

ASSESSMENT OF COMMUNICATION STRATEGIES ADOPTED BY NEMA IN HANDLING DISASTER AND RISK INTERVENTION IN NASARAWA STATE AND FCT ABUJA

Hariratu ISMAILA, MSc
Department of Mass Communication
Nasarawa State University, Keffi
Email: ismailaharirat@gmail.com

Tsegysu SANTAS, PhD
Department of Mass Communication
Nasarawa State University, Keffi
Email: tsegysu@gmail.com

Anthony OGANDE, PhD
Department of Mass Communication
Nasarawa State University, Keffi
Email: anthonyogande1971@gmail.com

Abstract

Effective disaster communication is critical to emergency management in flood-prone developing nations. This study aimed to assess the communication strategies employed by Nigeria's National Emergency Management Agency (NEMA) in managing flood disasters in Nasarawa State and the Federal Capital Territory (FCT) Abuja. The study addressed persistent gaps in communication reach and effectiveness among vulnerable populations. The study was anchored on Risk Communication Theory, which posits that effective communication of hazard information empowers communities to make informed protective decisions, and Communication Accommodation Theory, which holds that communicators adjust their style and language to bridge social and cultural differences. A mixed-methods research design was employed, with data collected from 450 residents in Doma Local Government Area and Abaji Area Council through structured questionnaires and analysed using descriptive statistics and thematic analysis. Findings revealed that NEMA utilises a multi-channel approach integrating digital platforms and traditional media. Whilst this improved awareness among urban populations, with 64% confirming receipt of flood information through multiple channels, significant gaps persisted rurally, with 72% reporting limited access due to poor infrastructure and language barriers. Key challenges included inconsistent messaging (58%), technical jargon (47%), and weak feedback mechanisms (61%). The study recommends strengthening community participation, promoting culturally sensitive messaging, bridging the digital divide, and enhancing stakeholder collaboration for more inclusive disaster communication in Nigeria.

Keywords: Assessment, Communication Strategies NEMA Disaster and Risk Intervention

Introduction

Nigeria has experienced recurring flooding disasters, particularly affecting the north-central region, with significant impacts on lives, livelihoods, and infrastructure. Nasarawa State and the Federal Capital Territory (FCT) Abuja have emerged as focal points for these natural disasters, with communities facing devastating floods that result in displacement, property destruction, and disruption of essential services (Adelekan et al., 2020). The increasing frequency and intensity of these events have been attributed to climate change, poor urban planning, inadequate drainage systems, and environmental degradation (Etuonovbe, 2011).

The National Emergency Management Agency (NEMA), established in 1999, serves as Nigeria's primary federal agency responsible for coordinating disaster preparedness, response, and recovery efforts. Central to NEMA's mandate is the effective communication of disaster-related information to vulnerable populations, enabling timely warnings, coordinated responses, and enhanced community resilience (NEMA, 2021). However, despite technological advances and policy frameworks, challenges persist in ensuring that critical information reaches all segments of society, particularly rural and marginalised communities.

Effective disaster communication requires not merely the dissemination of information but the strategic integration of appropriate channels, culturally relevant messaging, and two-way engagement mechanisms that foster trust and facilitate behavioural change (Covello, 2003; Reynolds & Seeger, 2005). Within Nigeria's diverse socio-cultural landscape, characterised by varying levels of digital literacy, infrastructural development, and linguistic diversity, the effectiveness of disaster communication strategies becomes a critical determinant of successful risk intervention.

This study focuses on flood management between 2020 and 2024, a period marked by intensified flooding events and heightened public awareness of climate-related risks. By examining NEMA's communication strategies in Nasarawa State and FCT Abuja, this research provides empirical evidence on the adoption, influence, effectiveness, and challenges of disaster communication practices in Nigeria's flood-prone regions.

Statement of the Problem

Despite NEMA's mandate to coordinate disaster response and risk communication, significant challenges remain in ensuring timely and effective dissemination of information to vulnerable populations. Nasarawa State and FCT Abuja continue to experience devastating floods that displace thousands, destroy infrastructure, and threaten food security. For instance, the 2022 floods in Nasarawa State displaced over 350,000 individuals, with communities such as Toto, Lafia, and Doma experiencing severe impacts (Premium Times, 2025).

Whilst NEMA has implemented various communication initiatives, including nationwide simulation exercises and grassroots engagement programmes, there remains a noticeable gap in research examining the practical effectiveness of these strategies. Existing literature tends to generalise emergency management without delving into the specific realities of information dissemination—how warnings are issued, received, understood, and acted upon by diverse communities (Godwin et al., 2019). Furthermore, limited attention has been paid to the barriers

preventing effective communication, particularly concerning rural populations with limited access to digital technologies.

The rural-urban digital divide, linguistic diversity, low literacy rates, and infrastructural deficiencies create significant obstacles to effective disaster communication in Nigeria. Additionally, issues of trust in governmental institutions, inconsistent messaging, and the absence of robust feedback mechanisms further complicate NEMA's efforts to engage meaningfully with at-risk populations (Onuoha, 2017; Bello & Yusuff, 2022).

This study addresses these gaps by providing a comprehensive assessment of NEMA's communication strategies, examining their adoption, influence, effectiveness, and associated challenges within the specific contexts of Nasarawa State and FCT Abuja. The findings aim to inform evidence-based improvements in disaster communication practices, ultimately enhancing community preparedness and resilience.

Research Objectives

This study was guided by the following objectives:

1. To examine NEMA's communication strategies in handling disaster management and interventions in Nasarawa State and FCT Abuja.
2. To assess the influence of NEMA's communication strategies on disaster risk interventions in Nasarawa State and FCT Abuja.
3. To identify the key challenges associated with the adoption and implementation of NEMA's communication strategies in managing disaster and risk interventions in Nasarawa State and FCT Abuja.

Conceptual Review

Communication Strategies

Communication strategies refer to deliberate, structured processes designed to achieve specific communication objectives through the selection of appropriate channels, message framing, and audience targeting (Grunig & Hunt, 2020). In disaster management, communication strategies encompass the methods and tools employed to disseminate critical information before, during, and after emergencies. Effective disaster communication requires not only clarity and timeliness but also cultural sensitivity, accessibility, and the capacity to foster trust amongst diverse audiences (Argenti, 2007; Heath & Bryant, 2000).

NEMA's communication strategies incorporate both digital platforms—including social media, mobile alerts, and web-based information systems—and traditional media such as radio broadcasts, television announcements, community meetings, and engagement with local leaders. This multi-channel approach recognises the heterogeneity of Nigerian communities and seeks to maximise reach across urban and rural populations (Madugu & Ushama, 2015).

Disaster and Risk Intervention

Disaster and risk intervention entails coordinated actions designed to mitigate hazard effects, protect human lives, and restore normalcy following disruptive events. The global approach to disaster management has transitioned from reactive responses to proactive disaster risk reduction

(DRR), emphasising comprehensive preparedness, community resilience, and effective communication (UNDRR, 2015). In Nigeria, NEMA bears statutory responsibility for disaster coordination, encompassing preparedness planning, early warning dissemination, emergency response, and rehabilitation.

The effectiveness of intervention strategies is intrinsically linked to communication quality. Timely, accurate, and actionable information enables communities to implement protective measures, comply with evacuation orders, and engage cooperatively with emergency services (Coppola, 2011). However, intervention success is contingent upon addressing structural barriers, including infrastructural deficits, limited technological access, and socio-cultural factors that influence message reception and behavioural response.

Literature Review

Communication Strategies and Disaster Risk Management

Effective communication is recognised as fundamental to disaster risk management (DRM), serving as the backbone of preparedness, response, and recovery efforts (Adeyemi, 2018). Research demonstrates that multi-channel communication approaches, integrating digital and traditional media, enhance information reach and public engagement. Adeyemi (2018) emphasises that whilst NEMA has made significant strides in improving communication channels, gaps persist in information dissemination, particularly in rural areas lacking adequate infrastructure.

Anozie (2019), advocates for decentralised disaster communication, arguing that community-based strategies—incorporating local leaders, indigenous communication methods, and culturally relevant messaging—significantly enhance trust and uptake of disaster information. The integration of participatory approaches enables communities to provide feedback, thereby aligning interventions with local needs and contexts (Ibrahim, 2020).

Effectiveness of Disaster Communication

Studies evaluating NEMA's communication effectiveness reveal mixed outcomes. Adedeji (2019) highlights that limited community involvement constrains effective information dissemination during emergencies, impeding public understanding and response. Ezeani (2020) argues that communication must transition from reactive information provision to proactive engagement that fosters long-term community resilience through informed preparedness.

Research by Nwachukwu and Okeke (2024) indicates that whilst many citizens appreciate NEMA's efforts, concerns persist regarding clarity and accessibility of content. The use of technical jargon and absence of translations into local languages create barriers, particularly amongst vulnerable populations with limited formal education. This underscores the necessity for simplified, culturally adapted messaging that resonates across diverse demography.

Empirical Literature Review

This section reviews existing empirical studies relevant to disaster communication and risk management practices. It examines previous research findings on communication strategies, public awareness, preparedness, and institutional effectiveness in disaster management. The purpose is to identify established trends, highlight gaps in the literature, and position the current study within the broader body of scholarly work.

Olonilua (2019) conducted a study titled *Promoting Public Involvement in Disaster Risk Communication in Nigeria*, which aimed to critically examine disaster risk communication strategies in Nigeria, with particular focus on the National Emergency Management Agency's (NEMA) public engagement approaches in disaster management. The study adopted a mixed-methods approach, combining interviews with both government officials and members of the public to capture institutional and citizen perspectives on disaster communication. The findings revealed that NEMA's communication was predominantly reactive, focusing on post-disaster response rather than proactive public engagement and preparedness. The study also found that whilst digital tools such as mobile phones and social media held potential for improving communication, infrastructural deficiencies including inconsistent electricity supply and limited internet access significantly hindered their effectiveness, particularly in disaster-prone regions like Nasarawa State and the Federal Capital Territory (FCT), Abuja.

Okocha, Agbele, and Kente (2023) conducted a study on *Social Media for Disaster Awareness and Management in Nigeria*, which aimed to investigate the role of social media in enhancing disaster awareness and management within the Nigerian context. The researchers employed a mixed-methods approach, combining secondary data analysis with primary data collection through a structured questionnaire administered to 390 respondents selected via purposive sampling. The findings indicated that social media was actively utilised for disaster awareness and management in Nigeria; however, several challenges were identified, including low internet penetration, insufficient disaster training, inadequate responses from disaster management agencies, and the widespread dissemination of false information during disaster events. The study concluded that despite these challenges, social media remained a vital tool for disaster communication and recommended that agencies enhance their online presence and engage more actively with the public during emergencies.

Oke, Adeyinka, and Oluseyi (2018) conducted a study titled *Media and Disaster Management: Analysing Communication Trends in Flood-Ravaged Communities in Benue State, North Central Nigeria*, which aimed to examine the role of media as a stakeholder in disaster communication, with emphasis on its contribution to public awareness, education, and community resilience during flood events. The study employed a survey methodology, utilising structured questionnaires administered to 120 respondents across six flood-prone communities in Benue State. Findings revealed that disaster information was predominantly disseminated through mass media channels such as radio and television, with a notable absence of community-based communication methods such as town hall meetings and interpersonal engagement. The study further found that the media's approach was largely reactive, focusing on post-disaster sympathy reporting rather than proactive risk reduction, and that top-down communication strategies often failed to resonate with rural populations due to a lack of contextual and cultural sensitivity.

Ebhuoma and Leonard (2020) conducted a study titled *An Operational Framework for Communicating Flood Warnings to Indigenous Farmers in Southern Nigeria: A Systems Thinking Analysis*, which aimed to examine the disconnect between the timely issuance of flood warnings by the Nigerian Meteorological Agency (NMA) and the actual reception and interpretation of those warnings by rural farming communities. The study employed a systems thinking analytical framework, drawing on qualitative data to explore how indigenous farmers in Delta State perceived and responded to official flood warnings during the 2012 floods. The findings revealed that despite warnings being issued on time, many farmers suffered adverse effects due to inadequate communication strategies that failed to account for local knowledge systems, language preferences, and cultural contexts. The study concluded that integrating indigenous communication channels such as community meetings, town criers, and local leaders into formal disaster communication frameworks was essential for improving warning reception and response among rural populations.

Challenges in Communication Strategy Implementation

Persistent challenges in NEMA's communication practices include inconsistent messaging, delayed information dissemination, and inadequate feedback mechanisms (Onuoha, 2017; Bello & Yusuff, 2022). Structural barriers—such as poor network coverage, inconsistent electricity supply, and limited access to digital devices—disproportionately affect rural populations, creating significant disparities in information access (Yusuf & Ahmed, 2020).

Trust emerges as a critical factor influencing communication effectiveness. Scepticism towards governmental institutions, stemming from past experiences of delayed responses or misinformation, undermines public confidence in NEMA's messaging (Okoro, 2021). Building trust requires transparency, consistency, and sustained community engagement that demonstrates responsiveness to local concerns.

Methodology

Research Design

This study employed a mixed-methods research design, integrating quantitative and qualitative approaches to provide comprehensive insights into NEMA's communication strategies. The quantitative component utilised survey research to collect standardised data from a representative sample, whilst qualitative insights were gathered through semi-structured interviews with key informants.

Population and Sampling

The study population comprised residents from flood-affected communities in Doma Local Government Area (LGA) of Nasarawa State and Abaji Area Council of FCT Abuja. These areas were selected due to documented vulnerability to seasonal flooding. The combined estimated population of directly affected residents was approximately 81,400.

A combination of cluster and stratified sampling techniques was employed. Four flood-prone communities were selected from each location: Rukubi, Akpanaja, Odori, and Iwashu in Doma LGA; and Agyana, Ebagi, Rimba, and Gurdi in Abaji Area Council. Within selected clusters,

participants were stratified according to age, gender, and educational attainment to ensure balanced representation.

Using Cochran's formula with a 95% confidence level and 5% margin of error, the calculated sample size was 384 respondents. A total of 450 questionnaires were administered to account for potential non-responses, with 448 valid responses ultimately analysed.

Data Collection

Data were collected through structured questionnaires administered both online (via Google Forms) and in-person to ensure accessibility across diverse populations. The questionnaire comprised six sections covering demographic information, communication strategies employed, adoption levels, influence on disaster response, effectiveness assessment, and challenges encountered.

Data Analysis

Quantitative data were analysed using descriptive statistics, including frequencies, percentages, and Likert scale distributions. Results were presented in tables and charts to facilitate clarity and interpretation. The analysis adopted a purely descriptive approach, focusing on capturing and representing the distribution of respondents' views without inferential statistical testing, as the study's purpose was to provide an accurate snapshot of current practices rather than test specific hypotheses.

Results

The following tables present the key findings of the study, summarising respondents' demographic characteristics, communication strategies, adoption patterns, and perceptions of NEMA's disaster communication effectiveness. The tables provide a clear overview of the data collected through the field survey, highlighting important trends and patterns relevant to the study objectives.

Table 1: Demographic Characteristics of Respondents

Variable	Category	Frequency (%)
Gender	Male	231 (51.3%)
	Female	217(48.2%)
	Total	448(99.5%)
Age Group	18–25	60 (13.3%)
	26–35	49 (10.9%)
	36–45	63 (14.0%)
	46–55	209 (46.5%)
	56 and above	69 (15.3%)
	Total	450 (100%)
Educational Qualification	No Formal Education	41 (9.1%)
	Primary Education	34 (7.6%)
	Secondary Education	120 (26.7%)
	Tertiary Education	257 (57.1%)
	Total	450 (100%)
Occupation	Unemployed	129 (28.7%)
	Students	31 (6.9%)
	Civil Servants	70 (15.6%)
	Traders	52 (11.6%)
	Farmers	61 (13.6%)
	Private Sector Workers	105 (23.3%)
	Total	450 (100%)

Source: Questionnaire, 2025

Table 1 shows that the respondents were fairly balanced by gender, with a slightly higher proportion of males than females. The age distribution indicates that the majority were within the 46–55 age bracket, suggesting that most participants were mature and economically active individuals. Additionally, more than half of the respondents had attained tertiary education, and a significant proportion were either unemployed or engaged in private sector work, reflecting diverse socio-economic backgrounds within the study population.

Table 2: Communication Strategies Commonly Adopted by NEMA.

Communication Strategy	Frequency	Percentage(%)
Social Media Platforms	268	59.6
Radio Broadcasts	59	13.1
Television Broadcasts	59	13.1
Newspapers	10	2.2
Posters and Flyers	66	14.7
SMS and Mobile Alerts	6	1.3
Community Meetings	1	0.2
Others	3	0.7
Total	450	100.0

Source: Questionnaire, 2025

Table 2 shows that NEMA predominantly relies on digital and mass media channels, with social media platforms being the most commonly used strategy. Traditional media such as radio, television, and posters/flyers are also employed, though to a lesser extent, while SMS alerts and community meetings are minimally utilised. This suggests a strong emphasis on reaching audiences through widely accessible platforms, with limited engagement in direct, community-level communication.

Table 3: Communication Strategies Commonly Adopted by NEMA.

Frequency of Communication	Frequency	Percentage (%)
Very Frequently	53	11.8
Frequently	51	11.4
Occasionally	207	46.2
Rarely	70	15.6
Never	67	15.0
Total	488	100.0

Table 3 indicates that NEMA’s communication strategies are mostly deployed on an occasional basis, with nearly half of the respondents reporting receiving information irregularly. Fewer respondents reported very frequent or frequent communication, while a significant portion indicated that messages were rarely or never received. This suggests inconsistencies in the frequency of information dissemination, which may affect timely public awareness and responsiveness.

Table 4: Extent to which NEMA’s communication strategies are being adopted.

Rating	Frequency	Percentage(%)
To a very great extent	82	18.3
To a great extent	40	8.9
To a moderate extent	38	8.5
To a little extent	80	17.8
Not at all	209	46.5
Total	449	100.0

Source: Questionnaire, 2025

Table 4 shows that nearly half of the respondents reported not adopting NEMA's communication strategies at all, while only a small proportion indicated high levels of adoption. A moderate number of respondents adopted the strategies to a limited or moderate extent. This suggests that overall adoption of NEMA's communication efforts is low, highlighting challenges in translating information into active engagement.

Table 5: Respondents' Rating of NEMA's Communication Role in Reducing Confusion and Panic During Emergencies.

Response Option	Frequency	Percentage(%)
Excellent	96	21.3
Good	40	8.9
Fair	13	2.9
Poor	29	6.4
Very Poor	272	60.4
Total	450	100.0

Source: Questionnaire, 2025

Table 5 shows that the majority of respondents rated NEMA's communication strategies as very poor, with only a small proportion considering them excellent or good. This indicates a generally negative perception of the effectiveness and quality of the agency's communication efforts.

Table 6: Respondents' rating of the clarity of disaster-related messages received from NEMA.

Response Option	Frequency	Percentage (%)
Very clear	78	17.3
Clear	20	4.4
Sometimes Confusing	50	11.1
Often unclear	41	41
Very unclear	258	57.3
Total	450	100.0

Source: Questionnaire, 2025

Table 6 indicates that a majority of respondents found NEMA's disaster-related messages unclear, with over half rating them as very unclear. Only a small proportion considered the messages clear or very clear. This highlights significant issues with message clarity, which may hinder effective public understanding and response.

Table 7: Major Barriers Limiting Access to Disaster-Related Information from NEMA.

Barrier	Frequency	Percentage(%)
Poor network coverage	40	8.9
Inconsistent electricity supply	22	4.9
Language barriers	15	3.3
Illiteracy	27	6.0
Lack of awareness about NEMA	148	32.9
Distrust of government Institution	191	42.4
Others	6	1.3
Total	450	100.0

Source: Questionnaire, 2025

Table 7 shows that the major barriers limiting access to disaster-related information from NEMA are distrust of government institutions and lack of awareness about the agency. Infrastructural challenges, language barriers, and illiteracy were reported less frequently, indicating that systemic and perceptual factors play a larger role than technical limitations in hindering information access.

Discussion of Findings

The findings show that NEMA adopts a multi-channel communication strategy that combines digital and traditional media, in line with global best practices in disaster risk management. However, there is a clear rural–urban divide, as urban residents benefit more from these strategies while rural populations face barriers such as poor internet access, limited electricity, and lower digital literacy. Although some respondents believe communication strategies are equally adopted, the data suggest significant inequalities that require targeted rural-focused interventions.

NEMA’s communication efforts have influenced disaster preparedness to some extent, as some respondents reported taking preventive action based on the information received, particularly through posters and social media. This highlights the continued relevance of both traditional and digital channels in promoting behavioural change. However, the high level of uncertainty among respondents regarding whether they acted on the information suggests gaps in message clarity, relevance, and impact, limiting overall effectiveness.

Major challenges identified include distrust in government institutions and low public awareness of NEMA’s role. While access to communication tools and language were not widely perceived as barriers, infrastructural limitations and the digital divide still affect vulnerable populations. Overall, respondents rated NEMA’s communication as largely ineffective, citing issues of clarity, timeliness, reliability, and limited reach to vulnerable groups, indicating the need for more inclusive, community-based, and trust-building communication approaches.

Conclusion

The study reveals that although NEMA has established diverse communication channels for disaster risk management in Nasarawa State and the FCT, these efforts have not fully translated into improved preparedness or inclusive reach. The major challenges are systemic, particularly

trust deficits, inadequate community engagement, and rural–urban inequalities. Therefore, improving disaster communication requires not just multiple channels, but clearer messaging, stronger community partnerships, transparency, and strategies tailored to vulnerable populations to enhance resilience and effectiveness.

Recommendations

Based on the findings of this study, the following recommendations are proposed to enhance the effectiveness of NEMA's communication strategies:

1. Improve Community Engagement at Local Level

NEMA should strengthen engagement with communities in flood-prone areas by working more closely with existing local structures rather than creating entirely new systems. The agency can organise periodic community sensitisation meetings in collaboration with local government authorities and community leaders. Partnering with religious leaders, traditional rulers, and community associations to disseminate information can also improve trust and message credibility at minimal cost.

2. Simplify and Localise Communication Messages

NEMA should ensure that disaster messages are clear, brief, and free from technical language. Key messages should be translated into major local languages in affected areas and supported with simple visuals to enhance understanding. Before large-scale dissemination, messages can be informally tested with small community groups to ensure clarity and relevance.

3. Strengthen Use of Low-Cost Traditional Media

Given infrastructural and digital access limitations, NEMA should prioritise community radio, local announcements, posters, and collaboration with town announcers, especially in rural areas. These channels are affordable, accessible, and effective in reaching vulnerable populations. Social media should continue to be used, but not as the sole communication channel.

4. Improve Timeliness and Consistency of Information

NEMA should establish clearer internal communication procedures to ensure that disaster warnings and updates are released promptly and consistently. Providing regular updates during emergencies, even when information is limited, can improve public confidence and reduce uncertainty.

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