



Access to Climate Change Messages and Adaptation Practices among Residents of Selected Communities in Anambra State

Ifeyinwa Stella Onwuka^{a*}, Salami Ozohu Juwaretu^b

^aDepartment of Development and Communication Studies, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria

^bDepartment of Mass Communication, Federal Polytechnic, Nasarawa State, Nigeria

*ORCID iD: <https://orcid.org/0009-0000-7775-2399>

*Corresponding email: is.onwuka@unizik.edu.ng

Abstract

Climate change poses significant risks to Nigerian communities, and various stakeholders provide information to encourage people to adopt preventive and adaptive practices. This study examined access to climate change messages and adaptation practices among residents of selected communities in Anambra State. The study adopted a survey research design. The population comprised residents of selected communities in Anambra State, from which 160 respondents were purposively selected from Agu Awka, Ifite Awka, Fegge and Woliwo communities. Data were collected using a structured questionnaire and analysed using frequency, percentage and mean scores, with a mean benchmark of 3.00 for decision-making. Findings showed that exposure to climate change messages was moderate and issue-specific, with a grand mean of 3.04. Exposure was highest for flooding ($M=3.84$), erosion ($M=3.78$), and poor waste disposal and environmental pollution ($M=3.68$), while exposure to bush burning ($M=2.38$), loss of farmland and declining crop production ($M=2.39$), and extreme heat ($M=2.45$) was low. Radio was the dominant channel for accessing climate change information ($M=3.94$), followed by television ($M=3.14$) and posters, banners and billboards ($M=3.00$), while the overall channel-access score was low (grand mean=2.22). Most importantly, perceived utilisation of climate change messages through environmental and adaptation practices was generally low, with a grand mean of 2.65. It recommends shifting climate change communication towards practical, interactive and action-oriented approaches that strengthen residents' confidence and capacity to undertake appropriate adaptation practices.

Keywords: climate change communication, climate change messages, adaptation practices, information access, Anambra State

Introduction

Climate change is a serious threat to human settlements, livelihoods and development, making access to timely and actionable climate-risk information increasingly important for enabling populations to anticipate risks and take appropriate protective action (IPCC, 2022; UNDRR, 2024). The Intergovernmental Panel on Climate Change (IPCC) reports that climate change is already producing widespread losses and damages across Africa, including through floods, water shortages, declining food production, health impacts and economic losses (IPCC, 2022). It further identifies adaptation as an important means of reducing climate risks, while noting that technological, institutional and financial constraints limit the feasibility of adaptation in many African settings (IPCC, 2022). Globally, however, adaptation efforts remain inadequate relative to escalating climate risks. The United Nations Environment Programme (UNEP, 2023) estimates that developing countries will require between US\$215 and US\$387 billion annually for adaptation



during this decade, while adaptation planning and implementation have not kept pace with growing risks.

The challenge is particularly consequential in Africa, where high exposure to climate hazards intersects with socioeconomic vulnerability (Ayanlade et al., 2023). The IPCC (2022) observes that African populations are disproportionately dependent on climate-sensitive livelihoods and that rural households with limited resources face greater risks from climate hazards. Floods and droughts impose particularly difficult adaptation choices on poorer populations because many available responses require resources that vulnerable households may not possess (Schrieks et al., 2025; Shibia, 2024). Thus, adaptation is not determined solely by whether appropriate measures exist; people's capacity to recognise risks, obtain relevant information and translate information into appropriate action also matters.

Nigeria exemplifies this intersection of climate risk, vulnerability and the need for effective communication. The country is exposed to multiple climate-related hazards, including floods, droughts and extreme rainfall, with projected changes in rainfall variability and heavy rainfall events posing continuing risks (World Bank, 2021). This phenomenon is particularly concerning in Anambra State, where climate change-related issues, such as recurrent flooding, have exposed communities to substantial disruption of homes, livelihoods, infrastructure and essential services (Ajiboye & Orebiyi, 2022). In 2024, NEMA identified 11 Anambra LGAs as being at risk of flooding and called for collaborative early-warning and risk-reduction efforts involving government, traditional institutions, religious organisations and community groups (NEMA, 2024). This situation could partly be attributed to poor climate change adaptation behaviour among the people, which may be linked to a lack of knowledge and understanding of adaptation practices.

Existing scholarship provides evidence that information and communication are relevant to climate adaptation, but the literature has largely examined the issue through awareness, climate information access, risk perception or adoption of adaptation strategies within particular occupational groups (van Valkengoed et al., 2022; Ricart et al., 2023; Yona et al., 2025). However, this literature leaves an important communication question insufficiently addressed. Much of the Nigerian evidence (Muhammad et al., 2024; Mgbakor et al., 2020) treats climate information as one explanatory factor among socioeconomic, institutional or agricultural variables, rather than examining access to climate change messages as a communication phenomenon in its own right.

Against this background, this study examines access to climate change messages and adoption of adaptation practices among residents of selected flood-prone communities in Anambra State. Specifically, it shifts attention from climate-change awareness alone to the communication pathway between access to messages and adaptive action, while situating the investigation within vulnerable communities in Anambra State. The study is important because understanding this relationship can provide evidence for improving climate-risk communication, strengthening community-level preparedness and designing messages that are more accessible and relevant to populations exposed to flooding.

Objectives of the Study

The primary objective of this study is to examine access to climate change messages and their perceived utilisation among residents of selected communities in Anambra State. Specifically, the study seeks to:

1. Assess the level of exposure to climate change messages among residents of selected communities in Anambra State.



2. Identify the sources of climate change information accessed by residents of selected communities in Anambra State.
3. Assess the perceived utilisation of climate change messages accessed by residents of selected communities in Anambra State.

Literature Review

Climate Change Messages

Climate change messages refer to information, explanations, warnings and recommendations communicated to individuals or groups about the causes, effects, risks and possible responses to climate change (Peters et al., 2022). They are designed to increase understanding of climate-related issues, shape perceptions of environmental risks and encourage appropriate responses. Climate change messages may address issues such as rising temperatures, changing rainfall patterns, flooding, drought, extreme weather events, deforestation, greenhouse gas emissions and their effects on human health, agriculture, livelihoods and the environment (Eneji et al., 2021). Beyond simply providing information, effective climate change messages can communicate the seriousness of climate risks and provide practical guidance on actions that individuals and communities can take to reduce vulnerability.

Climate change messages can take different forms depending on their purpose, content, audience and communication channel (León et al., 2022). Climate change communication may provide general information about the causes, effects and trends of climate change (Cass et al., 2023), while risk and early-warning messages provide more specific information about impending or potential hazards, such as flooding, extreme rainfall and heatwaves, together with information that enables individuals and communities to take timely protective action (Nunes, 2025).

Climate Change Adaptation Practices

Climate change adaptation practices refer to the actions, adjustments and strategies adopted by individuals, households and communities to reduce their vulnerability to the actual or expected effects of climate change (Darjee et al., 2023). Adaptation involves responding to climate-related risks by modifying behaviours, livelihoods, infrastructure or resource-use practices in ways that minimise potential damage and improve resilience (Moghadam & Haghighi, 2026). Such practices are particularly important in communities exposed to hazards such as flooding, drought, extreme rainfall, heat and changing weather patterns.

Climate change adaptation practices vary according to the nature of the climate hazard, the resources available to communities and their socioeconomic and environmental circumstances (Darjee et al., 2023). In flood-prone communities, for example, adaptation practices may include moving temporarily or permanently to safer locations, elevating buildings and household property, constructing or maintaining drainage systems, avoiding construction in flood-prone areas, protecting important documents and valuables, maintaining emergency supplies, and responding to early-warning information. Other practices may include planting trees, improving waste disposal to reduce blocked drainage channels, adopting flood-resistant agricultural practices and participating in community disaster-preparedness activities.

Review of Empirical Studies

Existing empirical studies demonstrate that access to climate change information is an important, although not sufficient, condition for climate adaptation. Obi and Nwafor (2021) studied rice farmers across Southeast Nigeria and found substantial access to climate adaptation information, with government and NGO seminars, workshops and radio emerging as important



channels. Similarly, Akinwalere (2021) found that farmers obtained climate information from diverse sources, including family and friends, but that access and utilisation were constrained by factors such as inadequate warning information and infrastructural limitations. These findings suggest that the availability of climate information does not necessarily guarantee effective utilisation; rather, the accessibility, source and practical relevance of messages.

The importance of multiple communication channels is further demonstrated by studies examining community and digital communication. Abuta et al. (2020) found that while smallholder farmers increasingly leverage social media, specifically WhatsApp and Facebook groups, to receive and re-share localised weather and adaptation updates, overall adoption across broader platforms remains limited by digital literacy, network coverage and data costs. In Anambra State, Nwafor (2024) found that interpersonal communication and mock drills contributed to flood adaptation and mitigation, although exposure to organised mock drills was relatively limited. The studies above thus challenge a media-centred assumption that simply increasing the volume of climate messages will produce adaptation. Instead, they indicate that channel accessibility, language, trust, community structures and opportunities for interaction influence adaptation.

The literature also shows that the content and specificity of climate information matter. Eguaeje et al. (2023), among farmers in Nnewi North, Anambra State, found significant needs for information concerning climate-related effects on agriculture and adaptation technologies. This suggests that audiences require more than general awareness messages; they need information that addresses specific risks and provides practical responses. Similarly, Muhammad et al. (2024) reported a positive relationship between climate-change information and flood-adaptation strategies among rice farmers in Jigawa State. However, such findings should be interpreted cautiously because information access may operate alongside other determinants of adaptation, including resources, occupational circumstances and previous experience of climate hazards.

Protection Motivation Theory

This study is guided by the Protection Motivation Theory (PMT) proposed by Rogers (1975) to explain how fear-arousing communication influences individuals' motivation to protect themselves from perceived threats (Sun et al., 2023). Rogers later revised and extended the theory in 1983, broadening its application to persuasive communication and protective behaviour (Balla & Hagger, 2025). The theory assumes that individuals respond to threats through two cognitive appraisal processes: threat appraisal and coping appraisal (Mills et al., 2025). Threat appraisal concerns the perceived severity of a threat and an individual's vulnerability to it, while coping appraisal concerns response efficacy (belief that the recommended action can reduce the threat), self-efficacy (belief in one's ability to undertake the action) and response costs associated with the action (Balla & Hagger, 2025).

PMT is particularly useful because it explains why receiving risk information does not automatically produce protective behaviour; individuals must perceive the threat as serious and relevant to them and believe that an available response is both effective and achievable. The theory has been applied beyond its original health context to environmental and climate-related behaviours, including drought-related pro-environmental behaviour among farmers, climate-change adaptation decisions among farmers, and flood-risk adaptation intentions (Bockarjova & Steg, 2016; Bagagnan et al., 2019; Ghanian et al., 2020; Purwanti et al., 2023).

PMT is applicable to this study because climate change messages can provide residents of selected communities in Anambra State with information about threats and possible protective

responses. Exposure to messages about flooding, changing rainfall patterns, environmental degradation and other climate-related risks can contribute to residents' assessment of the severity and vulnerability associated with climate change. Messages that provide practical adaptation measures can also influence response efficacy and self-efficacy by explaining how particular practices can reduce risks and how residents can undertake them.

Methodology

The study adopted a survey research design. The population comprised residents of selected communities in Awka South and Onitsha South Local Government Areas, with Agu Awka and Ifite Awka selected in Awka South and Fegge and Woliwo selected in Onitsha South as the study areas. A sample of 160 respondents was selected through purposive sampling based on their residence in the selected communities and relevance to the study. Data were collected using a structured questionnaire and analysed using frequency distributions, simple percentages and mean scores. The questionnaire was structured into sections covering respondents' demographic characteristics, access to climate change messages, channels of information access and adaptation practices. A four-point Likert scale was used to measure respondents' perceptions and practices. A mean benchmark of 3.00 was adopted for decision-making, with mean scores of 3.00 and above accepted and those below 3.00 rejected. The findings were presented in tables and interpreted in relation to the study objectives.

Data Presentation

Table 1. *Demographic Characteristics of Respondents (N = 160)*

Item	Response	Frequency (f)	Percentage (%)
Sex	Male	88	55.0
	Female	72	45.0
Age	18–27 years	28	17.5
	28–37 years	52	32.5
	38–47 years	40	25.0
	48–57 years	25	15.6
	58 years and above	15	9.4
Educational qualification	Primary education	12	7.5
	Secondary education	25	15.6
	NCE/OND	30	18.8
	First degree (HND/Bachelor's)	68	42.5
	Postgraduate degree	25	15.6
Community	Agu Awka	40	25.0
	Ifite Awka	40	25.0
	Fegge	40	25.0
	Woliwo	40	25.0



The table shows that 88 (55.0%) of the respondents were male, while 72 (45.0%) were female. Respondents aged 28 years and above constituted 82.5% of the sample, indicating that the findings largely reflect the views of mature adults who are more likely to have experienced climate-related events and encountered climate change messages. Respondents with a first degree constituted the largest educational group (42.5%), suggesting that a substantial proportion of participants had the educational background required to understand and respond to climate change information. The equal representation of respondents across Agu Awka, Ifite Awka, Fegge and Woliwo, with 40 (25.0%) respondents from each community, provides a balanced basis for examining access to climate change messages and adaptation practices across the selected communities.

Table 2. Respondents' Level of Exposure to Messages on Major Climate Change Issues ($N = 160$)

S/N	Climate change issue	Frequently	Occasionally	Once in a while	Rarely	Not at all	Score	Mean	Decision
1	Flooding	60 (37.5%)	50 (31.3%)	25 (15.6%)	15 (9.4%)	10 (6.3%)	615	3.84	Accepted
2	Erosion	55 (34.4%)	50 (31.3%)	30 (18.8%)	15 (9.4%)	10 (6.3%)	605	3.78	Accepted
3	Extreme heat and rising temperature	10 (6.3%)	24 (15.0%)	40 (25.0%)	40 (25.0%)	46 (28.8%)	392	2.45	Rejected
4	Poor waste disposal and environmental pollution	52 (32.5%)	48 (30.0%)	28 (17.5%)	20 (12.5%)	12 (7.5%)	588	3.68	Accepted
5	Deforestation and loss of trees	20 (12.5%)	30 (18.8%)	40 (25.0%)	35 (21.9%)	35 (21.9%)	445	2.78	Rejected
6	Loss of farmland and declining crop production	8 (5.0%)	22 (13.8%)	40 (25.0%)	45 (28.1%)	45 (28.1%)	383	2.39	Rejected
7	Bush burning and its effects on the environment	10 (6.3%)	20 (12.5%)	40 (25.0%)	40 (25.0%)	50 (31.3%)	380	2.38	Rejected
Grand Mean							3,408	3.04	Accepted

Note. Frequently = 5, Occasionally = 4, Once in a while = 3, Rarely = 2, and Not at all = 1. Score represents the weighted aggregate of responses for each item. Decision rule: Mean ≥ 3.00 = Accepted; Mean < 3.00 = Rejected. Percentages are based on $N = 160$.

The findings indicate that respondents' exposure to climate change messages is issue-specific rather than broad-based. Messages concerning flooding, erosion, and poor waste disposal/environmental pollution appear to have achieved comparatively stronger reach, suggesting that communication is more visible around immediate and locally experienced environmental problems that directly affect livelihoods and everyday life. However, the relatively limited exposure to messages on extreme heat, deforestation, loss of farmland and declining crop production, and bush burning suggests that communication efforts have not given comparable attention to less immediately visible, gradually developing, or behaviourally rooted dimensions of climate change.



Table 3. Channels Through Which Residents Access Climate Change Information (N = 160)

S/N	Communication channel	Frequently (5)	Occasionally (4)	Once in a while (3)	Rarely (2)	Not at all (1)	Score	Mean	Decision
1	Radio	70 (43.8%)	45 (28.1%)	20 (12.5%)	15 (9.4%)	10 (6.3%)	630	3.94	Accepted
2	Television	32 (20.0%)	38 (23.8%)	35 (21.9%)	30 (18.8%)	25 (15.6%)	502	3.14	Accepted
3	Social media	5 (3.1%)	10 (6.3%)	20 (12.5%)	45 (28.1%)	80 (50.0%)	295	1.84	Rejected
4	Online news platforms/websites	5 (3.1%)	10 (6.3%)	20 (12.5%)	40 (25.0%)	85 (53.1%)	290	1.81	Rejected
5	Newspapers	5 (3.1%)	8 (5.0%)	17 (10.6%)	40 (25.0%)	90 (56.3%)	278	1.74	Rejected
6	Community public- address systems	3 (1.9%)	7 (4.4%)	15 (9.4%)	40 (25.0%)	95 (59.4%)	263	1.64	Rejected
7	Community meetings/town-hall meetings	5 (3.1%)	8 (5.0%)	17 (10.6%)	40 (25.0%)	90 (56.3%)	278	1.74	Rejected
8	Posters, banners and billboards	20 (12.5%)	35 (21.9%)	50 (31.3%)	35 (21.9%)	20 (12.5%)	480	3.00	Accepted
9	Mobile phone calls and SMS	5 (3.1%)	10 (6.3%)	20 (12.5%)	35 (21.9%)	90 (56.3%)	285	1.78	Rejected
10	Films, documentaries and other video programmes	3 (1.9%)	7 (4.4%)	15 (9.4%)	35 (21.9%)	100 (62.5%)	258	1.61	Rejected
Grand Mean							3,559	2.22	Rejected

Note. Frequently = 5, Occasionally = 4, Once in a while = 3, Rarely = 2, and Not at all = 1. Score represents the weighted aggregate of responses for each item. Decision rule: Mean ≥ 3.00 = Accepted; Mean < 3.00 = Rejected. Percentages are based on N = 160.

The findings reveal a highly concentrated climate change information environment, with residents relying predominantly on conventional and highly visible communication channels rather than the wider range of available channels. Radio emerges as the most established channel, followed by television and outdoor communication materials such as posters, banners and billboards, suggesting that climate change information reaches residents mainly through broadcast and public-space communication. However, the very low exposure associated with social media, online news platforms, newspapers, community public-address systems, community meetings, mobile communication and video-based channels indicates that these channels have not become significant pathways for accessing climate change information among the residents studied. This pattern is important because it suggests a narrow communication reach, in which reliance on radio and other traditional channels may provide broad access but may also limit opportunities for more interactive, participatory and targeted climate change communication. The low use of digital and community-based channels further points to an underutilisation of communication platforms that could potentially support sustained engagement, feedback and locally tailored climate change information.

Table 3. Respondents' Degree of Practice of Environmental Actions (N = 160)

S/N	Environmental practices	Very Often	Often	Sometimes	Rarely	Never	Score	Mean	Decision
1	Proper disposal of waste	20 (12.5%)	30 (18.8%)	40 (25.0%)	40 (25.0%)	30 (18.8%)	450	2.81	Rejected
2	Clearing and keeping gutters clean	18 (11.3%)	28 (17.5%)	42 (26.3%)	42 (26.3%)	30 (18.8%)	442	2.76	Rejected
3	Taking steps to prevent erosion	15 (9.4%)	25 (15.6%)	45 (28.1%)	45 (28.1%)	30 (18.8%)	430	2.69	Rejected
4	Planting and protecting trees	20 (12.5%)	25 (15.6%)	40 (25.0%)	45 (28.1%)	30 (18.8%)	440	2.75	Rejected
5	Avoiding bush burning	15 (9.4%)	25 (15.6%)	40 (25.0%)	45 (28.1%)	35 (21.9%)	420	2.63	Rejected
6	Protecting farmland from damage	12 (7.5%)	23 (14.4%)	40 (25.0%)	50 (31.3%)	35 (21.9%)	407	2.54	Rejected
7	Taking steps to cope with excessive heat	10 (6.3%)	20 (12.5%)	40 (25.0%)	50 (31.3%)	40 (25.0%)	390	2.44	Rejected
8	Taking part in community sanitation	18 (11.3%)	25 (15.6%)	42 (26.3%)	40 (25.0%)	35 (21.9%)	431	2.69	Rejected
9	Keeping the environment free from pollution	15 (9.4%)	22 (13.8%)	43 (26.9%)	45 (28.1%)	35 (21.9%)	417	2.61	Rejected
10	Encouraging others to keep the environment clean	12 (7.5%)	23 (14.4%)	42 (26.3%)	48 (30.0%)	35 (21.9%)	409	2.56	Rejected
Grand Mean							4,236	2.65	Rejected

Note. Very Often = 5, Often = 4, Sometimes = 3, Rarely = 2, and Never = 1. Score represents the weighted aggregate of responses for each item. Percentages are based on N = 160. Decision rule: Mean $\geq$ 3.00 = Accepted; Mean < 3.00 = Rejected.

The table above shows that respondents generally reported a low degree of practice of the identified environmental actions, as indicated by the grand mean of 2.65, which is below the 3.00 decision benchmark and was therefore rejected. Among the practices, proper waste disposal recorded the highest mean (M=2.81), followed by clearing and keeping gutters clean (= 2.76) and planting and protecting trees (M=2.75). Taking steps to cope with excessive heat had the lowest mean (M=2.44), followed by protecting farmland from damage (M= 2.54) and encouraging others to keep the environment clean (M=2.56). The findings suggest that although residents engage in some environmental practices, the frequency of these practices is generally below the expected level.

Discussion of Findings

The study, evaluated access to climate change messages and adaptation practices of residents of selected communities in Anambra State. The first objective assessed the level of residents' exposure to climate change messages. The findings show that exposure was issue-specific rather than comprehensive, with relatively high exposure to messages on flooding, erosion and poor waste disposal and environmental pollution, while exposure to extreme heat, deforestation, loss of farmland and declining crop production, and bush burning was low. This suggests that climate communication in the selected communities is more strongly associated with



visible and immediate environmental problems, particularly flooding and erosion, than with less visible or longer-term climate-related risks. The finding partly agrees with Obi and Nwafor (2021), who reported substantial access to climate adaptation information among farmers in Southeast Nigeria, but differs in showing that exposure is not evenly distributed across climate issues. It also supports Eguaioje et al. (2023), who found strong information needs concerning climate-related effects and adaptation among farmers in Nnewi North, suggesting that information access may be shaped by the immediacy and relevance of particular risks. In light of the Protection Motivation Theory (PMT), repeated exposure to messages about flooding and erosion may strengthen residents' threat appraisal because these hazards are directly observable and experienced; however, limited exposure to other risks may weaken recognition of their severity and personal vulnerability. The implication is that climate communication should move beyond reactive communication around highly visible hazards and provide sustained, locally relevant messages covering a broader range of climate risks.

The second objective identified the channels through which residents accessed climate change information. The findings indicate that radio was the dominant channel, followed by television and posters, banners and billboards, whereas social media, online news platforms, newspapers, community public-address systems, community meetings, mobile communication and video programmes recorded low scores. This demonstrates a predominantly traditional and public-space communication pattern, with limited use of digital and participatory channels. The finding agrees with Obi and Nwafor (2021), who identified radio as an important source of climate adaptation information among Southeast Nigerian farmers, but contrasts with Abuta et al. (2020), who found social media useful for obtaining, sharing and disseminating climate adaptation information. It also differs from Nwafor (2024), who demonstrated the contribution of interpersonal communication and mock drills to flood adaptation in Anambra State. These differences suggest that the effectiveness and accessibility of communication channels are context-dependent rather than universally determined by the popularity of a medium. Within PMT, the dominance of radio may facilitate threat appraisal through wide information reach, but the limited use of interactive channels may restrict opportunities for clarification, reinforcement of response efficacy and development of self-efficacy. The implication is that radio should remain central to climate communication in these communities, but should be complemented by community engagement, digital platforms and other interactive channels capable of translating general climate information into practical and locally relevant action.

The third objective assessed the extent to which accessed climate change messages were reflected in residents' environmental and adaptation practices. The findings reveal generally low utilization. This indicates that access to climate messages did not automatically translate into frequent protective practices. The finding contrasts with Muhammad et al. (2024), who reported a positive relationship between climate-change information and flood-adaptation strategies among rice farmers in Jigawa State, and with Nwafor (2024), who found that interpersonal communication and mock drills contributed to flood adaptation in Anambra State. However, it is consistent with Akinwalere (2021), who observed that access to climate information does not necessarily ensure utilisation because infrastructural and other contextual constraints may intervene. Similarly, Mgbakor (2020) demonstrated that farmers in Anambra State relied on personal observation and various coping strategies, indicating that adaptation may depend on more than mediated information alone. From the PMT perspective, the low level of practice suggests that exposure



may have generated some awareness of threats without sufficiently strengthening response efficacy and self-efficacy, or without reducing the practical costs and constraints associated with protective action. The implication is that climate communication interventions should not be evaluated primarily by message reach; they should provide clear, feasible and context-specific actions, strengthen residents' confidence to undertake them, and address practical barriers that prevent information from being converted into sustained adaptation behaviour.

Conclusion

The study concludes that residents of selected communities in Anambra State have greater exposure to messages on immediate and visible climate-related problems, particularly flooding, erosion and waste disposal, mainly through radio and television; however, this exposure has not translated into a high level of environmental and adaptation practices. This implies that climate change communication should move beyond information dissemination towards practical, interactive and action-oriented strategies that strengthen residents' confidence and capacity to adopt appropriate adaptation practices. However, the study is limited by its focus on selected communities in Anambra State, which may limit the generalisability of the findings and introduce the possibility of response bias. Further studies are therefore needed to deepen understanding of the relationship between climate change communication, message utilisation and adaptation practices among residents.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Relevant government agencies, environmental organisations and media practitioners in Anambra State should broaden climate change messages beyond flooding, erosion and waste disposal to include less frequently communicated issues such as extreme heat, deforestation, loss of farmland and bush burning, with emphasis on their local relevance and practical consequences.
2. Climate change communicators should retain radio and television as major channels while integrating community meetings, social media, mobile communication and other interactive platforms to broaden reach and provide residents with opportunities for clarification, feedback and engagement.
3. Government agencies and community-based organisations should design climate change messages around specific, affordable and achievable environmental actions, supported by practical demonstrations and community-based initiatives, to strengthen residents' confidence and capacity to translate information into sustained adaptation practices.

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