, Myjoyonline, The Punch, Senenews, 2016-2023; Brain Builders Youth Development Initiative, 2024



↑ Figure 10:

Citizens' legal reactions to information manipulation and violent extremism

Source: YouTube data, Twitter Data, 2020-2023, Brain Builders Youth Development Initiative, 2024



Data in Table 6 are comparable to those shown in Figures 9 and 10, in which moral entrepreneurs and citizens agreed to enforce existing laws and rules. However, the data in Table 6 show a little divergence in citizens' positions. They were more opposed to combating violent extremism and information manipulation in recent years than to supporting and preserving neutral viewpoints. This is more pronounced in 2017 and 2022 than in previous years. One of the citizens noted thus:



Information manipulation started by corrupt journalist who will make up stories for the sake of great stories to attract their readers. As videos and cameras became more accessible as hand held device. People used it either proof or fabricated stories. Information Manipulation just didn't happen in the computer era. In fact, it's been happening since man learnt to write and read. It's a powerful way to manipulate or control people. But the use of technology made it spread much convenient and easier. The era may have changed but it is fundamentally the same objective to control people. It was once said that the outcome of war is how fast information being delivered and internet did exactly just that. Social media is a type of forum where people gathered waiting for a piece of information."

It also emerged that in 2022, fact-checkers issued the majority of fake verdicts on the claims they verified. This shows that the verdict appeared to be ineffective throughout the year. In fact, it could be said that verdicts provided little impact on reducing information manipulation creation and dissemination as well as believing in ending violent extremism, especially with the connection with the claims associated with the extremism type.

TABLE 6 **Citizens' opposition and rationalisation of violent extremism and information manipulation by year**

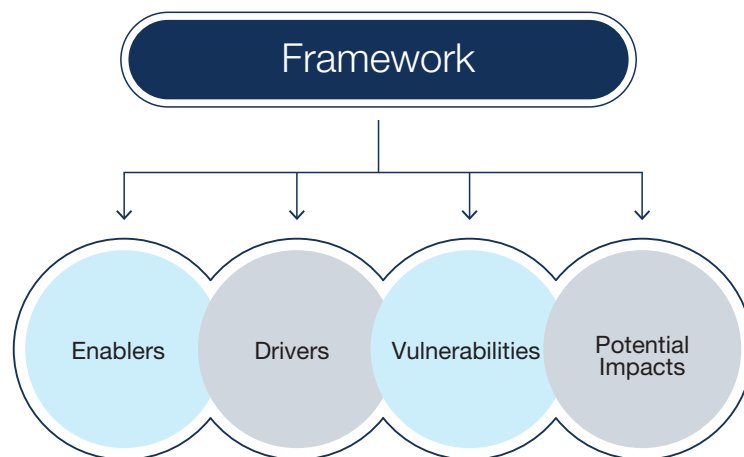
Year	Support stopping	Against stopping	Neutral about stopping
2017	<b>25(71.43%)</b>	<b>115(59.59%)</b>	<b>44(61.11%)</b>
2018	0(0.00%)	0(0.00%)	1(1.39%)
2019	1(2.86%)	4(2.07%)	2(2.78%)
2020	2(5.71%)	5(2.59%)	2(2.78%)
2021	0(0.00%)	2(1.04%)	0(0.00%)
2022	<b>6(17.14%)</b>	<b>53(27.46%)</b>	<b>21(29.17%)</b>
2023	1(2.86%)	14(7.25%)	2(2.78%)
<b>Total</b>	<b>35(100%)</b>	<b>193(100%)</b>	<b>72(100%)</b>

Source: Africa Check, Dubawa, FactCheck Hub, PesaCheck, 2017-2023;  
Brain Builders Youth Development Initiative, 2024

# 7 Analytical Framework and Methodology



Increased use of platforms (social media) remains the primary driver, with extremist beliefs appearing not only on social media but also in mainstream media. This has increased the spread of information pollution and is predicted to remain an important driver in the future.



Using the information integrity framework developed by the United Nations Development Programme, we aim to assess information pollution and its propensity to support violent and hateful extremism in West Africa. Four essential components make up this framework, which helps stakeholders—citizens in particular—build strong resistance against information pollution and violence. The framework anticipates that analysts would investigate enablers, drivers, vulnerabilities, and potential impacts in order to achieve holistic assessment of information ecosystem. Because the

components address the socioeconomic and political dynamics expected for identifying issues like information pollution, we believe that these components are appropriate and sufficient for investigating the influence of polluted messages on hateful and violent extremism in a sub-region that has been polarised over the years due to various conflicts.

Enablers and drivers are structural conditions that indirectly facilitate information pollution, while vulnerability refers to a society's propensity to be adversely affected by hazards. The

framework suggests that analyses aiming to detect enablers and drivers of information pollution should consider four contextual components: socio-economic and social context, media landscape and information ecosystem context, regulatory, legislative, institutional context, and political context. Understanding how these components interact to create vulnerability is crucial for effective risk management<sup>90</sup>.

As shown in Table 7 and Exhibit 1, socioeconomic and social environment are significant enablers of information pollution, with low economies, terrible governance, and conflicts encouraging people to engage in information pollution business. Increased use of platforms (social media) remains the primary driver, with extremist beliefs appearing not only on social media but also in mainstream media. This has increased the spread of information pollution and is predicted to remain an important driver in the future. The driver's future influence is increasingly assured as platforms adopt generative artificial intelligence to provide more value

to users, and users employ outside generative AI to create contaminated messages and distribute them across platforms.

Because media pluralism is associated with freedom, particularly when viewing a society as democratic, extremist ideology can pass through professionally controlled and self-regulatory media. As a result, poor regulation or complexity in controlling the information ecosystem and media landscape continues to be a major source of information pollution. The sub-region's complexity is evident in the erosion of trust and polarization of groups and societies along religious, ethnic, and political lines. This has significantly reduced the ability to make informed decisions about combatting the epidemic and potentially ending various forms of extremism.

The necessity to defend fundamental human rights and secure long-term freedom of press and speech adds to the complexities. On multiple instances, proponents of anti-social media regulation



[Because media pluralism is associated with freedom, particularly when viewing a society as democratic, extremist ideology can pass through professionally controlled and self-regulatory media.](#)

have taken advantage of this, and it has remained one of the fundamental elements driving the spread of information pollution. As a result, stakeholders are caught in a difficult position: proponents and followers desire emancipation (preserving information pollution as a form of expression), while the government needs to address the negative effects of

polluted messages. While all of this may be said of anti-social media regulatory crusaders, political and non-political actors have used weak political institutions to carry out targeted information pollution initiatives, particularly during election years. In this aspect, the sociopolitical environment has always been prone to information pollution.

<sup>90</sup> UNDP. (2022). Information integrity: Forging a pathway to truth, resilience and trust. UNDP. Available from: <https://policycommons.net/artifacts/2264852/information-integrity/>

From the UNDP framework to a framework constructed utilizing research questions (see Exhibit 1), we want to gain a comprehensive understanding of tackling information pollution in West Africa, combining structural conditions and direct activities with collaborative, evidence-based, and targeted approaches, using system dynamic method with adoption of integrated research strategy.

The integrated research strategy included both secondary and primary data sources. We systematically chose academic and think-tank papers related to the research topic. These publications dated from 2013 to 2023. Our think-tank data came primarily from the Institute for Security Studies (ISS), Research ICT Africa (RIA), Africa Center for Strategic Studies (ACSS), Democracy in Africa (DIA), Centre for Democracy and Development (CDD), The Atlantic Council's Digital Forensic Research Lab (DFRLab), CAMRI (Communication and Media Research Institute), and UNESCO Abuja Office. The years of establishment ranged from 1975 to 2016. A total of 42 relevant academic papers and 12 think-tank publications were gathered from various digital sources (Google Scholars and the organisations' official websites).

The second stage of the secondary data was the consideration of the World Values Survey<sup>91</sup> database for extracting views of the people of the case countries: Ghana, Ivory Coast, Nigeria, and Senegal. However, we later used the surveys for Ghana and Nigeria because Ivory Coast and Senegal were completely not considered during the period we examined by the WVS. Social values, attitudes and stereotypes, happiness and well-being, social capital, trust and organisational membership, security, science and technology, religious values, ethical values, and norms were specifically chosen from the WVS. These constructs are in line with the key components of the UNDP's

framework and related to connective elements and actors in our formulated analytical framework because WVS aims at providing insights that guide state and non-state actors in addressing structural problems related to socio-economic and political conditions. From the database, a total of 2,790 Ghanaian and Nigerian respondents answered questions posed by the WVS. One thousand and five hundred and fifty-two Nigerians participated in the survey that covered 2017–2022, while 1,238 Ghanaians participated from 2010 to 2014. Relevant laws and regulations of the case countries was the third stage of secondary data use. Specifically, we selected existing and proposed legal instruments.

Primary data sources encompassed news stories from selected major newspapers in the case countries, fact-check organisations, YouTube and Google Trends. We specifically chose relevant 132 information pollution control-focused news from The Punch (Nigeria), *Fraternité Matin* (Côte d'Ivoire), Myjoyonline (Ghana), and Senenews (Senegal). The selection resulted in 250 relevant quotes for analysis. Claims from information pollution conveyors fact-checked by fact-check organisations formed the second stage of primary data collection. We considered Africa Check (39 claims), Dubawa (173 claims), FactCheck Hub (104 claims), and PesaCheck (316 claims) because they are key fact-check organisations in Africa, according to several sources. The third primary data emerged from views expressed on the need to combat information manipulation and violent extremism in Africa, especially in the case countries. The fourth stage of primary data use was a TEDx YouTube video<sup>92</sup> with Nigerian journalist and social influencer, Stephanie Busari. The video focused on how information manipulation does real harm<sup>93</sup>, and the speaker copiously referenced Nigeria's Chibok girls' abduction and some instances where information manipulation could lead to

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<sup>91</sup> World value survey (Wave 7 for Nigeria 2017-2022; Wave 6 for Ghana 2010-2014)

<sup>92</sup> Boko Haram kidnapped over 200 schoolgirls in Chibok, Nigeria, causing confusion and delays in rescue efforts. In a talk by journalist Stephanie Busari, she highlights the danger of information manipulation and suggests ways to combat it, highlighting the Chibok tragedy as a prime example.

<sup>93</sup> Stephanie Busari (April 14, 2014). How information manipulation does real harm. Available from: <https://www.youtube.com/watch?v=IwVYaY39YbQ>

extremism. A total of 598 comments were extracted from the comment section of the video. Google Trends were our fifth stage of primary data. We extracted public interest from 2013 to 2023, considering case countries, about information pollution and its impacts. The source was considered because citizens of the case countries, like their counterparts in the world, are expected to seek information on various issues using search engines, most importantly Google Search Engine. And, for the purpose of historical archiving of digital footprints for real time analysis and insights generation, Google developed Google Trends as a product.

Across the sources, we focused on the

types of information pollution discussed previously. Media channels for spreading FMDH (information manipulation, misinformation, disinformation, and hate speech), digital tools used for verification, conveyors of polluted messages and possible impacts in terms of hateful and violent extremism, verdicts employed by fact-checkers, moral entrepreneurs, moral economy types (enact rules and laws and enforce rules and laws), sentiments, and public rationalisation of information pollution and its impacts were specifically measured. Data were analysed using descriptive statistics of simple frequency counts and percentages and visualised using charts and tables.

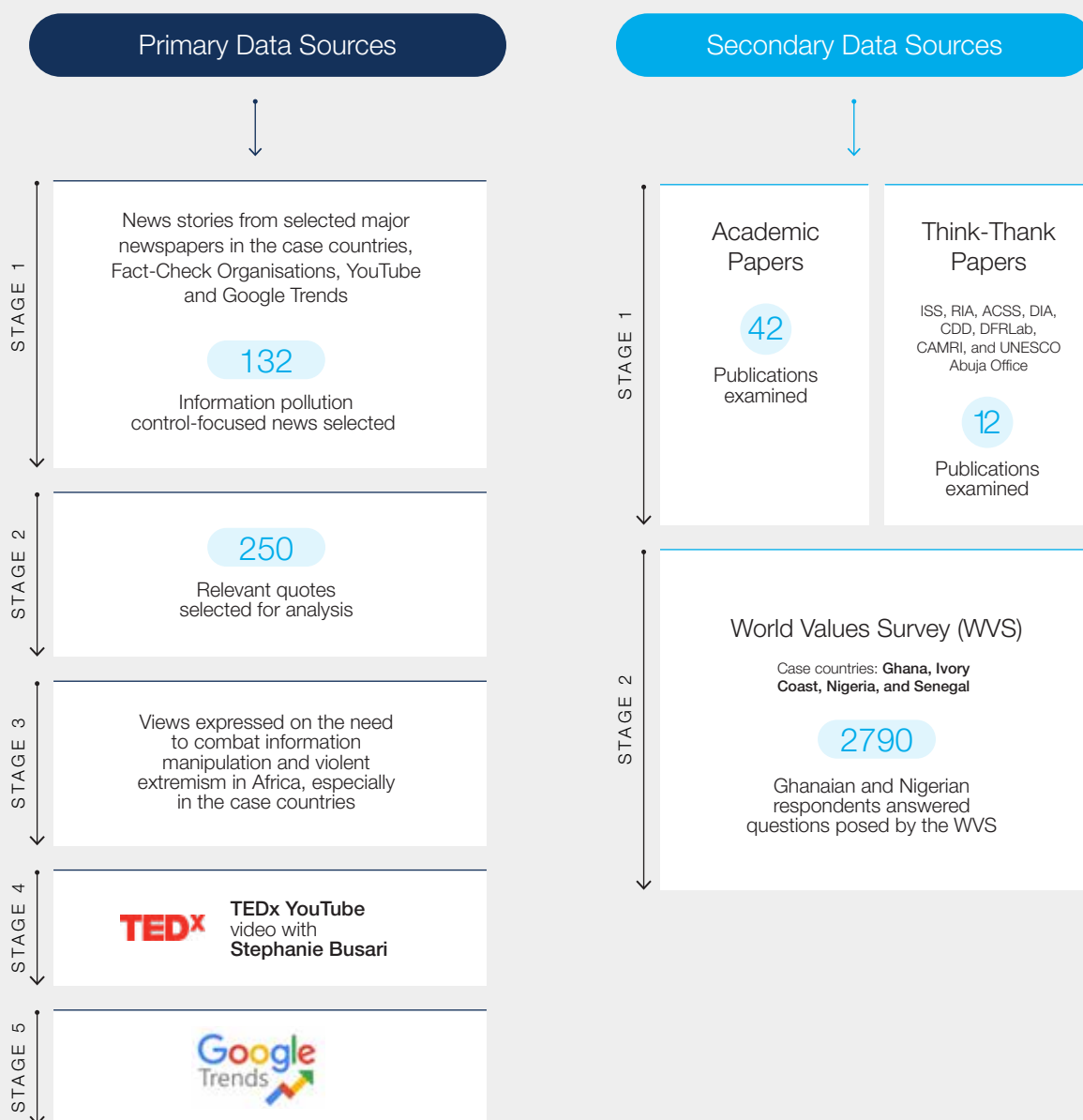


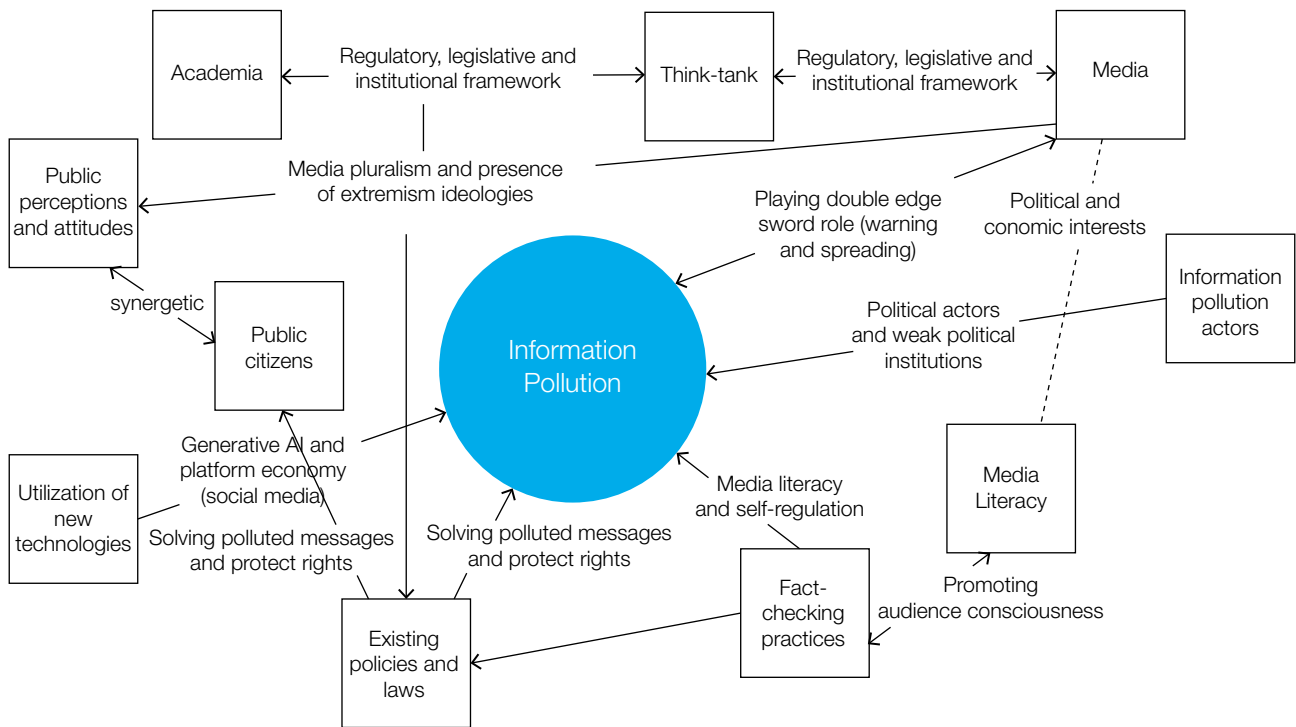


TABLE 7 Potential enablers, drivers, vulnerabilities and impacts on information pollution

	Enablers (indirect structural conditions)	Drivers (direct actions)	Vulnerabilities	Impacts
Socio-economic and social context	Poor economy through bad governance, personal as well as societal conflict and violence	Presence and increased use of social media  Emergence of generative Artificial Intelligence	Inability to address varied socioeconomic and political challenges leverage by creators	Enablers create a fertile ground, while social media and generative AI accelerate its spread and make it more difficult to combat
Media landscape and information ecosystem	Poor self-regulation of social and mainstream media  Low level of media and information literacy	Presence of media and employees with hateful and extremism ideologies  Low institutional framework for improved ML and IL	Media pluralism and lack of strong institutionalisation of ML and IL	Erosion of trust in media, polarization of communities and a diminished ability to make informed decisions
Regulatory, legislative and institutional	Complexity in implementing existing laws and regulations as well as accepting proposed ones	The need to sustain freedom of speech, expression and digital rights  Capitalize on liberalism and freedom at the expense of moral sensibility	Create an environment where information pollution is protected as a form of expression	Create a delicate balance between protecting individual rights and addressing the harmful effects of information pollution
Political	Weak political institutions pre, during electoral and post-electoral cycles	Political and non-political actors leverage the weak institutions	Generate a complex socio-political environment for creating and fostering information pollution ecosystem	Create a delicate balance between building strong socio-political institutions and addressing the harmful effects of information pollution

Source: Brain Builders Youth Development Initiative, 2024

## EXHIBIT 1 Illustrated analytical framework



Source: Brain Builders Youth Development Initiative, 2024

## 8 Country Case



Our country cases include Côte d'Ivoire, Ghana, Senegal, and Nigeria. In this report, they are known as COGASEN. Nigeria and Ghana are Anglophone countries, whilst Côte d'Ivoire and Senegal are Francophone ones. These countries differ in terms of socioeconomic and political development. However, the most consistent similarities over time have been information pollution and its consequences.





8.1



# Côte d'Ivoire

When the information is excessively disorganized or polluted, the decision may have a favourable or dreadful influence. Ivorians, like the rest of the world, are required to seek information through a variety of media channels, ranging from personal to mainstream and social.



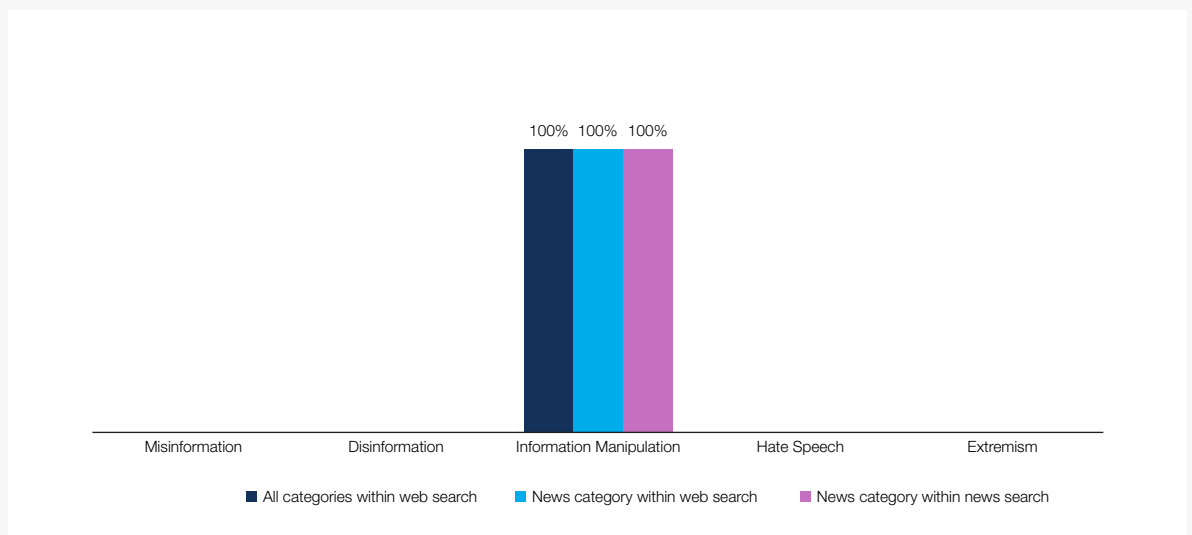
Everyone requires information in order to endure social, economic, and political problems, as well as to address the requirements associated with these fundamental aspects of existence. Access to a variety of media is critical in this situation. Such media must have chosen and primed specific parts of social, economic, and political life so that each individual might make an informed decision. When the information is excessively disorganized or polluted, the decision may have a favourable or dreadful influence. Ivorians, like the rest of

the world, are required to seek information through a variety of media channels, ranging from personal to mainstream and social. On this basis, we intend to identify how Ivorians explore the Internet for polluted messages, with a focus on information manipulation, misinformation, disinformation, and hate speech. As seen in Figure 11, Table 8, Table 9, and Table 10, Ivorians showed a greater interest in information manipulation than other types of information pollution between 2013 and 2023.

↑ Figure 11:

Information seeking behaviour about information pollution and extremism in Côte d'Ivoire between 2013 and 2023

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024



The information in Table 8 indicates that the Ivorian public was more interested in reading information manipulation in 2022, 2020, and 2023 than they were in previous years. This kind of information pollution was mostly looked for across all web search categories that Google created to classify search interest among the general population. According to Google's explanation of the feature, the

Ivorian action indicates that news, photos, videos, and other sectors like education, health, security, industry, and business were employed for reading information manipulation. There were a number of reasons why the public was interested in those years. For instance, the nation was hit hard by the COVID-19 epidemic in 2020 and held presidential elections in the same year.

TABLE 8 All categories within web search in Côte d'Ivoire

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	0(0%)	0(0%)	4.13%	0(0%)	0(0%)
2014	0(0%)	0(0%)	<b>12.11%</b>	0(0%)	0(0%)
2015	0(0%)	0(0%)	6.57%	0(0%)	0(0%)
2016	0(0%)	0(0%)	7.50%	0(0%)	0(0%)
2017	0(0%)	0(0%)	8.03%	0(0%)	0(0%)
2018	0(0%)	0(0%)	5.61%	0(0%)	0(0%)
2019	0(0%)	0(0%)	6.65%	0(0%)	0(0%)
2020	0(0%)	0(0%)	<b>13.64%</b>	0(0%)	0(0%)
2021	0(0%)	0(0%)	9.83%	0(0%)	0(0%)
2022	0(0%)	0(0%)	<b>13.87%</b>	0(0%)	0(0%)
2023	0(0%)	0(0%)	<b>12.01%</b>	0(0%)	0(0%)
<b>Total</b>	<b>0(0%)</b>	<b>0(0%)</b>	<b>7914 (100%)</b>	<b>0(0%)</b>	<b>0(0%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

The data in Table 9, which shows the degree to which Google Trends saved searches between 2013 and 2023 within the news category rather than the general categories previously stated, further supports the earlier position that the Ivorian people developed an interest in information manipulation. Sixteen percent of 5,887 searches were in 2023. This is closely followed by 2019, when 12.60% of all searches (n=5,887) were made. Comparatively, the percentage of people looking for information manipulation was almost identical in 2020 and 2021. Overall analysis indicates that within the general web search section, the Ivorian public utilized specific keywords to get information regarding specific information manipulation that had already been obtained from human and media sources, including newspapers, blogs, and social media.



TABLE 9 News category within web search in Côte d'Ivoire

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	0(0%)	0(0%)	8.78%	0(0%)	0(0%)
2014	0(0%)	0(0%)	10.03%	0(0%)	0(0%)
2015	0(0%)	0(0%)	7.94%	0(0%)	0(0%)
2016	0(0%)	0(0%)	4.75%	0(0%)	0(0%)
2017	0(0%)	0(0%)	7.38%	0(0%)	0(0%)
2018	0(0%)	0(0%)	5.43%	0(0%)	0(0%)
2019	0(0%)	0(0%)	<b>12.60%</b>	0(0%)	0(0%)
2020	0(0%)	0(0%)	<b>11.10%</b>	0(0%)	0(0%)
2021	0(0%)	0(0%)	<b>10.29%</b>	0(0%)	0(0%)
2022	0(0%)	0(0%)	4.85%	0(0%)	0(0%)
2023	0(0%)	0(0%)	<b>16.78%</b>	0(0%)	0(0%)
<b>Total</b>	<b>0(0%)</b>	<b>0(0%)</b>	<b>5887(100%)</b>	<b>0(0%)</b>	<b>0(0%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

The data in Table 10 are extensions of those shown in Tables 8 and 9, because the Ivorian public specifically searched within the news category, as well as within the news search, rather than across all categories and the broader web. According to Google's explanation of this category, the Ivorian public entered terms into search engines and largely selected the news category using Google Trends' section selection option. Meanwhile, the data clearly shows that information manipulation was crucial to the Ivorian population between 2013 and 2023. According to our analysis, substantial searches happened in 2022, 2018, 2019, and 2017. This shows that during these years, the players manufactured and circulated a large amount of information manipulation. For example, in 2019, a member of parliament was accused of spreading false information that "chief prosecutor was planning to order the arrest of another lawmaker. But the prosecutor denied this and said the tweet had caused demonstrations." The parliamentarian was later sentenced to one year in prison and fined \$520 .

<sup>94</sup> SABC (2019). Ivory Coast MP jailed for tweeting information manipulation. Available from: <http://web.sabc.co.za/sabc/home/channelafrica/news/details?id=2d62f100-950b-45d0-a318-ea14328c9224&title=Ivory%20Coast%20MP%20jailed%20for%20tweeting%20fake%20news>

TABLE 10 News category within news search in Côte d'Ivoire

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	0(0%)	0(0%)	6.90%	0(0%)	0(0%)
2014	0(0%)	0(0%)	7.86%	0(0%)	0(0%)
2015	0(0%)	0(0%)	8.73%	0(0%)	0(0%)
2016	0(0%)	0(0%)	8.05%	0(0%)	0(0%)
2017	0(0%)	0(0%)	<b>10.34%</b>	0(0%)	0(0%)
2018	0(0%)	0(0%)	<b>11.45%</b>	0(0%)	0(0%)
2019	0(0%)	0(0%)	<b>10.13%</b>	0(0%)	0(0%)
2020	0(0%)	0(0%)	7.63%	0(0%)	0(0%)
2021	0(0%)	0(0%)	8.54%	0(0%)	0(0%)
2022	0(0%)	0(0%)	<b>12.20%</b>	0(0%)	0(0%)
2023	0(0%)	0(0%)	8.12%	0(0%)	0(0%)
<b>Total</b>	<b>0(0%)</b>	<b>0(0%)</b>	<b>5735(100%)</b>	<b>0(0%)</b>	<b>0(0%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

Another instance that seems to justify the Ivorian public interest in information manipulation was a information manipulation video on social media in the country's main city Abidjan that led to attacks on Niger nationals, resulting in one death and several injuries. The video, which depicted a 2019 raid by the Nigerien army on the Boko Haram jihadist group, was mistaken as an incident where Niger nationals attacked Ivorians. The violence occurred in the working-class districts of Abobo, Yopougon, Anyama, Angre, and Adjame, where hundreds of people from neighboring West African countries live<sup>95</sup>.

As illustrated in Figure 12, our analysis indicates that academics, legal experts,

legislators, government representatives, and other moral entrepreneurs feel information manipulation is more pervasive in Ivory Coast than other types of information pollution. This is based on 23 quotes from moral entrepreneurs that we analyzed. More than half of all quotes strongly supported the public interest search trend. However, having disinformation in second place indicates that the type is also prevalent and most likely has a big impact on personal reputation as well as societal damage. Figure 13 shows that information pollution remains a challenge to Ivorian democratic governance, elections, and health management. It was also shown that polluted messages were viewed as leading to conflict formation and escalation.

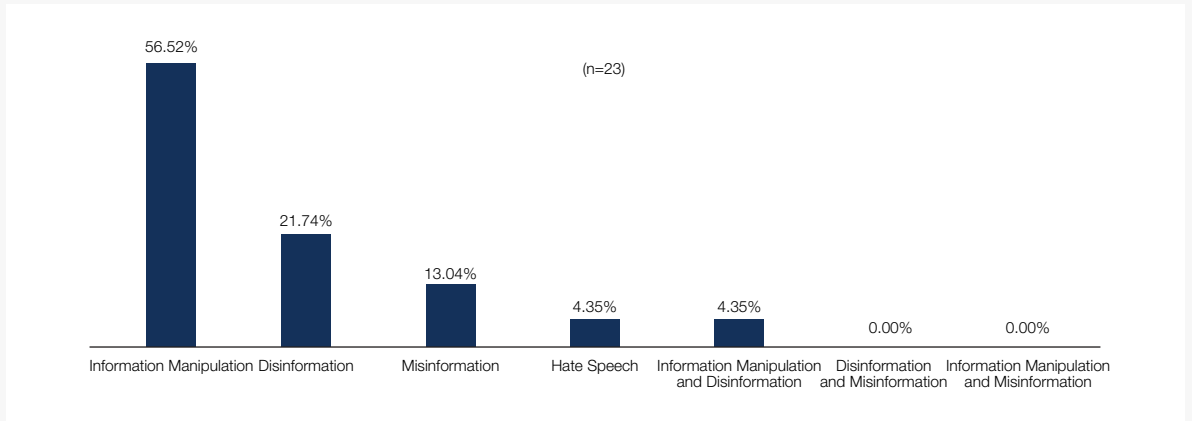
<sup>95</sup> News24 (2021). One killed, many injured in Ivory Coast xenophobic violence. Available from: <https://www.news24.com/news24/africa/news/one-killed-many-injured-in-ivory-coast-xenophobic-violence-20210521>



↑ **Figure 12:**

Dominant information pollution types according to Ivorian moral entrepreneurs

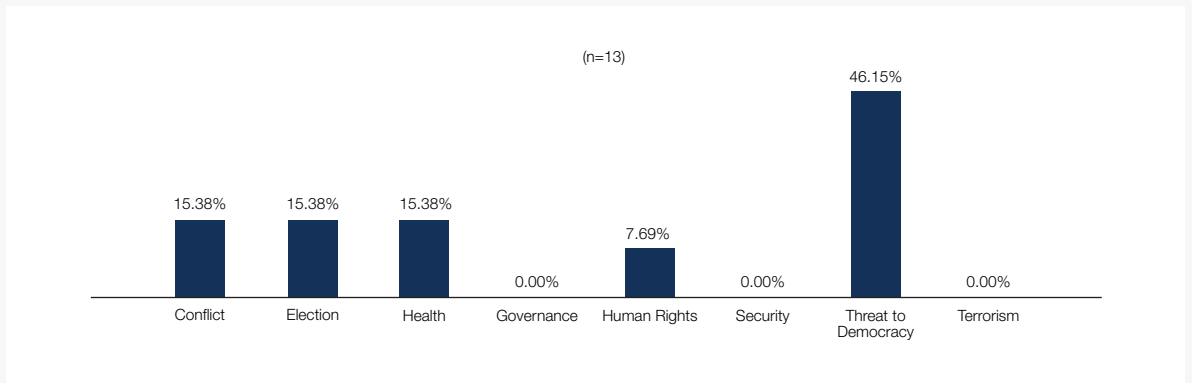
**Source:** Fraternité Matin, 2013-2023; Brain Builders Youth Development Initiative, 2024



↑ **Figure 13:**

Issues raised by Ivorian moral entrepreneurs

**Source:** Fraternité Matin, 2013-2023; Brain Builders Youth Development Initiative, 2024



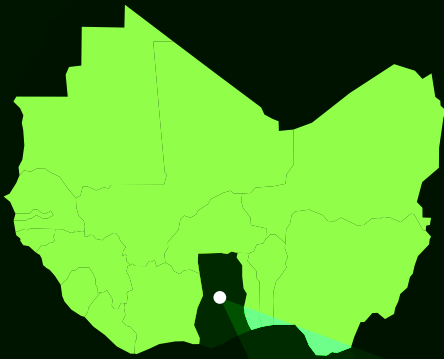
If information pollution has various consequences, as stated by moral entrepreneurs, to what extent do existing laws and regulations fit with the need to combat the menace? If not, are there any proposed laws and regulations to eliminate the scourge? We respond to these questions by retrieving legal

instruments from the country. As shown in Table 11, we discovered three statutes or clauses that address disinformation, information manipulation, misinformation, and disinformation. The prosecution of the legislator previously discussed could fall under these rules, particularly those with prison and fine penalties.

TABLE 11 Existing and proposed legal provisions in Côte d'Ivoire

Law	Year	Provisions	Penalties
Code Penal	1998	<b>Article 173</b> Criminalizes the publication of false information found to lead to civil disobedience or undermine either 'public morale' or the reputation of institutions. The standard for determining what information is false, or how to define and prove the alleged harms, was not set out.	Those found guilty can face up to 3 years in prison and a fine of up to 5 million CFA Francs.
Loi 2013-451 2013		Relative à la lutte contre la cybercriminalité. <b>Article 65</b> criminalizes the distribution online of 'false information' related to attacks on people or property and other emergency situations. No proof of harm is required to make publication an offense. Falsity alone is enough.	Penalties not specified
Loi 2017-867 2017	2017	Régime juridique de la presse. <b>Article 97</b> the publication by the press, broadcast, or online media of any 'false news'. The law decriminalized infringements of the previous law.	Fines of up to 5 million CFA Francs.





82



# Ghana

However, when leaders attempt to deny people their core human rights such as freedom of expression, movement, religion, and association, diverse kinds of opposition frequently emerge. Ghana, as a West African country, has experienced these conditions on numerous occasions.



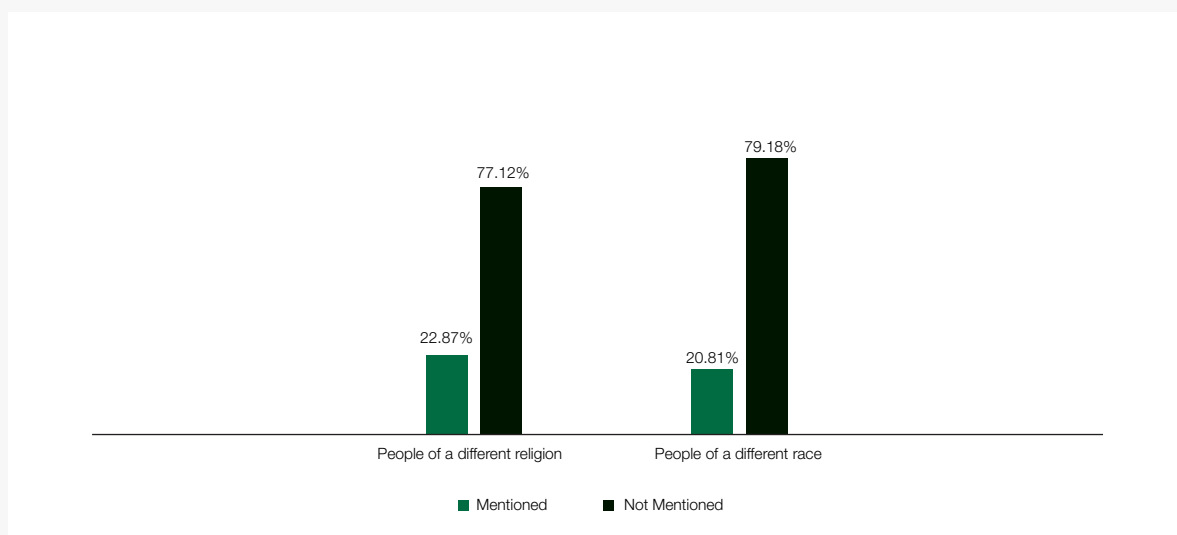
A country's existence and survival are determined by a variety of circumstances. For example, after being geographically established, it must be controlled by a group of individuals who are often elected or appointed in accordance with constitutional criteria. On the other hand, leaders may arise by force, such as the military seizing power from a democratically elected government. In various methods, followers are expected to follow the norms and laws in order to achieve meaningful coexistence. However, when leaders attempt to deny people their core human rights such as freedom of expression, movement, religion, and

association, diverse kinds of opposition frequently emerge. Ghana, as a West African country, has experienced these conditions on numerous occasions. While witnessing the scenarios, information, like other countries across the world, became a strategic and soft power tool used by state actors, non-state actors, and citizens to win the war of interests. It was implemented based on individual differences that can be connected to the principle of asymmetry and symmetry, which states that some people play the game of interest by leveraging what they have to gain what they lack.

↑ Figure 14:

Ghana: Mention any that you would not like to have as neighbours

Source: World Values Survey, 2014; Brain Builders Youth Development Initiative, 2024



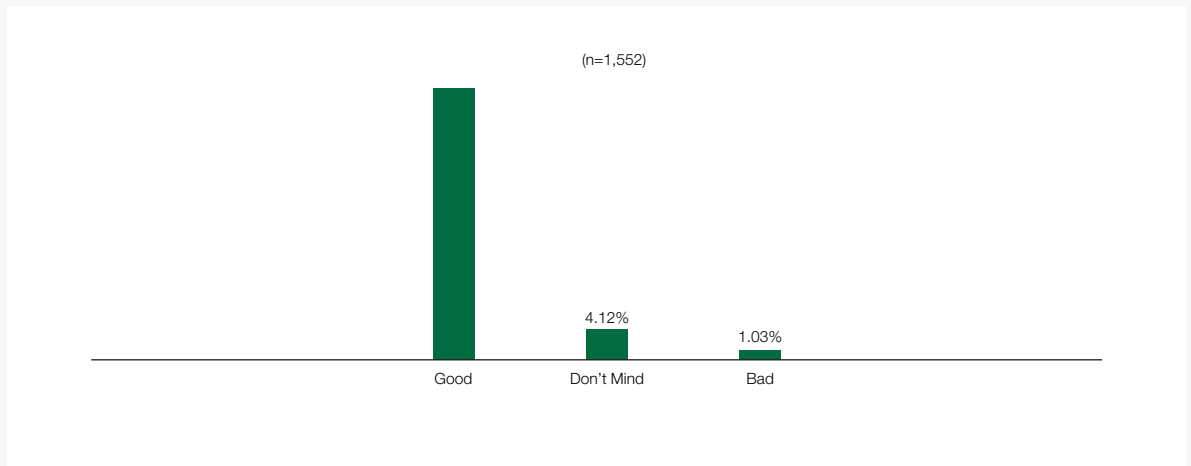
When people prioritize religion and ethnicity when determining who to live with or relate to, the use of knowledge as a strategic and soft power instrument becomes increasingly threatening to society. Though Ghanaians who participated in the WVS did not consider religion or race when deciding who should be their neighbors, the small percentage that did consider religion speaks volumes about what can happen when people use information as soft power in the current era of digital platforms, where people spread different ideologies based on religious orientations. Ghanaians' lack of regard for religion as a deciding factor could possibly be attributed to their belief

that no religion is superior to another. This is shown in Figure 16, where the majority of respondents strongly rejected viewing one religion as superior to another. In this regard, one could argue that Ghana is unlikely to encounter hateful and violent extremism motivated by religious extremists. As a result, data in Figure 15 show that Ghanaians would accept and respect the government's decision to control extremist views by enforcing existing laws or enacting new ones when existing ones appeared obsolete or ineffective in combating extremist expressions from religious leaders and their followers.

↑ Figure 15:

Ghana: Greater respect for authority

Source: World Values Survey, 2014; Brain Builders Youth Development Initiative, 2024



↑ Figure 16:

Ghana: The only acceptable religion is my religion

Source: World Values Survey, 2014; Brain Builders Youth Development Initiative, 2024

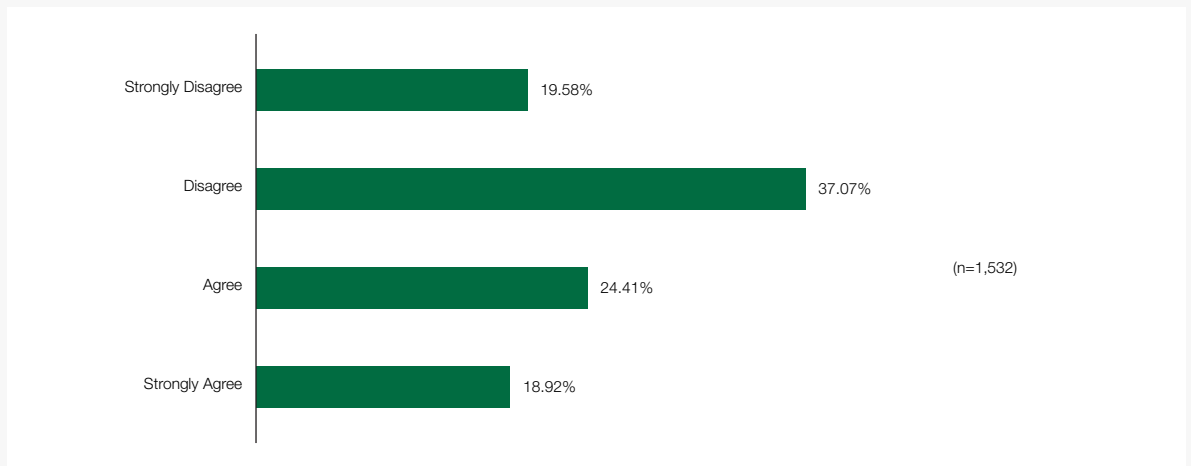


Figure 17 confirms the findings provided in Figures 14 and 16, in which religion and race were deemed less significant in determining who should be neighbours. The reason that Ghanaians are not concerned about racist behaviour could be attributed to a certain level of collaboration and camaraderie, as well as appreciation for individual differences. However, they were concerned about a terrorist attack. Therefore, the crucial question that requires comprehensive answers remains: what factors can be attributed as significant causes of terrorist attacks? Could it be that in Ghana, non-religious extremists are more likely than religious extremists to carry out terrorist attacks? A rather indirect answer to this issue is that Ghana shares borders with Burkina Faso and Togo, both of which have seen intense terrorist assaults

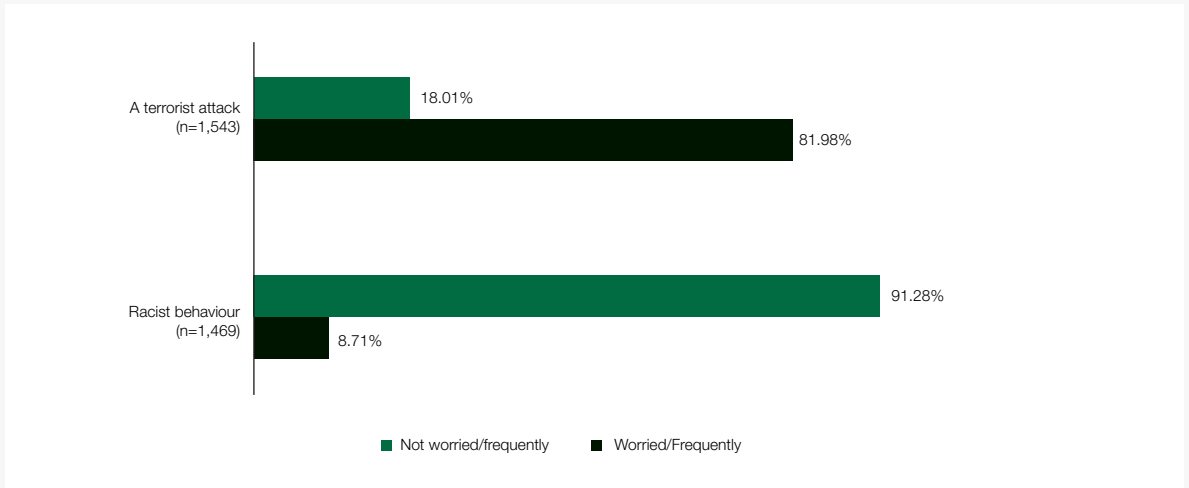
in recent years. As a result, their concerns appear valid due to the potential expansion of attacks, particularly in Northern Ghana that has experienced a number influx of displaced people from Burkina Faso.

Meanwhile, in terms of creating and spreading polluted messages, moral entrepreneurs are more worried about information manipulation, misinformation, disinformation, and the combination of information manipulation and misinformation (see Figure 18). These types, according to our analysis, are linked with possible insecurity, threats to governance, possible terrorist activities, and electoral process disruption (see Figure 19).

↑ Figure 17:

Ghana: Racist behaviour and a terrorist attack

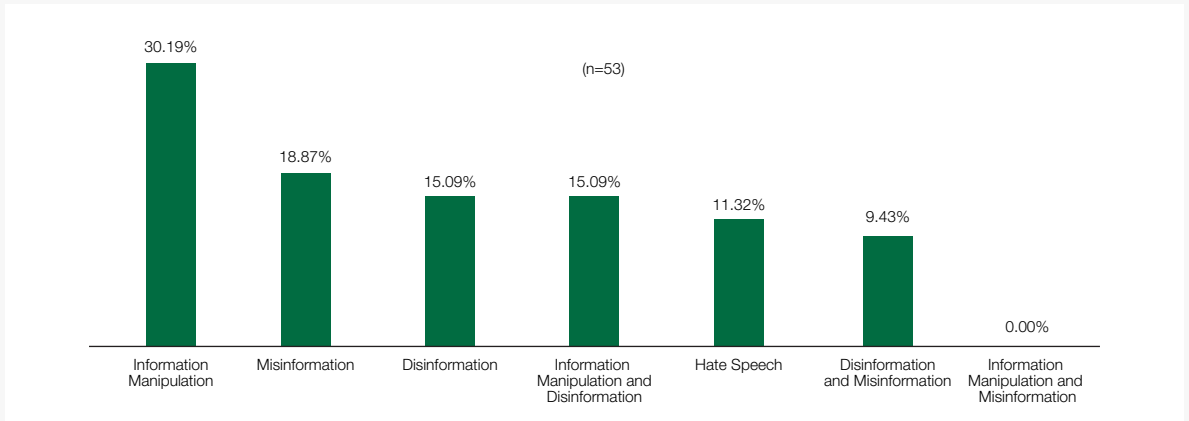
Source: World Values Survey, 2014; Brain Builders Youth Development Initiative, 2024



↑ Figure 18:

Dominant information pollution type according to Ghanaian moral entrepreneurs

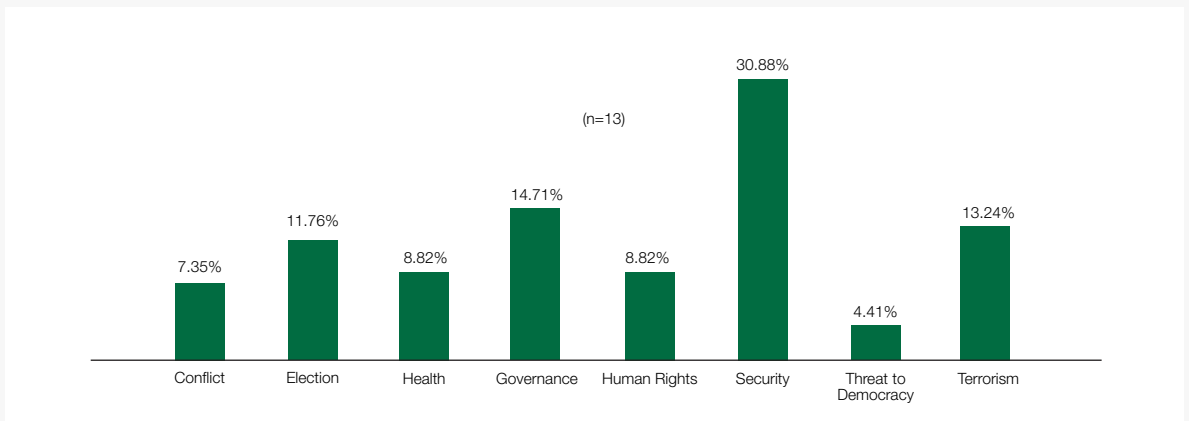
Source: Myjoyonline, 2013-2023; Brain Builder Youths Development Initiative, 2024



↑ Figure 19:

Issues raised by Ghanaian moral entrepreneurs

Source: Myjoyonline, 2013-2023; Brain Builders Youth Development Initiative, 2024



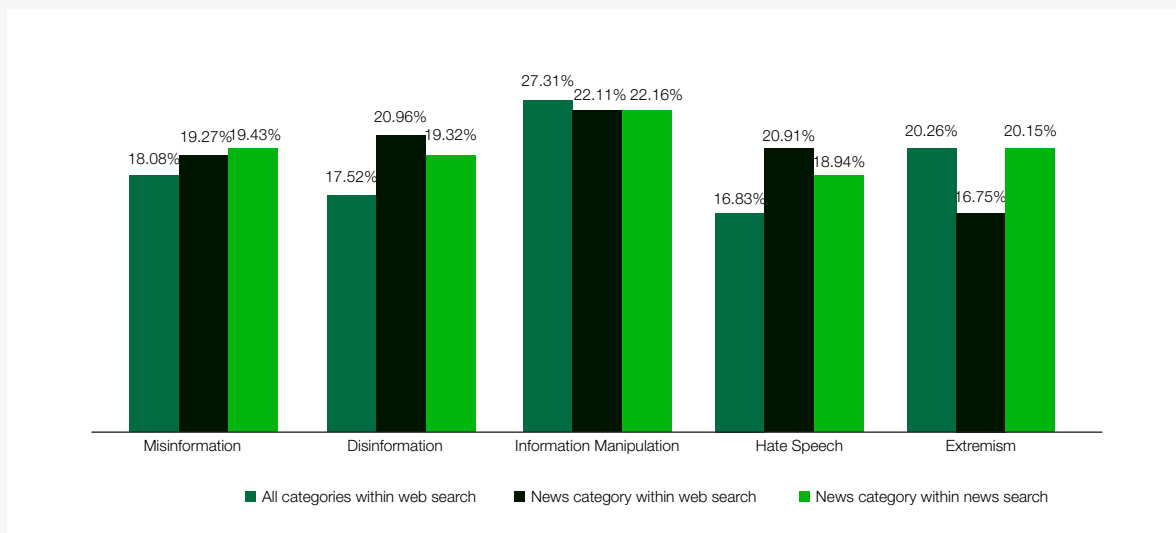
Ghanaians, like Ivorians, used numerous search engines, particularly Google, to find information regarding different sorts of information pollution. As shown in Figure 20, the Ghanaian public was interested in the Google Trends sections for all categories within web search (n=25841), news category within web search (n=20973), and news category within news search (n=19953). They were more interested in understanding the concept of information manipulation and reading about it in various media outlets, including mainstream and social media. According to our analysis, the public had a strong interest in extremism, misinformation, and

disinformation. This shows that the Ghanaian public may have developed an interest in misinformation and disinformation due to its potential to lead to extremism. Between 2013 and 2023, more than 20% of 20,973 web searches were made in the news category, indicating that the public searched the Internet with the goal of consuming extremism-related news content. This is also consistent with our results for disinformation and hate speech in the news category of web searches, in which the Ghanaian public read content linked to both types of information pollution at the same time.

↑ Figure 20:

Information seeking behaviour about information pollution and extremism in Ghana between 2013 and 2023

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024



The data in Tables 12–14 add to existing understanding of how the Ghanaian public searched for and understood various types of information pollution between 2013–2023. The trends in misinformation and disinformation showcase notable fluctuations, reaching a pinnacle in 2022. This suggests a dynamic information landscape, indicating varying degrees of public concern or awareness regarding these issues. The surge in information manipulation from 2020 to 2021 highlights a period of heightened interest in potentially misleading information. In terms of prevalence, information manipulation emerges as the most sought-after category, accounting for a substantial 7,057 searches. Disinformation closely follows, indicating a persistent challenge. The prominence of these categories underscores the urgent need for

addressing false or misleading narratives in the digital space.

The year 2015 witnesses a significant spike in hate speech and extremism, suggesting potential societal tensions or external influences during that period. In 2016, misinformation peaks, emphasizing the importance of discernment in information consumption. The year 2020 experiences a surge in disinformation and information manipulation, possibly influenced by global events or local factors. The peaks in 2022 and 2023 across multiple categories, including disinformation, information manipulation, and extremism, raise concerns. This may indicate critical periods where public interest and susceptibility to misinformation are notably elevated.

TABLE 12 All categories within web search in Ghana

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	4.79%	7.99%	5.80%	7.72%	6.01%
2014	9.63%	6.03%	4.01%	6.78%	5.08%
2015	9.93%	8.57%	<b>11.02%</b>	<b>16.36%</b>	8.95%
2016	<b>11.92%</b>	5.92%	5.65%	<b>12.48%</b>	3.72%
2017	6.44%	7.25%	8.55%	5.54%	6.30%
2018	9.59%	<b>12.08%</b>	<b>11.78%</b>	7.88%	<b>10.16%</b>
2019	<b>10.96%</b>	7.95%	8.36%	9.93%	6.32%
2020	6.01%	<b>13.27%</b>	<b>16.50%</b>	<b>11.08%</b>	8.61%
2021	7.79%	4.66%	<b>10.21%</b>	5.97%	<b>16.23%</b>
2022	<b>12.88%</b>	<b>16.72%</b>	9.57%	6.50%	<b>11.09%</b>
2023	<b>10.01%</b>	9.52%	8.48%	9.72%	<b>17.49%</b>
<b>Total</b>	<b>4671(100%)</b>	<b>4527(100%)</b>	<b>7057(100%)</b>	<b>4350(100%)</b>	<b>5236(100%)</b>

Source: Google Trends, 2013–2023; Brain Builders Youth Development Initiative, 2024



Table 12's results become obvious when combined with Table 13, which shows how the public viewed the news category within web search. The interest was high on understanding or reading content related to information manipulation, disinformation, hate speech and misinformation. According to our analysis, misinformation and information manipulation show a gradual increase from 2013 to 2023, indicating a sustained interest or exposure to potentially inaccurate information. Disinformation experiences fluctuations, with a peak in 2019, suggesting a significant period of intentional spread of false information. Hate speech exhibits peaks in 2017 and

2018, followed by a decline. This pattern may reflect societal or political changes influencing the prevalence of such content. Extremism, while showing variations, maintains a relatively lower overall presence compared to other categories. 2015 witnesses spikes in misinformation, hate speech, and extremism, suggesting a year of increased public interest or heightened content generation in these areas. 2020 stands out with higher percentages in misinformation, disinformation, and information manipulation, aligning with global trends during the COVID-19 pandemic and general elections held during the year.

TABLE 13 News category within web search in Ghana

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	9.12%	6.78%	9.46%	9.12%	7.79%
2014	9.97%	<b>12.37%</b>	<b>10.45%</b>	9.85%	8.56%
2015	<b>12.07%</b>	6.25%	8.36%	<b>12.79%</b>	6.71%
2016	3.78%	6.07%	4.37%	<b>11.76%</b>	7.65%
2017	<b>12.49%</b>	<b>10.76%</b>	7.93%	<b>11.12%</b>	<b>16.36%</b>
2018	7.84%	<b>10.10%</b>	<b>17.25%</b>	7.63%	<b>11.72%</b>
2019	5.61%	<b>15.01%</b>	<b>10.15%</b>	6.40%	<b>9.24%</b>
2020	<b>11.82%</b>	9.30%	9.01%	<b>10.07%</b>	<b>9.44%</b>
2021	<b>11.70%</b>	10.60%	<b>13.30%</b>	7.89%	8.65%
2022	6.13%	5.73%	4.55%	6.18%	8.36%
2023	9.42%	6.98%	5.11%	7.13%	5.46%
<b>Total</b>	<b>4042(100%)</b>	<b>4395(100%)</b>	<b>4637(100%)</b>	<b>4385(100%)</b>	<b>3514(100%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

Data in Table 14 further reveal shifts in public interest, where misinformation consistently captures significant attention, indicating a sustained interest or concern about potentially inaccurate information circulating online. Disinformation and information manipulation exhibit variations over the years, with notable peaks in 2014, 2019, and 2021, reflecting periods of heightened public curiosity or awareness. Our analysis also reveals that hate speech sees fluctuations, with an outstanding increase in 2016 and 2019. This suggests varying degrees of societal

engagement with content that may promote hostility or discriminatory narratives. Extremism, while showing variations, maintains a relatively lower overall presence compared to other categories. In terms of yearly peaks and valleys, 2015 was renowned for high interest in misinformation, hate speech, and extremism, indicating potential events or issues shaping public discourse during that period. 2023 stands out with a substantial peak in disinformation, highlighting a critical year of heightened interest in intentionally false content.

TABLE 14 News category within news search in Ghana

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	14.52%	<b>9.67%</b>	9.83%	7.46%	<b>12.83%</b>
2014	5.64%	7.10%	4.72%	6.42%	6.51%
2015	<b>15.86%</b>	8.06%	8.00%	<b>10.47%</b>	<b>9.95%</b>
2016	<b>9.15%</b>	6.64%	7.35%	<b>15.87%</b>	8.03%
2017	<b>11.24%</b>	<b>8.79%</b>	<b>10.60%</b>	9.52%	<b>10.39%</b>
2018	7.22%	5.47%	<b>10.83%</b>	8.94%	<b>10.74%</b>
2019	<b>9.87%</b>	7.34%	10.45%	<b>10.95%</b>	9.92%
2020	8.02%	8.71%	<b>11.76%</b>	6.42%	5.37%
2021	9.05%	<b>14.42%</b>	<b>12.59%</b>	7.53%	9.65%
2022	4.95%	5.86%	8.16%	5.79%	6.59%
2023	4.43%	17.89%	5.65%	<b>10.58%</b>	<b>9.97%</b>
<b>Total</b>	<b>3877(100%)</b>	<b>3855(100%)</b>	<b>4421(100%)</b>	<b>3780(100%)</b>	<b>4020(100%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

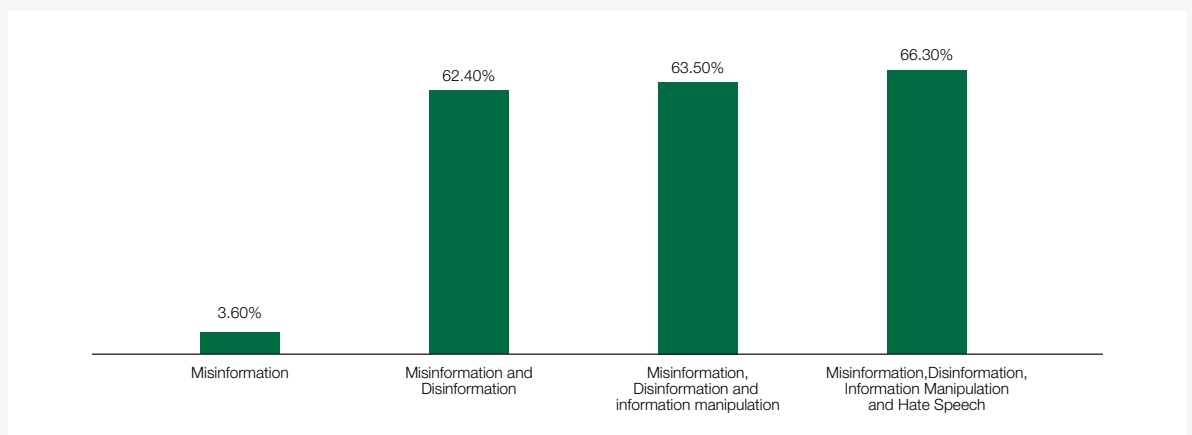
Overall, our data indicates that the public in Ghana has become considerably more interested in misinformation, information manipulation, and disinformation while showing a comparatively greater interest in extremism. In the meantime, we use the data shown in Figure 21 to try and comprehend the relationship between the public's interest in these kinds of information pollution and their concurrent development of a sizable interest in extremism. We concentrate on this in order to ascertain whether the public's desire to search the types would prompt

them to think about how likely it is that these types could inspire extremism. A number of unexpected results are shown in Figure 21. For instance, our analysis reveals that looking for content pertaining to disinformation might result in more than three times as much consideration of content pertaining to extremism. On the other hand, looking through two or more forms of information pollution results in a search that increases interest in content associated to extremism by more than 60 times.

↑ Figure 21:

Link between information seeking in Ghana about information pollution types and extremism

Source: Google Trends, 2013-2023; Brain Builder Youths Development Initiative, 2024



If the public's information-seeking behaviour and moral entrepreneurs are the source of all these results and insights, are there any legal measures in place to stop the spread of the various forms of information pollution that have been identified? We looked at current laws to get the answer, just like in other country cases. According to our data, various aspects of the current laws target misinformation both individually and collectively (with disinformation), even if there are no specific laws designed to combat the problem. For instance, Section 185 of the Criminal Act 1960 specifically states that “Whoever communicates to any other person,

whether by word of mouth or in writing or by any other means, any false statement or report which is likely to injure the credit or reputation of Ghana or the Government and which he knows or has reason to believe is false, shall be guilty of second-degree felony.” This is similar to what Section 74 of Electronic Communications 2008 Act states: “A person who knowingly gives false or misleading information to the Authority commits an offence and is liable on summary conviction to a fine of not more than one thousand penalty units or to a term of imprisonment of not more than three years or to both.” In both cases, makers and disseminators of polluted

communications are cautioned about the consequences of participating in information pollution activities.

However, media professionals, civil society organisations, and non-governmental organisations have long questioned the two Acts, claiming that they are being

exploited by political elites to silence the media and their critics in politics. These Acts are viewed as restrictive and used to silence individuals who are disseminating “accurate information” about political leaders<sup>96</sup>.

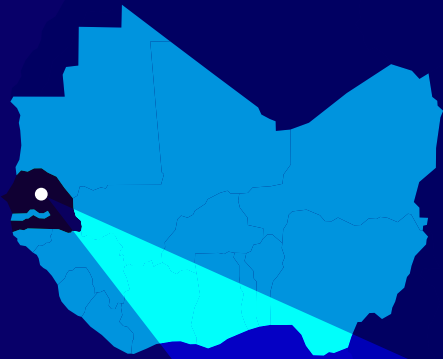


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<sup>96</sup> Asante, K.K., (2023). The laws were supposed to attack 'information manipulation.' Now they are jailing journalists: How governments in West Africa scapegoat critical coverage with 'information manipulation' laws. Available from: <https://www.poynter.org/commentary/2023/misinformation-laws-west-africa-benin-ghana/>; Committee to Protect Journalists (2020). Ghana journalist David Tamakloe arrested on false news charge. Available from: <https://cpj.org/2020/10/ghana-journalist-david-tamakloe-arrested-on-false-news-charge/>

TABLE 15 Existing and proposed legal provisions in Ghana

Law	Year	Provisions	Penalties
Criminal Code Act, 1960	1960	<p><b>Section 185:</b> Whoever communicates to any other person, whether by word of mouth or in writing or by any other means, any false statement or report which is likely to injure the credit or reputation of Ghana or the Government and which he knows or has reason to believe is false, shall be guilty of second-degree felony.</p> <p><b>(3)</b> It is no defence to a charge under this section that the person charged did not know or did not have reason to believe that the statement or report was false unless he proves that, before he communicated the statement or report, he took reasonable measures to verify the accuracy of the statement or report.</p> <p><b>(4)</b> A citizen of Ghana may be tried and punished for an offence under this section whether committed in or outside Ghana.</p> <p><b>Section 208:</b> Any person who publishes or reproduces any statement, rumour or report which is likely to cause fear and alarm to the public or to disturb the public peace knowing or having reason to believe that the statement, rumour or report is false is guilty of a misdemeanour.</p> <p><b>(2)</b> It is no defence to a charge under subsection (1) that the person charged did not know or did not have reason to believe that the statement, rumour or report was false unless he proves that, prior to publication, he took reasonable measures to verify the accuracy of the statement, rumour or report.</p>	Section 185: Second-degree felony. Section 208:
Electronic Communications Act, 2008	2008	<p><b>Section 74:</b> A person who knowingly gives false or misleading information to the Authority commits an offence and is liable on summary conviction to a fine of not more than one thousand penalty units or to a term of imprisonment of not more than three years or to both.</p> <p><b>Section 76:</b> (1) A person who by means of electronic communications service, knowingly sends a communication which is false or misleading and likely to prejudice the efficiency of life-saving service or to endanger the safety of any person, ship, aircraft, vessel, or vehicle commits an offence and is liable on summary conviction to a fine of not more than three thousand penalty units or to a term of imprisonment of not more than five years or both.</p> <p><b>(2)</b> A person is taken to know that a communication is false or misleading if that person did not take reasonable steps to find out whether the communication was false, misleading, reckless, or fraudulent.</p>	<p><b>Section 74:</b> Fine of not more than one thousand penalty units or imprisonment for a term of not more than three years, or both.</p> <p><b>Section 76:</b> Fine of not more than three thousand penalty units or imprisonment for a term of not more than five years, or both</p>



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# Senegal

In line with the information-seeking habits of Ghanaians and Ivorians, we also discovered that Senegalese people became highly interested in information pollution. Like the Ivorians, though, they were more interested in information manipulation than other forms of information pollution.



Senegal is another Francophone country that shares certain commonalities with the Ivory Coast. France colonised both countries. In terms of language, both employ French as their official language, along with a variety of local languages. Economically and politically, there are some similarities and differences. For example, both have political relations that include substantial collaboration in sectors like as security and trade. They are members of the Economic Community of West African States (ECOWAS) by virtue of their location in the subregion. However, they differ in their approach to altering political government. They conduct election operations in different years. While political elites interact in numerous ways, citizens also collaborate and participate in a variety of socioeconomic activities together.

All things considered; information is essential to what they do. In order to prevent the potential effects of disseminating polluted messages, governments, individuals, and groups have made it a priority to monitor how information is created, transmitted, and consumed. In line with the information-seeking habits of Ghanaians and Ivorians, we also discovered that Senegalese people became highly interested in information pollution. Like the Ivorians, though, they were more interested in information manipulation than other forms of information pollution. Over 5,000 searches for information manipulation were made using various

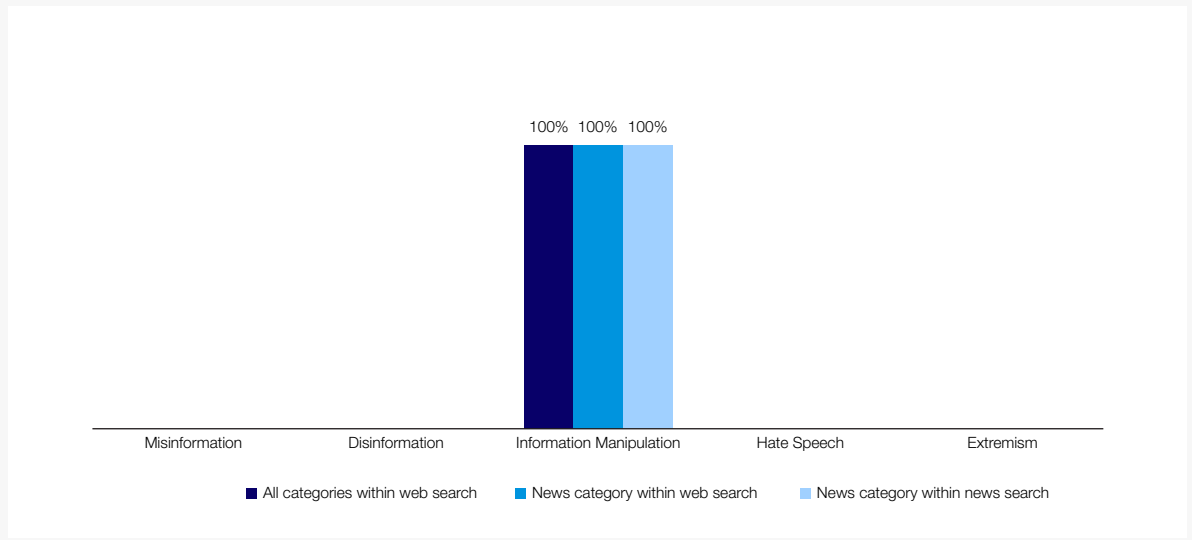
search engines, mostly Google Search Engine, according to the data shown in Figure 22. Meanwhile, our analysis suggests that the searches were predominantly conducted through all categories within web search (n=5,582), the news category within web search (n=5,854), and the news category within news search (n=5,761), according to the Google Trends sections we analyzed. Our data, as previously stated, indicates that information manipulation was increasingly important to the Senegalese population between 2013 and 2023. We explore this further using the data presented in Tables 16–18, which assess the trends of their interest.

As illustrated in Figure 12, our analysis indicates that academics, legal experts, legislators, government representatives, and other moral entrepreneurs feel information manipulation is more pervasive in Ivory Coast than other types of information pollution. This is based on 23 quotes from moral entrepreneurs that we analyzed. More than half of all quotes strongly supported the public interest search trend. However, having disinformation in second place indicates that the type is also prevalent and most likely has a big impact on personal reputation as well as societal damage. Figure 13 shows that information pollution remains a challenge to Ivorian democratic governance, elections, and health management. It was also shown that polluted messages were viewed as leading to conflict formation and escalation.

↑ Figure 22:

Information seeking behaviour about information pollution and extremism in Senegal between 2013 and 2023

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024



According to our data, Senegalese interest in false news peaked in 2019 and then decreased dramatically in 2020, culminating in a sharp reduction in 2021. The data also shows that interest in learning about existing information manipulation and comprehending the information pollution type peaked in 2013 before decreasing in 2023. These results suggest that there was inconsistency in

how creators and disseminators of polluted messages conducted their activity during these years. On the other hand, it shows that the Senegalese public made an arbitrary decision while searching for the type using their digital resources, especially when considering all types of material put on the Internet by various players.

TABLE 16 All categories within web search in Senegal

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	0.00%	0.00%	9.06%	0.00%	0.00%
2014	0.00%	0.00%	10.10%	0.00%	0.00%
2015	0.00%	0.00%	7.04%	0.00%	0.00%
2016	0.00%	0.00%	3.01%	0.00%	0.00%
2017	0.00%	0.00%	6.61%	0.00%	0.00%
2018	0.00%	0.00%	5.66%	0.00%	0.00%
2019	0.00%	0.00%	<b>14.29%</b>	0.00%	0.00%
2020	0.00%	0.00%	<b>11.71%</b>	0.00%	0.00%
2021	0.00%	0.00%	10.26%	0.00%	0.00%
2022	0.00%	0.00%	<b>11.23%</b>	0.00%	0.00%
2023	0.00%	0.00%	10.92%	0.00%	0.00%
<b>Total</b>	<b>0(0.00%)</b>	<b>0(0.00%)</b>	<b>5582(100%)</b>	<b>0(0.00%)</b>	<b>0(0.00%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024



While interest in false news increased across all categories of web search in 2019 (see Table 16), it grabbed center stage in 2013 when we looked at public interest in the news category of web search. This is a 6-year gap, implying that there was little development and distribution of polluted messages before 2019, across all types of content on the

Internet. Meanwhile, the increasing interest in 2020 could be attributed to the COVID-19 epidemic, which plagued the planet for several months. The small maintenance of interest in 2021 and between 2022 and 2023 could be attributed to tensions in national politics ahead of the March 24, 2024 presidential election.

TABLE 17 News category within web search in Senegal

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	0.00%	0.00%	<b>14.19%</b>	0.00%	0.00%
2014	0.00%	0.00%	3.31%	0.00%	0.00%
2015	0.00%	0.00%	10.96%	0.00%	0.00%
2016	0.00%	0.00%	7.29%	0.00%	0.00%
2017	0.00%	0.00%	9.03%	0.00%	0.00%
2018	0.00%	0.00%	6.13%	0.00%	0.00%
2019	0.00%	0.00%	6.28%	0.00%	0.00%
2020	0.00%	0.00%	<b>11.63%</b>	0.00%	0.00%
2021	0.00%	0.00%	<b>11.20%</b>	0.00%	0.00%
2022	0.00%	0.00%	9.15%	0.00%	0.00%
2023	0.00%	0.00%	10.77%	0.00%	0.00%
<b>Total</b>	<b>0(0.00%)</b>	<b>0(0.00%)</b>	<b>5854(100%)</b>	<b>0(0.00%)</b>	<b>0(0.00%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

Further examination of the interest in news categories within news search redirects our understanding of Senegalese public information pollution seeking behaviour (see Figure 18). They remained interested in the type in 2013, 2015, and 2018 more than in previous years that we identified as noteworthy. From these years, 2015 had a high percentage (13.74%) of over 5,000 searches conducted. Our study also shows that 2018 had more than 10% of the total (n=5,761), followed by 2013 (10.44%). Overall, these years were noteworthy for the public in terms of

knowing or reading information manipulation, which may have been related to the predominance of information pollution. As data in Figure 23 demonstrated, Senegalese moral entrepreneurs were concerned about impacts of polluted messages on security as well as leading to terrorism and conflicts. They also considered various forms of information pollution as threats to democracy. A non-governmental organisation representative, one of the Senegalese moral entrepreneurs, commented on religious extremism thus:

“

It is a complex strategy which concerns all people, all citizens. I insist on all citizens. For what? When we say war, we talk about cannons. The Defense and Security Forces have their limits. Because they have special rules. When we attack society, religion, I think it goes far beyond them. And I think I will be happy the day when all Senegalese, in any case all Africans, consider themselves soldiers of the new war, not by taking Kalashnikovs, but by knowing exactly what the true religion is.”

TABLE 18 News category within news search in Senegal

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	0.00%	0.00%	<b>10.44%</b>	0.00%	0.00%
2014	0.00%	0.00%	8.10%	0.00%	0.00%
2015	0.00%	0.00%	<b>13.74%</b>	0.00%	0.00%
2016	0.00%	0.00%	7.01%	0.00%	0.00%
2017	0.00%	0.00%	<b>10.06%</b>	0.00%	0.00%
2018	0.00%	0.00%	<b>10.88%</b>	0.00%	0.00%
2019	0.00%	0.00%	8.50%	0.00%	0.00%
2020	0.00%	0.00%	8.01%	0.00%	0.00%
2021	0.00%	0.00%	6.89%	0.00%	0.00%
2022	0.00%	0.00%	9.46%	0.00%	0.00%
2023	0.00%	0.00%	6.85%	0.00%	0.00%
<b>Total</b>	<b>0(0.00%)</b>	<b>0(0.00%)</b>	<b>5761(100%)</b>	<b>0(0.00%)</b>	<b>0(0.00%)</b>

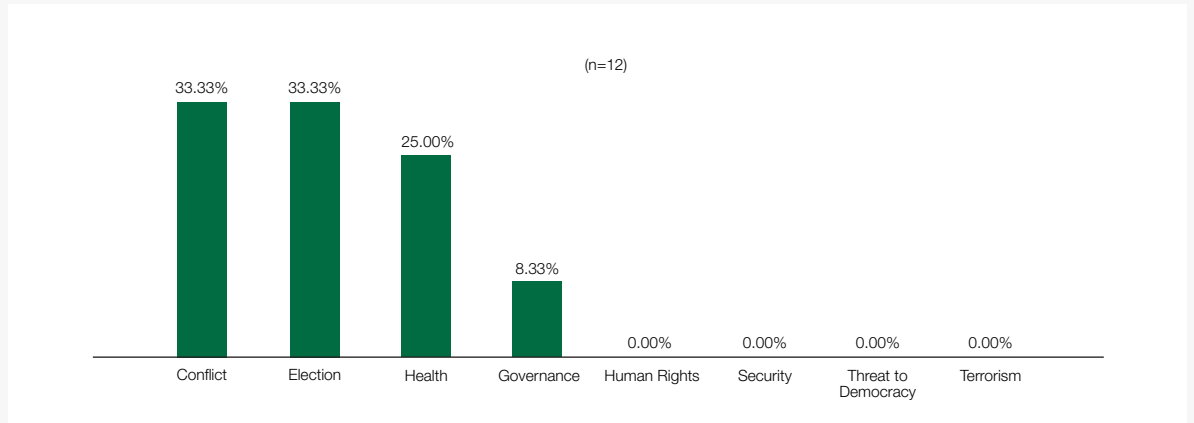
Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

<sup>97</sup> Senenews (2018). 1.05% of young people in Rosso are sensitive to religious extremism. Available from: [https://www.senenews.com/actualites/105-des-jeunes-de-rosso-sont-sensibles-a-lextremisme-religieux\\_231513.html](https://www.senenews.com/actualites/105-des-jeunes-de-rosso-sont-sensibles-a-lextremisme-religieux_231513.html)

↑ Figure 23:

Issues raised by Senegalese moral entrepreneurs

Source: Senenews, 2013-2023; Brain Builders Youth Development Initiative, 2024



While moral entrepreneurs raised these worries, our data reveals that Senegal has a legal provision that criminalizes the creation and transmission of false information, though it was not principally created to combat information manipulation. False information authors and disseminators may face fines ranging from 100,000 to 1,500,000 West African francs and imprisonment for one to three years, according to the country's Penal Code 1977 (amended in 2016). Like Ghana, this clause and other prohibitions imposed by the Senegalese government have attracted heavy criticism over the years from non-state actors, particularly media professionals, NGOs, and CSOs fighting for free speech and press freedom.

In 2023, Pape Ndiaye, a columnist for Wal Fadjri, was imprisoned for questioning the independence of the judiciary in the case of Ousmane Sonko, a presidential candidate, accused of rape by a beauty salon employee. Ndiaye claims that most judges in the public prosecutor's office dismissed Sonko's case, despite the government's advice. The charges against Ndiaye include "provocation of a gathering, contempt of court, intimidation, and reprisals against a member of the judiciary." Despite suggesting hateful extremism, media practitioners and other non-state actors did not view the claims as potential precursors to violent extremism<sup>98</sup>.

TABLE 19 Existing legal provisions in Senegal

Law	Year	Provisions	Penalties
Penal Code	1977 (Amended 2016)	<b>Article 255</b> Criminalizes the publication, dissemination, disclosure, or reproduction of false news ('nouvelles fausses') when it causes, or is likely to cause, disobedience of the country's laws, damage to the morale of the population, or discredits public institutions.	Fines between 100,000 and 1,500,000 West African francs and imprisonment between one and three years. If the maximum fine and prison sentence are imposed without taking into account the circumstances of the offense, sanctions may be disproportionate.

<sup>98</sup> Africanews (2023). Senegal: Journalist jailed for "contempt of court and spreading false news. Available from: <https://www.africanews.com/2023/03/08/senegal-journalist-jailed-for-contempt-of-court-and-spreading-false-news/>



8.4



# Nigeria

As was previously mentioned, interpersonal relationships are something that Nigeria and her people participate in on both a national and personal basis. Thus, having a neighbour is crucial to establishing and maintaining healthy communal life.



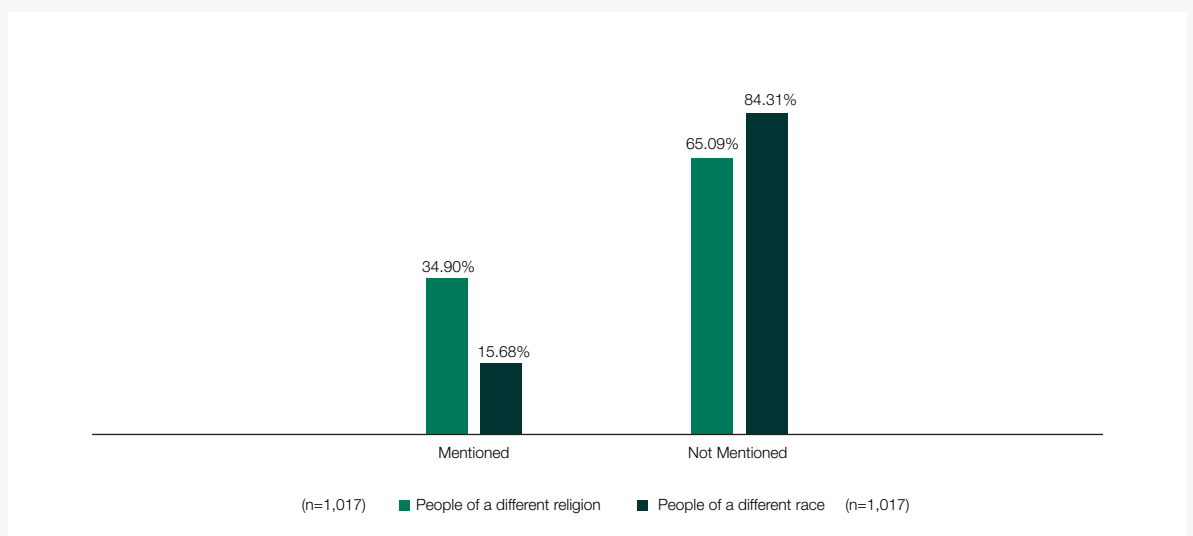
Ghana and Nigeria share certain equivalents with Senegal and Ivory Coast in terms of political, social, and economic cultures. The United Kingdom colonized both nations, and they each attained freedom in a separate year. Many collaborations and partnerships that have been formed throughout the years in the field of international and economic affairs are still in place and are producing the desired outcomes. From a social standpoint, a number of group activities, like marriage and festival attendance, contribute to the development of strong social bonds and provide for oneself. Creating and sending messages is one way that communication is started throughout these tasks. As was previously

mentioned, interpersonal relationships are something that Nigeria and her people participate in on both a national and personal basis. Thus, having a neighbour is crucial to establishing and maintaining healthy communal life. This sums up the data shown in Figure 24, which shows responses from more than a thousand Nigerians to the WVS survey about racial and religious characteristics of their neighbours. Whereas Ghanaians continued to hold a somewhat different perspective of the two criteria when selecting neighbours, our data indicates that Nigerians appear to choose neighbours who share their religious convictions as well as certain members of their ethnic group.

↑ Figure 24:

Nigeria: Mention any that you would not like to have as neighbours

Source: World Values Survey, 2022; Brain Builders Youth Development Initiative, 2024

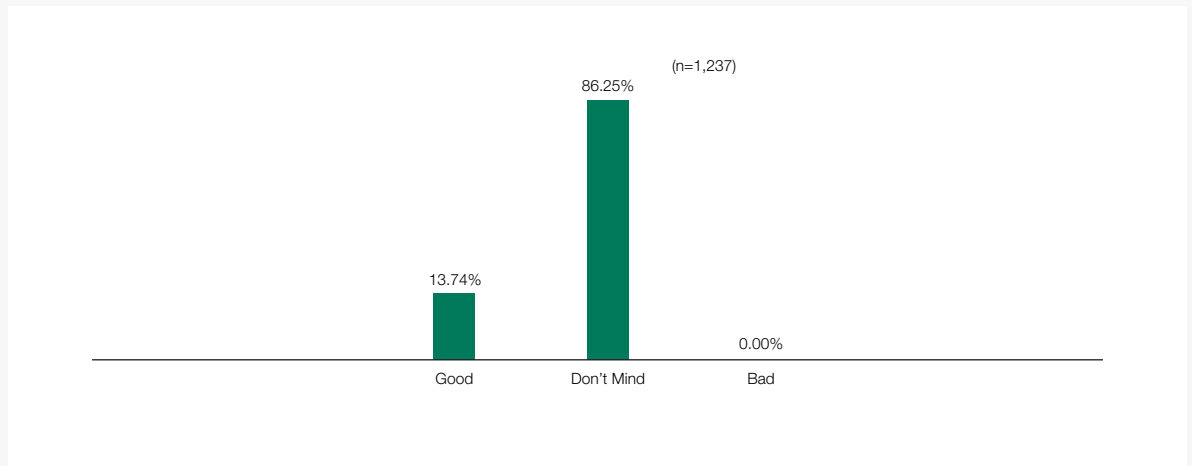


Over 60% of 1,237 Nigerians believed that their religions were superior to others' religions. However, retaining a neutral stance on having more respect for authority is doubtful. The two viewpoints have important consequences for cultivating a vibrant social life. For example, it would be impossible for people to follow government directives aimed at preventing religious extremism or violence. It also implies that conflicts will be harder to avert at the communal level.

↑ **Figure 25:**

Nigeria:  
Greater respect  
for authority

**Source:** World Values  
Survey, 2022;  
Brain Builders Youth  
Development  
Initiative, 2024



↑ **Figure 26:**

Nigeria:  
The only acceptable  
religion is my religion

**Source:** World Values  
Survey, 2014;  
Brain Builders Youth  
Development  
Initiative, 2024

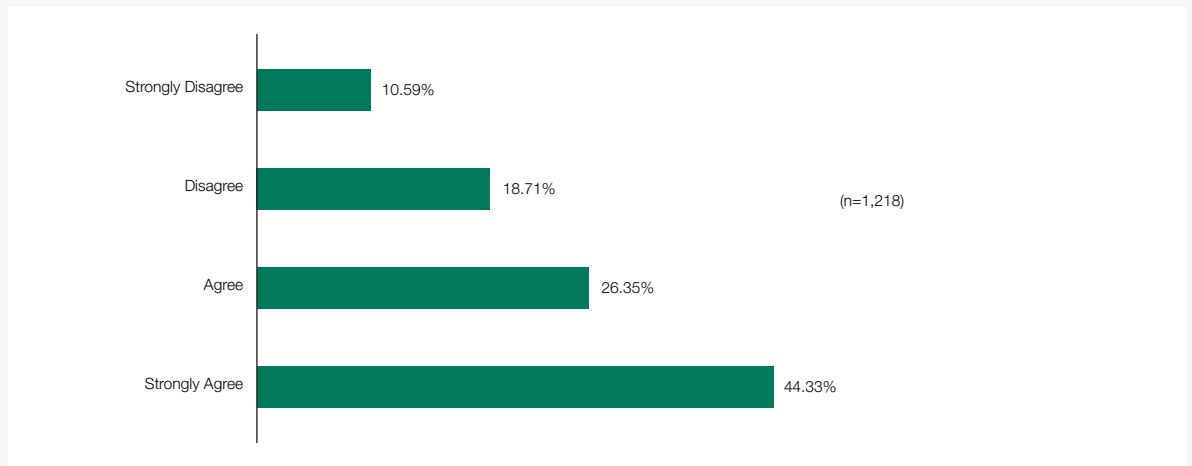
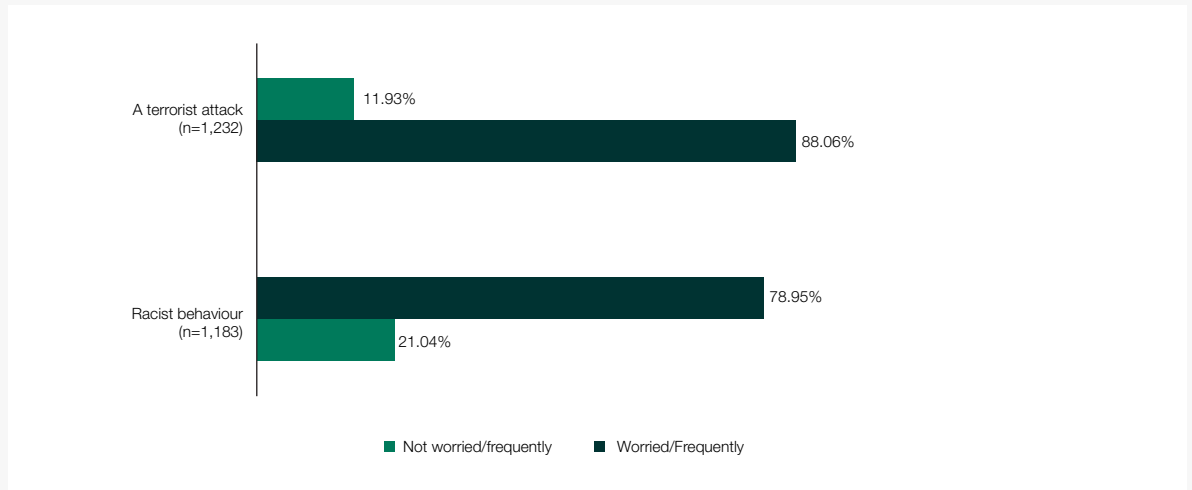


Figure 27 depicts responses from over 1,000 Nigerians regarding the prevalence of discriminatory behaviour in their community and their level of concern about a terrorist strike. According to the data, more than 78% of the 1,183 respondents were unconcerned about racial behaviour. However, more than 88% of the 1,232 Nigerians dreaded terrorist attacks. Placing these results in the context of the data shown in Figure 24 demonstrates that Nigerians can maintain social interactions with their neighbours despite the fact that they do not share the same religious beliefs and are afraid of terrorist attacks. This shows that terrorism evokes more plausible anxieties than what neighbours from other ethnic groups might create when there are conflicts or disagreements on matters. Meanwhile, Nigerian moral entrepreneurs feel that misinformation, hate speech, and information manipulation are harmful to the communal well-being and pose serious dangers to elections, security, and democracy (see Figures 27–29).

↑ Figure 27:

Nigeria: Racist behaviour and a terrorist attack

Source: World Values Survey, 2022; Brain Builders Youth Development Initiative, 2024



For instance, the Inspector General of Police, as one of the moral entrepreneurs, states that:

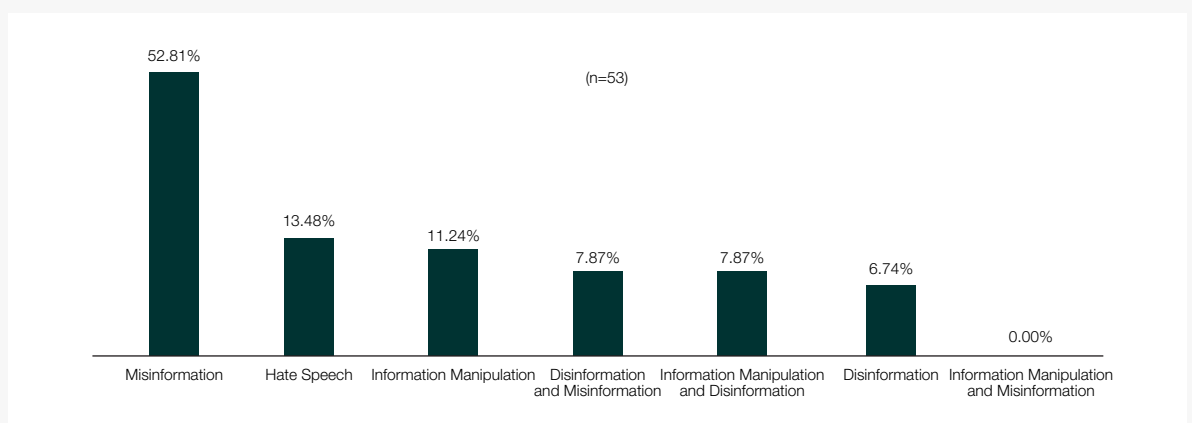


[as much as the Nigeria police has perfected plans to engender a peaceful electoral process the following have been identified as possible challenges: hate speeches, political intolerance and extremism as well as anti-democratic conduct of some state governors and other strategic political actors which could inflame the political space.<sup>99</sup>](#)

↑ Figure 28:

Dominant information pollution type according to Nigerian moral entrepreneurs

Source: The Punch, 2013-2023; Brain Builders Youth Development Initiative, 2024

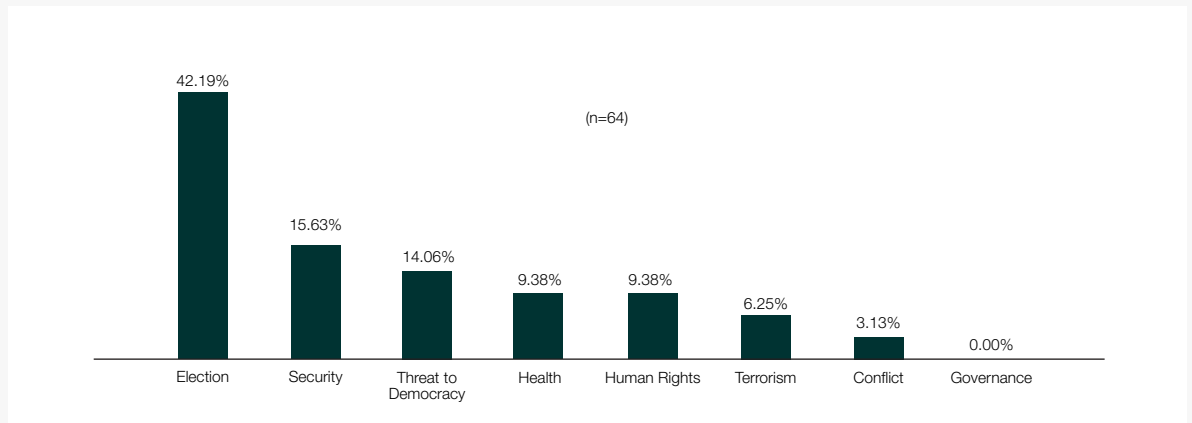


<sup>99</sup> The Punch (2023). Govs, hate speech, extremism among threats to polls – IG. Available from: <https://punchng.com/govs-hate-speech-extremism-among-threats-to-polls-ig/>

↑ **Figure 29:**

Issues raised by Nigerian moral entrepreneurs

**Source:** The Punch, 2013-2023; Brain Builders Youth Development Initiative, 2024



From a survey viewpoint to a moralistic approach to information pollution, it is obvious that information interchange cannot be overstated in dealing with the current implications of polluted communications. As a result, gathering knowledge about the epidemic would be an ongoing process for the foreseeable future. We investigate this position using Nigerian public information pollution-seeking behaviour. Between 2013 and 2023, our data show that more than 7,000 searches were conducted. Overall, a substantial number of searches were conducted across all categories of web search (n=34,005), followed by the news category within web search (n=22,104) and the news category within news search (n=18,733).

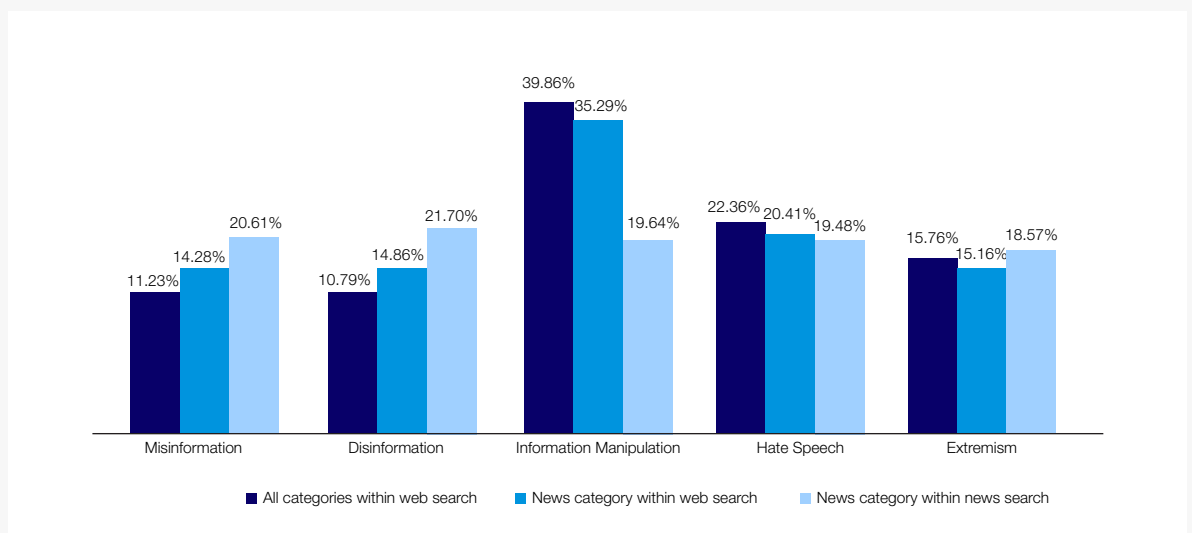
Our data reveals that more than 39% of all

web search queries focused on comprehending or reading information manipulation. Less than this percentage (35.29%) was detected for the same type of information pollution when the public searched using the news category on the web. Meanwhile, the results get more fascinating when one considers the frequency with which people seek information regarding disinformation, misinformation, and extremism through news searches, indicating an interest in consuming 'news' related to the various types of information pollution. Our data show disinformation and misinformation accounted for more than 20% of the 18,733 searches conducted through news within news search, with extremism coming in third with 18.57% of the total searches.

↑ **Figure 30:**

Information seeking behaviour about information pollution and extremism in Nigeria between 2013 and 2023

**Source:** Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024





Meanwhile, disaggregating the data yields more fascinating results, highlighting notable tendencies across many categories. In Table 20, misinformation continuously increases, reaching a high of 25% in 2023, indicating a growing concern or interest in erroneous or misleading information. Disinformation fluctuates but generally diminishes over time, implying a probable fall in the deliberate distribution of incorrect

information. Information Manipulation peaks in 2021 and 2023, indicating a greater emphasis on false news items and the need for enhanced media literacy activities. Hate speech is on the rise in 2021, indicating an increase in interest or concern about online hate speech and a need for counter-hate activities. Extremism fluctuates but is largely steady, indicating ongoing interest or understanding of extremism-related issues.

TABLE 20 All categories within web search in Nigeria

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	5.70%	<b>16.68%</b>	4.54%	4.07%	9.88%
2014	4.94%	10.79%	5.02%	9.06%	11.88%
2015	<b>12.35%</b>	<b>15.78%</b>	7.04%	4.45%	<b>14.40%</b>
2016	7.25%	11.99%	6.27%	5.27%	<b>14.60%</b>
2017	5.18%	3.13%	7.26%	<b>12.81%</b>	6.88%
2018	7.38%	2.69%	8.69%	<b>12.31%</b>	6.41%
2019	1.75%	1.82%	3.37%	8.30%	2.68%
2020	9.66%	6.40%	<b>13.21%</b>	11.54%	6.77%
2021	<b>12.51%</b>	7.82%	<b>15.20%</b>	<b>12.81%</b>	9.23%
2022	8.22%	6.59%	9.33%	5.90%	4.81%
2023	<b>25.00%</b>	<b>16.24%</b>	<b>20.01%</b>	<b>13.43%</b>	<b>12.40%</b>
<b>Total</b>	<b>3819(100%)</b>	<b>3668(100%)</b>	<b>13556(100%)</b>	<b>7602(100%)</b>	<b>5360(100%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

Table 21 shows that misinformation swings but increases significantly in 2023. Information Manipulation peaks in 2020 and 2023, emphasizing its prevalence and calling for increased fact-checking methods in the news sector. Hate speech fluctuates, peaking in 2017, 2018, and

2023, highlighting the necessity of limiting hate speech in news narratives. The extremism varies but remains rather stable, demonstrating a constant attention or awareness of extremism in news contexts.

TABLE 21 News category within web search in Nigeria

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	<b>14.44%</b>	19.14%	4.64%	<b>11.34%</b>	<b>10.92%</b>
2014	6.74%	5.26%	3.02%	4.85%	9.40%
2015	9.88%	<b>10.04%</b>	4.94%	6.58%	<b>16.83%</b>
2016	<b>18.40%</b>	7.64%	4.74%	9.79%	8.32%
2017	<b>11.50%</b>	6.14%	7.44%	6.93%	10.08%
2018	6.93%	<b>10.74%</b>	<b>11.75%</b>	10.97%	7.01%
2019	3.45%	5.54%	7.74%	<b>12.03%</b>	3.81%
2020	7.85%	9.28%	<b>15.98%</b>	11.32%	<b>10.59%</b>
2021	6.74%	<b>11.75%</b>	11.16%	8.26%	10.47%
2022	5.92%	5.50%	8.65%	5.60%	3.19%
2023	8.07%	8.91%	19.88%	<b>12.27%</b>	9.96%
<b>Total</b>	<b>3156(100%)</b>	<b>3285(100%)</b>	<b>7800(100%)</b>	<b>4512(100%)</b>	<b>3351(100%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

In Table 22, misinformation peaks in 2018 but declines in subsequent years, indicating potential gains in misinformation management. Information Manipulation peaks in 2020, underlining the importance of rigorous fact-checking in news-related searches and joint efforts to fight the spread of false information. Hate speech peaks in 2014, 2020, and 2022, indicating periods of heightened interest or concern about online hate speech during news searches. Extremism varies, with peaks in 2015, 2020, and 2022, indicating growing interest in or awareness of extremism in news searches. However, the Nigerian

people were more engaged in disinformation than in other types of polluted messages. According to our analysis, 2022 accounted for 14.31% of the 4,065 searches for the type (disinformation), followed by 2017 (13.87%). According to the analysis, the Nigerian people expressed substantial interest in disinformation in 2023 and 2019. This outcome is hardly surprising given that Nigeria has held national elections over the years. As a result, the years were ideal ground for those who created and disseminated toxic messages across many media platforms.

TABLE 22 News category within news search in Nigeria

	Misinformation	Disinformation	Information Manipulation	Hate Speech	Extremism
2013	7.82%	6.91%	<b>11.08%</b>	8.32%	5.23%
2014	<b>11.08%</b>	1.62%	<b>14.73%</b>	<b>16.27%</b>	8.65%
2015	<b>10.36%</b>	8.26%	7.74%	8.19%	<b>16.73%</b>
2016	4.61%	2.77%	2.98%	4.08%	3.85%
2017	8.39%	<b>13.87%</b>	<b>12.96%</b>	7.56%	8.80%
2018	<b>12.84%</b>	12.34%	6.55%	<b>10.19%</b>	9.05%
2019	9.09%	<b>12.42%</b>	6.71%	6.10%	4.83%
2020	6.55%	6.71%	<b>11.55%</b>	<b>13.47%</b>	<b>14.00%</b>
2021	<b>9.47%</b>	7.77%	10.43%	6.93%	<b>13.08%</b>
2022	8.23%	<b>14.31%</b>	6.82%	<b>14.02%</b>	<b>12.47%</b>
2023	11.52%	<b>12.96%</b>	8.39%	4.82%	3.22%
<b>Total</b>	<b>3861(100%)</b>	<b>4065(100%)</b>	<b>3679(100%)</b>	<b>3650(100%)</b>	<b>3478(100%)</b>

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024

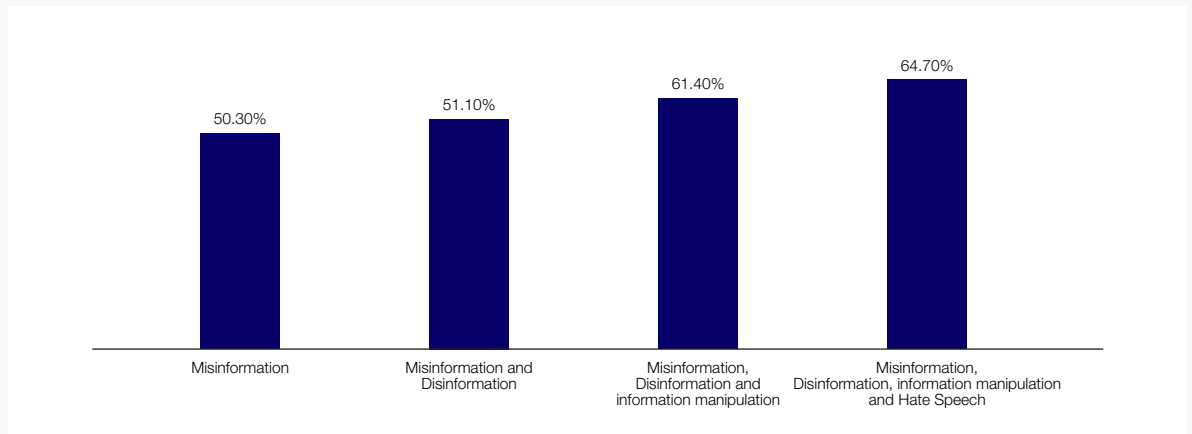
From Tables 20 to 21, important percentages such as the 25% peak in misinformation searches in 2023 and the 15.98% peak in information manipulation searches within the news category in 2020 show critical topics of concern that require targeted interventions in the coming years. The constant increase in searches for misinformation highlighted a key accuracy challenge. The decline in searches for disinformation indicated a favorable shift toward more authentic information. The rising interest in information manipulation necessitated a systematic effort on improving the credibility of news outlets. It was also discovered that a surge in

searches for hate speech highlighted the importance of courteous communication online, yet a continuous interest in searches for extremism demanded a neutral online environment. Following these recommendations becomes more important when one considers the frequency with which public interest in the identified information pollution types leads to significant interest in seeking and consuming information about extremism (see Figure 31), where one unit of searching misinformation, and misinformation with other types leads to over 50 to 60 times of searching information related to extremism.

↑ Figure 31:

Link between information seeking in Nigeria about information pollution types and extremism

Source: Google Trends, 2013-2023; Brain Builders Youth Development Initiative, 2024



Nigeria, like the other countries we examined, has existing laws and proposed bills. Our legal instrument data shows that Nigeria has provisions to combat information pollution. According to the data in Table 23, three clauses target disinformation; one intends to reduce or eliminate information manipulation, misinformation, and disinformation, while the other two target misinformation. We also uncovered four clauses that address misinformation and disinformation. However, despite the existence of these

laws and proposed ones, which are comparable to those available in other selected countries (Ghana, Ivory Coast and Senegal), there have been a variety of competing viewpoints on enforcement over the years. In 2019, civil society and non-governmental organizations rejected a social media bill that would allow police to imprison people whose tweets threaten national security, influence elections, or undermine public trust. Critics argue that this might limit free speech and jeopardize global efforts to battle misinformation .

<sup>100</sup> Paquette, D., (2019). Nigeria's 'information manipulation' bill could jail people for lying on social media. Critics call it censorship. Available from: <https://bit.ly/NewNigeriainformationmanipulationlaw>

TABLE 23 Existing and proposed legal provisions in Nigeria

Law	Year	Provisions	Penalties
Criminal Code Act	1990	<p><b>Section 59(1):</b> Any person publishing or reproducing a false statement likely to cause fear/disturb public peace is guilty of a misdemeanour.</p> <p><b>Section 59(2):</b> No defense if unaware of falsity unless reasonable measures to verify accuracy were taken prior to publication.</p> <p><b>Section 60:</b> Publishing anything exposing a person in a foreign state to hatred or contempt is a misdemeanour.</p> <p><b>Section 375:</b> Publishing defamatory matter is a misdemeanour, punishable by imprisonment for one year. Publishing defamatory matter knowingly false is punishable by two years' imprisonment.</p>	<p>Imprisonment for three years.</p> <p>punishable by imprisonment for two years.</p> <p>Imprisonment for one year for defamatory matter; two years if knowingly false.</p>
Cyber Crime Act	2015	<p><b>Section 24:</b> Knowingly or intentionally sending a grossly offensive, pornographic, indecent, obscene, or menacing message, or knowingly sending a false message for the purpose of causing annoyance, inconvenience, danger, etc., is an offense.</p>	<p>Fine of not more than N7,000,000.00 or imprisonment for a term of not more than 3 years or both such fine and imprisonment.</p>
Constitution of the Federal Republic of Nigeria	1999	<p><b>Section 39(1):</b> Every person shall be entitled to freedom of expression, including freedom to hold opinions and to receive and impart ideas and information without interference.</p> <p><b>Section 22:</b> The press, radio, television, and other agencies of the mass media shall at all times be free to uphold the fundamental objectives contained in this Chapter and uphold the responsibility and accountability of the Government to the people.</p>	<p>No specified penalties as it guarantees freedom of expression for individuals and the media.</p>
Freedom of Information Act (FOA) 2011	2011	<p><b>Section 1:</b> Establishes the right of any person to access or request information in the custody or possession of any public official, agency, or institution.</p> <p><b>Section 7(1):</b> Specifies that where access is refused, the grounds for refusal must be stated, and the applicant has the right to challenge the decision in court.</p> <p><b>Section 7(5):</b> Establishes that wrongful denial of access is an offense, and the defaulting officer or institution is liable to a fine of N500,000 upon conviction.</p>	<p>Fine of N500,000 for wrongful denial of access.</p>
Electoral Act	2022	<p><b>Section 123(b):</b> Publishing false statements about the withdrawal of a candidate before or during an election.</p> <p><b>Section 123(c):</b> Publishing false statements about the personal character or conduct of a candidate calculated to prejudice the chance of election or to promote or procure the election of another candidate, without reasonable grounds for belief in the statement's truth.</p>	<p>Maximum fine of N100,000 or imprisonment for a term of six months or both upon conviction.</p>

TABLE 23 Existing and proposed legal provisions in Nigeria

Law	Year	Provisions	Penalties
Social Media	2019	<p><b>Section 3:</b> Prohibits the transmission of false statements of fact likely to be prejudicial to security, public health, public safety, public tranquility, public finances, friendly relations with other countries, election outcomes, or causing enmity, hatred, ill-will, or diminishing public confidence.</p> <p><b>Section 3(3):</b> Specifies penalties for contravention, including fines and imprisonment.</p>	<p>For individuals: Fine not exceeding N300,000 or imprisonment for a term not exceeding 3 years or both. For entities: Fine not exceeding N10 Million. If an inauthentic online account or a bot is used, similar penalties apply.</p>
Nigeria Broadcasting Code (NBC),	2016	<p><b>3.0.2.1:</b> No broadcast shall encourage or incite to crime, lead to public disorder or hate, be repugnant to public feelings or contain offensive reference to any person or organization, alive or dead, or generally be disrespectful to human dignity.</p> <p><b>3.0.2.2:</b> Hate speech is prohibited; therefore, a Broadcaster shall not transmit any programme, programme promotion, community service announcement, or station identity, which is likely, in any circumstance, to provoke or perpetuate in a reasonable person, intense dislike, serious contempt, or severe ridicule against a person or groups of people because of age, colour, gender, national or ethnic origin, disability, race, religion or political leanings.</p>	

# 9 Laws and Regulations in the Confluence of Moral Sensibility to Combat Information Pollution and Extremism



Looking at the existing and proposed legal provisions in the case countries, it is obvious that adopting laws and implementing regulations is not the primary issue impacting effective control and containment of polluted messages. Instead, like other countries around the world, our case countries are caught between maintaining core human rights and reducing information pollution, which has serious consequences for individuals, entities, and the nation as a whole.

Looking at the existing and proposed legal provisions in the case countries (see Table 24), it is obvious that adopting laws and implementing regulations is not the primary issue impacting effective control and containment of polluted messages. Instead, like other countries around the world, our case countries are caught between maintaining core human rights and reducing information pollution, which has serious consequences for individuals, entities, and the nation as a whole. However, not everyone is ready for rules and regulations to take on non-human responsibilities or duties in moderating actions and behaviors that can maintain the information pollution business.

As demonstrated previously, there are laws that criminalize the publication of false information that leads to civil disobedience or undermines public morale or institutions' reputations. They also criminalize the distribution of false information related to attacks on people or property and emergency situations. False statements or reports that cause fear or alarm are guilty of a misdemeanor. Those who knowingly give false or misleading

information to authorities or send false or misleading messages to endanger life-saving services are also guilty. Mostly in Nigeria, the law prohibits the transmission of false statements that may cause enmity, hatred, or diminish public confidence. Nigerian broadcasters are prohibited from transmitting programmes that provoke hate speech.

Since the conflict of interest persists over time, we argue that, in addition to the employment of techniques such as awareness creation through social campaigns, media literacy, and education, there is a need to include moral sensibility as a strategic moderating component. Essentially, people should be asked to imagine themselves in the shoes of polluted message targets who have suffered reputational damage and financial loss and how they would feel. In this sense, we believe that including responsiveness and responsibility into information pollution reduction measures would make producers and disseminators more receptive to communal solutions to the plague that have been urged for years by concerned stakeholders.





TABLE 24 **Resonance of existing and proposed laws with Information pollution and key concepts**

Country	Penalty	Information Pollution	Penalties	Extremism
Côte d'Ivoire	1990	Misinformation and disinformation	Yes	No
Côte d'Ivoire	Not stated	Disinformation	Yes	No
Côte d'Ivoire	Fine	Information Manipulation	No	No
Ghana	Prison sentence	Misinformation and disinformation	No	No
Ghana	Not stated	Misinformation	Yes	Yes
Ghana	Prison sentence and fine	Misinformation	No	No
Ghana	Prison sentence and fine	Misinformation	No	No
Ghana	Not stated	Misinformation	No	No
Senegal	Prison sentence and fine	Information Manipulation	Yes	Yes
Nigeria	Prison sentence	Misinformation	Yes	Yes
Nigeria	Prison sentence	Misinformation	No	No
Nigeria	Prison sentence	Misinformation and disinformation	No	No
Nigeria	Prison sentence	Misinformation and disinformation	No	No
Nigeria	Prison sentence and fine	Disinformation	No	No
Nigeria	Prison sentence and fine	Disinformation	No	No
Nigeria	Prison sentence and fine	Disinformation	No	No
Nigeria	Prison sentence and fine	Misinformation and disinformation	Yes	Yes
Nigeria	Fine	Misinformation and disinformation	Yes	Yes
Nigeria	Fine	Information Manipulation, misinformation and disinformation	Yes	Yes

Source: Brain Builders Youth Development Initiative's Compilation, 2024

# 10 Emerged System of Information Pollution, New Technologies and Extremism in West Africa

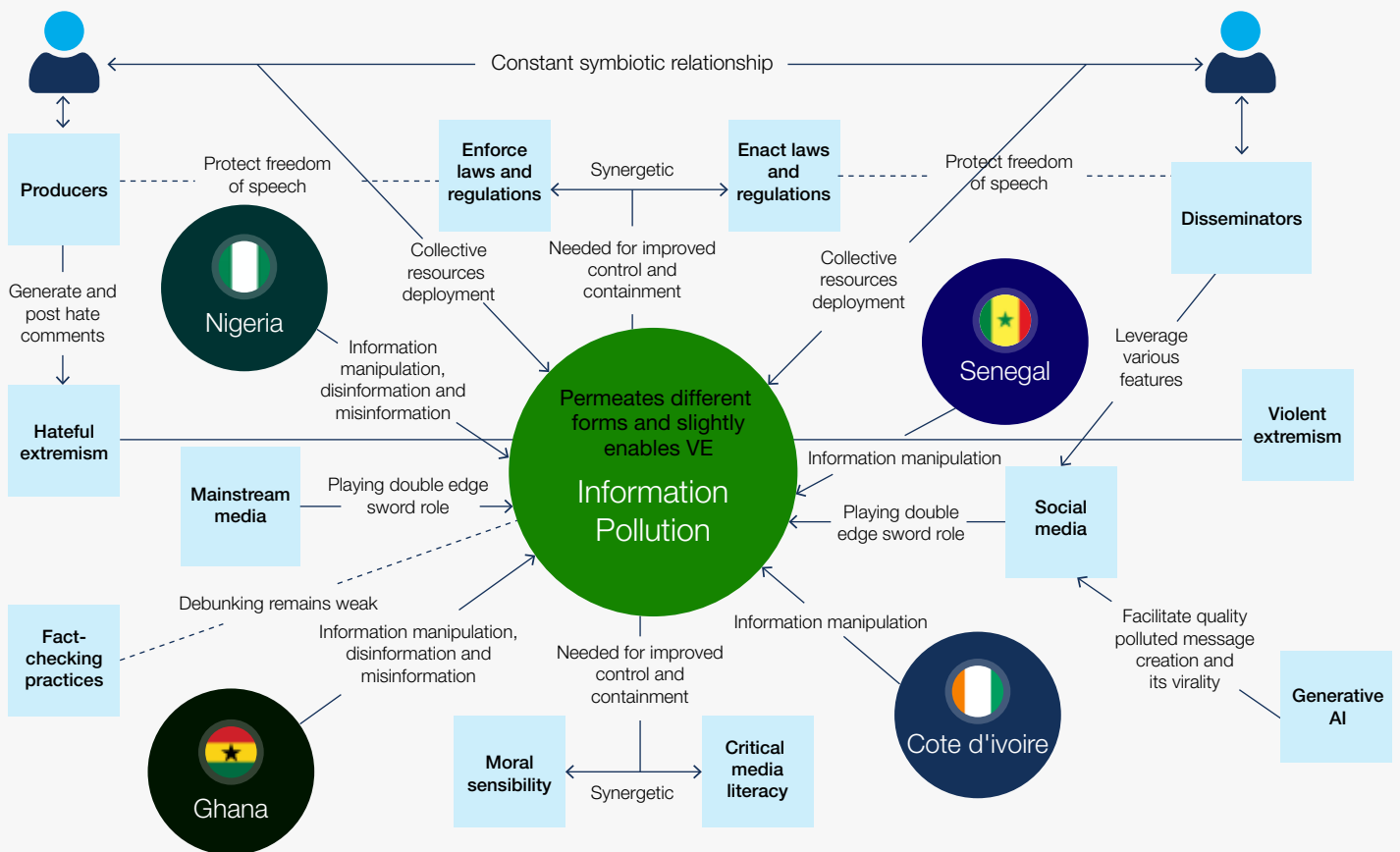


Based on our findings, we proposed INPONTEinWA as a system for effective control and containment of potential extremism by preventing the creation and spread of identified information pollution types throughout West Africa.



Based on our findings, we proposed INPONTEinWA as a system for effective control and containment of potential extremism by preventing the creation and spread of identified information pollution types throughout West Africa. As the system illustrates, human actors are fighting to end the epidemic and prevent various forms of extremism. Specifically, there are players working against every non-human actor that is employed or recommended to solve the problem

holistically. We also align with the recent scholarly position that fact-checking aims to prevent people from being deceived by information manipulation, but it cannot eliminate the media environment's infestation of such information. Certain media outlets maintain an incentive to disseminate information manipulation despite the likelihood of its eventual debunking through fact-checking processes<sup>101</sup>.



Source: Brain Builders Youth Development Initiative's Conceptualisation, 2024

<sup>101</sup> Kang, M., & Sheen, GC-H., (2024). The making of the boy who cried wolf: information manipulation and media skepticism. Political Science Research and Methods. doi:10.1017/psrm.2024.7

# 11 Managerial and Policy Recommendations



1



## Enhance Moral Sensibility

There is a need to introduce moral sensibility as an integral component in the fight against information pollution in West Africa. All stakeholders should work together to develop comprehensive strategies that imbue individuals and institutions with a deep ethical consciousness to counter the spread of disordered information effectively.

2



## Galvanize Political Will

We recognize the robust legal framework in place to combat information disorder in West Africa, but we call on governments to mobilize political will to enforce these laws. Governments across the region must demonstrate unwavering commitment and resolve to implement and uphold legal mechanisms aimed at curbing the dissemination of disinformation and extremism.

3



## Institute Critical Media Literacy

We recommend the launch of expansive critical media literacy initiatives within the public domain across the four case countries. These would lead to the implementation of robust educational programmes in various public forums, including educational institutions, places of worship, and community centers, to equip citizens with the analytical tools necessary to discern and combat misinformation effectively.

4



## Forge Media-CSO Collaborations

There is a need to foster collaborative partnerships between traditional and digital media outlets, civil society organizations (CSOs), and non-governmental organizations (NGOs) to spearhead public education campaigns. This also include developing and disseminating informative content aimed at raising awareness about the grave repercussions of engaging in the propagation and consumption of disordered information.

5



## Deploy Moral-Centric Campaigns

We task orientation agencies and governmental bodies across the case countries with launching extensive moral-centric campaigns to mitigate the production and dissemination of disordered information. This would involve crafting compelling messaging that underscores the ethical imperatives of responsible information sharing, thereby instilling a culture of accountability and integrity within society.

6



## Empower Citizenry for Collective Action

We suggest the mobilization of citizens and non-state actors to actively support governmental efforts in combating information pollution. This advocacy is important for collective action in safeguarding core human rights and freedoms while simultaneously safeguarding societal well-being from the deleterious effects of disinformation.

7



## Fortify Fact-Checking Processes

We suggest strengthening the infrastructure and methodologies of fact-checking organizations to ensure timely, accurate, and comprehensive verification of information. This would involve the bolstering of resources and capabilities to facilitate rigorous fact-checking procedures, thereby enhancing the reliability and credibility of information dissemination channels.

8



## Legislative Reform for Comprehensive Frameworks

We recommend legislative reforms within the legislative arms of Ghana, Cote d'Ivoire, and Senegal to establish comprehensive legal frameworks tailored to combat the multifaceted nature of information disorder. This would lead to the proposition of stringent measures and penalties commensurate with the severity of disinformation offenses, thereby fortifying legal deterrence against perpetrators.

9



## Leverage Existing Regulatory Bodies

We suggest harnessing the capabilities of existing regulatory bodies tasked with overseeing media and communication sectors in West Africa to strengthen measures aimed at dis-incentivizing the spread of information pollution. These regulatory bodies should be empowered with enhanced enforcement authority and resources to effectively monitor, investigate, and penalize individuals and entities found guilty of disseminating false or misleading information.



Brain Builders Youth Development Initiative (BBYDI) is a female-led non-profit organization dedicated to promoting good governance, youth civic engagement and sustainable communities. As a youth-led organization, our team harnesses the power of technology, conducts comprehensive research, and utilizes data-driven methodologies to enhance the information landscape in Nigeria. In the last three years, we have trained 1045 young journalists across all 36 states in Nigeria, empowering them with accountability and transparency tools to improve the information space and sustain the nascent Nigeria democracy. In the last eight years, we have reached over 500,000 Nigerians across the 36 States of the Federation through a series of civic tech projects.

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