

Editorial policy and uptake of climate-change adaptation messages to smallholder farmers in Nyando and West Nyakach, Kisumu County

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ABSTRACT

Climate change poses significant challenges to smallholder farmers whose livelihoods depend on rain-fed agriculture. In Nyando and West Nyakach Sub-counties, Kisumu County, recurrent floods, droughts and erratic rainfall increase the need for timely and accessible climate-change adaptation information. This study examined the influence of radio stations' editorial policies on the selection, production and dissemination of climate-change adaptation content among smallholder farmers. Guided by Agenda-Setting Theory, the study adopted a convergent mixed-methods design. Five radio stations—Radio Nam Lolwe, Radio Ramogi, Jowi, KBC-Mayienga and Radio Lake Victoria—were purposively selected from ten stations serving the study area, while 397 smallholder farmers were selected using simple random sampling based on Yamane's formula. Data were collected using questionnaires, focus group discussions, key informant interviews and Photovoice, and analyzed using descriptive and inferential statistics in SPSS version 26 and thematic analysis. The findings showed high radio access and exposure: 91.8% of farmers reported regular access to radio, while 95.8% had heard climate- or weather-related programming during the month preceding the survey. However, exposure did not consistently translate into effective utilization. Farmers' responses indicated that message relevance, language, credibility, localization, timing and opportunities for audience interaction shaped the perceived usefulness and uptake of climate-change adaptation information. Qualitative findings further showed that editorial decisions concerning issue selection, source verification, framing, language and programme production influenced how technical climate information was translated into broadcast content. The study recommends strengthening editorial guidelines, technical verification and collaboration between radio stations, meteorological and agricultural institutions, while prioritizing localized, credible, understandable and audience-responsive climate-change adaptation programming.

Keywords: Editorial policy, climate change communication; radio; smallholder farmers; utilization

I. INTRODUCTION

Climate change presents significant challenges to agricultural livelihoods, particularly among smallholder farmers whose production systems depend substantially on climate-sensitive natural resources. Changes in rainfall patterns, droughts, floods and other climate-related hazards can affect agricultural production, food security and rural livelihoods (Intergovernmental Panel on Climate Change [IPCC], 2022). For farming communities facing such risks, access to relevant and timely information can support understanding of climate-related threats and consideration of appropriate adaptation responses (Food and Agriculture Organization of the United Nations [FAO], 2016).

However, information available does not necessarily ensure that it is understood, regarded as relevant or utilized by intended audiences. This makes communication an important dimension of climate change adaptation. The effectiveness of climate information depends not only on the production of scientific knowledge but also on the processes through which that knowledge is selected, packaged, communicated, received, interpreted and potentially utilized by communities (WMO, 2013). From a Communication Studies perspective, therefore, attention needs to be given to the media processes and audience practices through which climate adaptation information becomes meaningful and usable.

Radio provides an important context for examining these processes, particularly among rural populations. Its geographical reach, affordability, use of local languages and capacity to provide interactive programming make it an important medium through which agricultural and climate-related information can reach farming communities (Mwaniki et al., 2017). However, radio should not be understood simply as a neutral channel for transmitting information. Radio stations make decisions concerning what issues to prioritize, which sources to use, how content is framed and packaged, what language and programme formats are adopted, and when information is broadcast. At the audience level, farmers similarly make choices about what programmes to listen to, how to interpret the information received and whether they consider it relevant to their circumstances (Hansen et al., 2019).

Radio remains an important medium for communicating information to rural populations, particularly in contexts where access to other forms of communication and information technologies may be limited (FAO, 2016; Lungahi & Ndavula (2018). Through agricultural programmes, interviews, discussions, news features and interactive formats, radio enables climate and agricultural information to be selected, contextualized, interpreted and communicated in forms that are accessible and relevant to local audiences, including through local languages and opportunities for audience participation (Hudson et al., 2017). However, the availability of climate information does not necessarily guarantee its utilization. The usefulness of information may depend on how it is selected, packaged, communicated, localized and made relevant to smallholder farmers' circumstances. This raises important questions about the extent to which radio programmes provide farmers with usable climate adaptation information and the factors that influence farmers' utilization of such information.

In Kenya, Mwaniki et al. (2017) demonstrated the potential of radio as a complementary agricultural extension tool for communicating climate change adaptation practices to farmers in Kilifi County. Their study found that radio was capable of making climate change information available and understandable to different social and cultural groups and could motivate farmers to adopt recommended adaptation strategies. However, access to the programmes, programme timing and the inability of farmers to record programmes were identified as challenges affecting their utilization.

Its ability to reach audiences in local languages and to connect information providers with communities makes radio a potentially important channel for communicating agricultural and environmental information to smallholder farmers (Odira, 2014; Wacheke et al., 2018). However, radio is not merely a neutral channel through which information is transmitted. Through editorial decisions, programme formats, topic selection and the packaging of content, radio provides a communicative space in which issues are selected, framed, interpreted and presented to particular audiences (McCombs & Shaw, 1972; Odira, 2014). The communicative role of radio becomes particularly important in relation to climate change adaptation among smallholder farmers. As climate variability and extreme weather events affect agricultural production, farmers require timely, accessible and locally relevant information to understand changing climatic conditions, anticipate risks and consider appropriate adaptation responses, including decisions concerning planting, crop selection, farm management and other livelihood strategies (IPCC, 2022; FAO, 2016; Mase et al, 2017). Evidence from previous studies demonstrates that stations such as Nam Lolwe, Ramogi and Radio Lake Victoria have been used by farmers as sources of agricultural information.

In particular, previous research on Radio Nam Lolwe documented farmers' access to and use of its agricultural programming, while a village baseline study conducted in Nyando identified Radio Ramogi and Radio Lake Victoria among the most popular sources of agriculture-related information. Audience studies demonstrate that radio consumption in Kenya is highly regionalised, with language, culture and content relevance influencing station preferences. The Media Council of Kenya's 2024 State of the Media Report, for example, reported strong regional listenership for Ramogi FM and Radio Nam Lolwe in Nyanza, while GeoPoll audience data cited by the Kenya Broadcasting Corporation showed Ramogi FM with a 26% share of the Lake Region radio market, followed by Mayienga FM (4%), Radio Lake Victoria (3%) and Nam Lolwe FM (2%). Earlier Communications Authority/KARF audience measurement data. Of the 306 respondents, 281 (91.8%) reported regular access to radio, 72.5% indicated that they listened to radio daily, and 293 (95.8%) reported having heard a radio programme dealing with climate change or weather during the month preceding the survey. Radio Ramogi was the most frequently identified station among respondents (59.2%), followed by Radio Nam Lolwe (19.6%) and Radio Lake Victoria (7.2%).

1.1 Statement of the Problem

Radio availability does not automatically mean that appropriate climate adaptation information is produced or disseminated. What farmers receive is partly determined by editorial decisions about what issues are selected, which sources are used, how information is framed, when programmes are aired and how frequently they are provided. Yet there is limited empirical evidence on how these editorial decisions influence the availability and utilization of climate adaptation information among smallholder farmers.

1.2 Research Objective

To assess the influence of radio stations' editorial policies on the production and dissemination of climate change adaptation content.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Agenda setting Theory

According to McCombs and Shaw (1972), Agenda-setting Theory is a media theory which states that the media agenda sets the emphasis on any issue by identifying the key issues for focus and attention. The theory is relevant to this

study because radio stations programme content decisions regarding the selection, order, emphasis, and frequency of climate-change adaptation messages that are produced could shape the information available on climate change to farming populations. In this study, the agenda-setting theory was used to inform the first objective of the research; which sought to analyze the extent and nature of radio programme content disseminating climatechange adaptation information. The theory also informed the third objective; which analyzed the influence of radio stations editorial policies on the production and dissemination of climate-change adaptation messages (McCombs & Shaw, 1972; McCombs, 2004).

2.2 Empirical Review

Previous studies demonstrate that radio is an important channel for agricultural and climate information, particularly among rural populations (Chapota et al., 2014; Manyozo, 2012; Myers, 2008). However, the availability of radio does not by itself explain what climate information is made available to farmers. Editorial decisions concerning issue selection, source utilization, framing, programme format, scheduling and frequency influence the nature and prominence of content presented to audiences (Shoemaker & Reese, 2014; Myers, 2021). These processes are consistent with the central proposition of Agenda-Setting Theory, which emphasizes the media's role in selecting and giving prominence to issues in public discourse (McCombs & Shaw, 1972). The theory therefore provides a useful framework for examining how radio editorial policy shapes the climate change adaptation agenda presented to smallholder farmers.

Although previous studies have established the importance of radio in agricultural extension and climate information dissemination, much of the literature has focused on access, reach, content and audience use rather than on the institutional editorial processes through which climate information is selected, prioritized, sourced, framed and scheduled. Consequently, limited empirical evidence exists on how station-level editorial policies shape the climate change adaptation agenda presented to smallholder farmers, particularly within local radio stations serving rural communities in Western Kenya. This study addressed this gap by examining the practices and decision-making processes through which selected radio stations in Nyando and West Nyakach Sub-counties selected, produced and disseminated climate change adaptation information to smallholder farmers.

III. METHODOLOGY

3.1 Research Design

The study adopted a convergent mixed-methods research design, integrating quantitative and qualitative approaches to examine the role of radio in the dissemination and utilization of climate-change adaptation information among smallholder farmers in Nyando and West Nyakach Sub-counties, Kisumu County. Quantitative data were used to establish patterns of radio access, exposure and utilization, while qualitative data provided contextual understanding of farmers' experiences and the editorial processes underlying climate-change communication. The two strands were collected concurrently, analysed separately and integrated during interpretation (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010).

3.2 Study Population and Sampling

The study population comprised smallholder farmers and radio personnel involved in climate- and agricultural-related programming in the study area, together with relevant agricultural and meteorological personnel. Five radio stations—Radio Ramogi, Radio Nam Lolwe, Jowi, KBC-Mayienga and Radio Lake Victoria—were purposively selected from the stations accessible to communities in the study area based on their relevance and reported listenership. Smallholder farmers were selected using simple random sampling. The quantitative sample size was determined using Yamane's (1967) formula, resulting in **397 respondents**. For the qualitative component, key informants were purposively selected based on their knowledge and involvement in climate-information production, editorial decision-making and dissemination. Six focus group discussions (FGDs), three in each sub-county, were conducted with male, female and youth farmers. Photovoice participants were also purposively selected based on their familiarity with local farming conditions and willingness to document climate-related experiences.

3.3 Data Collection

Data were collected using a structured questionnaire, key informant interview (KII) guide, FGD guide and Photovoice. The questionnaire captured radio access and listening patterns, exposure to climate-change programmes, perceptions of radio-based climate communication and utilization of adaptation information. Three trained research assistants assisted with questionnaire administration. The instrument was pre-tested among 25 smallholder farmers in Budalangi Sub-county, Busia County, and revised for clarity, relevance and comprehensibility before the main survey.

Semi-structured KIIs were conducted with radio personnel and relevant agricultural and meteorological experts to examine editorial decision-making, issue selection, source verification, framing, language, programme formats, scheduling, localization and audience participation. Six FGDs were conducted with purposively selected male, female and youth farmers to explore perceptions, experiences and utilization of radio-based climate-change adaptation information. Photovoice was used to document participants' lived experiences of climate change and adaptation

practices. Selected participants used digital cameras for five days and provided written or oral narratives explaining their photographs. Interviews and FGDs were audio-recorded with participants' consent and transcribed for analysis.

3.4 Data Analysis

Quantitative data were coded, cleaned and analysed using the Statistical Package for the Social Sciences (SPSS), Version 26. Descriptive statistics, including frequencies, percentages, means and standard deviations, were used to summarize respondents' characteristics, radio access, listening patterns and exposure to climate-change information. Pearson product-moment correlation was used to examine relationships between radio communication factors and utilization of adaptation information, while multiple regression analysis was used to determine the contribution of the explanatory variables to utilization.

Qualitative data from KIIs, FGDs and Photovoice narratives were analysed thematically. Interview recordings were transcribed using TurboScribe, after which the transcripts were coded, grouped into categories and developed into themes corresponding to the study objectives. Quantitative and qualitative findings were integrated during interpretation to identify areas of convergence and provide contextual explanations of the observed relationships.

3.5 Ethical Considerations

Ethical approval and relevant research authorization were obtained before data collection. Participants were informed about the purpose of the study, their voluntary participation and their right to withdraw at any time without consequence. Informed consent was obtained before questionnaires, interviews, FGDs and Photovoice activities were conducted. Confidentiality and anonymity were maintained by avoiding the disclosure of participants' identifying information and securely handling research data. Permission was also obtained for the use of photographs and accompanying narratives generated through the Photovoice component.

IV. FINDINGS & DISCUSSION

4.1 Influence of Radio Editorial Policy on Climate-Change Adaptation Communication

The study examined the influence of radio editorial policy on the selection, production and dissemination of climate-change adaptation information to smallholder farmers in Nyando and West Nyakach Sub-counties, Kisumu County. Radio editorial policy was examined through issue selection and prioritization, source credibility and verification, language, framing, localization, audience relevance, programme production, scheduling and dissemination practices. Quantitative survey findings were complemented by qualitative evidence from key informant interviews with radio managers and programme producers.

4.1.1 Farmers' Assessment of Radio-Based Climate-Change Adaptation Communication

Table 1 presents farmers' assessment of selected characteristics of climate-change adaptation messages broadcast through radio.

Table 1

Farmers' assessment of radio-based climate-change adaptation communication

Communication characteristic	Mean (M)	Standard deviation (SD)
Use of clear and simple language	3.68	1.11
Ease of understanding	2.96	1.41
Messages address local crops, livestock and farming methods	2.75	1.32
Overall perceived effectiveness of radio climate communication	3.03	0.4

The results in Table 1 show that farmers perceived radio-based climate-change adaptation communication as moderately effective, with an overall mean of 3.03 (SD = 0.40). The result indicates that radio provided climate-related information to farmers, although its perceived effectiveness was not consistently high. This suggests that exposure to climate-related messages does not necessarily translate into communication that farmers consider sufficiently relevant, understandable and actionable for adaptation decision-making.

The highest-rated item was the use of clear and simple language (M = 3.68, SD = 1.11). This indicates that farmers generally perceived broadcasters as making an effort to communicate climate-related information in accessible language. However, the mean score for ease of understanding was considerably lower (M = 2.96, SD = 1.41). The difference suggests that linguistic simplicity alone may not be sufficient to ensure comprehension. Climate information may remain difficult to understand where it involves technical concepts, generalized forecasts or terminology that is unfamiliar to farming audiences.

The finding is consistent with Nisbet (2009), who emphasizes the importance of communicating scientific information in forms that can be understood by non-specialist audiences. It also accords with Fraser and Restrepo-Estrada (1998) and Manyozo (2012), who emphasize the importance of culturally appropriate and audience-oriented communication in development contexts. In the present study, however, the finding highlights the editorial dimension of this process: broadcasters must make decisions about how technical information is simplified, translated and contextualized before it reaches farming audiences.

Localization received a comparatively lower rating. The mean score for whether radio messages addressed the specific crops, livestock and farming methods used in the local area was 2.75 (SD = 1.32). This suggests that climate-change adaptation messages were not always perceived as sufficiently tailored to farmers' local production circumstances. Localization is important because climate risks and adaptation options vary according to farming systems, crops, livestock, soils, rainfall patterns and other local conditions.

The qualitative findings provided further explanation for the quantitative results. The manager indicated that producers and presenters translate technical information into language that ordinary farmers can understand; including the use of local language and familiar examples. A radio station manager said:

"Climate information obtained from technical sources often contains specialized terminology and therefore needs to be simplified before it is presented to farmers" (KII1).

This finding suggests that editorial practice involves an important translation process between technical climate knowledge and audience oriented radio content

4.1.2 Source Selection, Credibility and Verification

Source selection and verification emerged as another important component of radio editorial practice. Radio practitioners reported working with meteorological and agricultural experts to obtain, interpret or verify climate-related information before it was broadcast. One practitioner opined:

"Climate information needed to be technically credible while remaining understandable to farmers" (KII3).

This finding is consistent with research emphasizing the importance of credible sources and collaboration with scientific and technical institutions in climate-change communication (Schäfer et al., 2014; Tall et al., 2018). The finding demonstrates that editorial policy extends beyond decisions about which topics should receive airtime. It also encompasses decisions about whose knowledge is considered authoritative, which sources are consulted and how information is verified before dissemination.

Source selection is particularly relevant to Agenda-Setting Theory. McCombs and Shaw (1972) argue that media organizations influence the salience of issues through processes of selection and emphasis. In the present study, selecting meteorological experts, agricultural officers and other information providers determines not only what climate issues are presented to farmers but also which interpretations and forms of knowledge become prominent within radio programming.

The implication is that editorial policy operates at two interconnected levels. First, stations determine which climate and adaptation issues receive attention. Second, they determine which voices and sources are used to explain those issues. Consequently, the radio climate agenda is shaped by both issue selection and source selection.

4.1.3 Language and Framing of Climate-Change Adaptation Messages

Language was an important element of the editorial process. As shown in Table 2, farmers rated the use of clear and simple language relatively positively (M = 3.68, SD = 1.11), suggesting that broadcasters generally made efforts to present climate information in accessible forms. However, the lower mean score for ease of understanding (M = 2.96, SD = 1.41) indicates that the use of simple language did not always translate into complete comprehension.

Table 2

Farmers' assessment of language and framing of climate-change adaptation messages

Editorial communication dimension	Indicator	Mean (M)	SD	Qualitative finding
Language	Use of clear and simple language	3.68	1.11	Broadcasters simplified technical information and used locally understandable language
Comprehension	Ease of understanding radio climate messages	2.96	1.41	Simple language did not always ensure complete understanding
Framing	Presentation and emphasis of climate-change adaptation issues	3.42	1.24	Programme producers framed climate information around farmers' immediate concerns, including rainfall variability, drought, flooding and farming practices

The distinction between simple language and comprehension is important from a communication perspective because climate-change information often contains scientific concepts, forecasts, probabilities and technical terminology. The editorial process therefore involves more than translating information into a local language; it also requires decisions about how technical concepts are explained, which examples are used and which aspects of climate change are emphasized. As Nisbet (2009) observes, the manner in which scientific information is communicated can shape how audiences interpret and understand it.

The qualitative findings further showed that framing formed part of the editorial process. A radio programme producer explained that climate information was commonly presented in relation to immediate concerns affecting farmers, such as changing rainfall patterns, drought, flooding and appropriate farming practices (KII2). This suggests that programme producers framed climate-change issues in ways intended to connect broader climate information with farmers' everyday agricultural experiences. However, where information remained generalized, its connection to specific farming decisions could be less apparent.

The finding supports Fraser and Restrepo-Estrada (1998) and Manyozo (2012), who emphasize the importance of audience-oriented and contextually appropriate communication in development settings. It also reflects the agenda-setting perspective of McCombs and Shaw (1972), since framing involves editorial choices about which aspects of an issue receive emphasis and how they are presented to audiences. Thus, radio editorial policy shapes not only whether climate-change adaptation is placed on the media agenda, but also how the issue is constructed and made meaningful to farmers.

4.1.4 Localization and Audience Relevance

Localization and audience relevance were important dimensions of radio editorial policy because climate-change adaptation information needs to reflect the specific circumstances of the farming communities it serves. Table 3 presents farmers' assessment of localization and overall perceived effectiveness of radio-based climate communication.

Table 3

Farmers' assessment of localization and effectiveness of climate-change adaptation communication

Indicator	Mean (M)	Standard deviation (SD)
Messages address local crops, livestock and farming methods	2.75	1.32
Overall effectiveness of radio climate-change communication	3.03	0.4

The results indicate that localization was comparatively weak, with a mean score of 2.75 (SD = 1.32) for messages addressing local crops, livestock and farming methods. This suggests a gap between the availability of climate information and its contextual relevance to farmers' specific production environments. In comparison, the overall perceived effectiveness of radio climate communication was moderate (M = 3.03, SD = 0.40).

The finding is important because climate adaptation is inherently context dependent. Information concerning rainfall variability, drought, flooding or changing seasons becomes more useful when farmers can relate it to their own crops, livestock, farming practices and immediate production decisions. Hansen et al. (2019) similarly emphasize the importance of context-specific climate services in responding to farmers' adaptation needs.

The finding also supports FAO (2016), which emphasizes communication approaches that respond to the information needs and circumstances of rural and family-farming communities. In the study area, localization may involve the use of locally understood languages, examples based on local farming systems, information concerning relevant crops and livestock, and explanations of adaptation options that farmers can relate to their own circumstances.

The qualitative evidence further indicated that localization was addressed through the way broadcasters translated technical information into locally understandable messages. A radio station manager explained: "*Producers used familiar examples and local language when presenting technical climate information to farmers*" (KII1). This suggests that localization is not simply a matter of selecting local topics; it also involves editorial decisions concerning examples, terminology, language and the practical context in which information is presented.

The relatively moderate overall effectiveness score, together with the lower localization rating, therefore suggests that the provision of climate information alone is insufficient. For radio communication to support adaptation effectively, information must also be sufficiently relevant and contextualized to enable farmers to connect it with their local realities.

4.3.6 Programme Production and Dissemination Practices

Radio editorial policy also operates through programme production and dissemination practices. The qualitative findings showed that programme producers make decisions concerning the format, presentation, timing and delivery of

climate-change adaptation information. These decisions determine how technical information is transformed into content that can be accessed and interpreted by farming audiences.

Table 4

Editorial practices in the production and dissemination of climate-change adaptation content

Editorial dimension	Evidence from qualitative findings	Implication for climate-change communication
Issue selection and prioritization	Producers select climate and agricultural issues according to programme priorities and perceived audience needs	Determines which adaptation issues receive airtime and prominence
Source selection and verification	Technical information is obtained from or verified with meteorological and agricultural experts	Enhances credibility and technical reliability
Language	Technical information is simplified and presented using locally understandable language	Improves accessibility and comprehension
Framing	Climate issues are presented in relation to farmers' immediate concerns such as rainfall, drought, flooding and farming practices	Connects broader climate issues with practical agricultural concerns
Programme format	Interviews, discussions, agricultural programmes, news features and interactive formats are used	Determines opportunities for explanation and audience engagement
Scheduling and timing	Programme timing is considered in relation to audience access and availability	Influences opportunities for farmers to encounter climate information
Localization	Local examples, farming circumstances and community experiences are incorporated	Increases contextual relevance
Audience participation	Interactive programmes provide opportunities for farmers to ask questions and share experiences	Supports clarification, interaction and interpretation
Dissemination frequency	Repeated coverage provides additional opportunities for exposure to climate information	Influences the prominence and continuity of adaptation issues

The qualitative findings demonstrate that editorial policy extends beyond the selection of topics. Programme producers make a series of decisions through which technical information is transformed into broadcast content. These include selecting appropriate sources, simplifying technical terminology, choosing programme formats, determining when content is broadcast and creating opportunities for audience interaction.

Programme format was particularly relevant to the communication process. Interviews, discussions and interactive programmes provide greater opportunities for explanation and clarification than short news items. Interactive formats can also enable farmers to relate climate information to their own experiences and seek clarification from presenters or invited experts. Thus, programme production practices influence not only the availability of information but also the opportunities for audiences to engage with it.

Scheduling similarly constitutes an editorial decision because the timing of a programme affects audience access. The frequency of climate-related coverage also determines how consistently particular adaptation issues appear on the radio agenda. Consequently, dissemination practices contribute to the prominence and accessibility of climate-change adaptation information.

These findings are consistent with Shoemaker and Reese (2014), who conceptualize media content as the outcome of multiple institutional and professional influences. They also support the application of Agenda-Setting Theory because decisions about the frequency, prominence and presentation of issues contribute to the construction of the media agenda (McCombs & Shaw, 1972).

4.1.6 Editorial Policy and Uptake of Climate-Change Adaptation Information

The dependent variable in the study was the uptake or utilization of climate-change adaptation information by smallholder farmers. The relationship between editorial policy and uptake is therefore central to determining whether editorial decisions translate into information that farmers can use in their adaptation practices.

The findings indicate that editorial characteristics can influence the conditions under which farmers receive and interpret climate information. Language affects accessibility and comprehension, source selection affects perceived credibility, localization affects relevance, while programme format, scheduling and audience participation influence opportunities for exposure and engagement.

Table 5*Pathways through which editorial policy may shape uptake of climate-change adaptation information*

Editorial-policy dimension	Communication mechanism	Expected contribution to uptake
Issue selection	Determines adaptation issues receiving attention	Increases visibility of selected adaptation concerns
Source credibility and verification	Provides technically reliable information	Strengthens confidence in information
Language	Simplifies technical information	Facilitates comprehension
Framing	Connects climate issues with particular concerns and perspectives	Influences interpretation of adaptation issues
Localization	Relates information to local farming circumstances	Increases perceived relevance
Programme format	Determines depth of explanation and interaction	Supports engagement and clarification
Timing and scheduling	Determines when farmers can access programmes	Creates opportunities for exposure
Audience participation	Enables questions, feedback and discussion	Supports interpretation and clarification
Dissemination frequency	Determines continuity of exposure	Reinforces visibility of adaptation information

The findings suggest that uptake cannot be understood solely in terms of whether farmers have access to radio or are exposed to climate-related programmes. Rather, the characteristics of the information delivered through those programmes matter. A farmer may encounter a climate message but may not consider it sufficiently understandable, locally relevant or applicable to a particular farming decision.

4.1.7 Discussion in Relation to Agenda-Setting Theory

The findings are consistent with the central proposition of Agenda-Setting Theory, which explains how media organizations influence the salience of issues through selection, emphasis and prominence (McCombs & Shaw, 1972; McCombs, 2004). In the present study, radio stations did not simply transmit climate information produced elsewhere. Instead, editorial decisions influenced which climate issues were selected, which sources were consulted, how information was framed and simplified, and how frequently and in what formats it was disseminated.

Table 6*Application of Agenda-Setting Theory to radio editorial practices*

Agenda-setting process	Editorial practice identified in the study	Communication implication
Issue selection	Selection of climate and adaptation topics	Determines which issues receive attention
Issue emphasis	Repetition and prominence of selected topics	Shapes the visibility of adaptation concerns
Source selection	Use of experts and other information providers	Influences the perspectives presented
Framing	Presentation of climate issues through particular themes and examples	Shapes how farmers interpret the issues
Language and translation	Simplification and use of locally understood language	Affects accessibility and comprehension
Localization	Linking information to local crops, livestock and farming conditions	Influences contextual relevance
Programme production	Choice of programme formats and presentation approaches	Determines depth and opportunities for interaction
Scheduling	Selection of broadcast times	Influences opportunities for audience exposure
Audience participation	Opportunities for questions, feedback and discussion	Facilitates engagement and clarification

The findings further demonstrate that agenda setting in local radio operates through both issue selection and issue presentation. The moderate overall effectiveness score ($M = 3.03$, $SD = 0.40$) and lower localization score ($M = 2.75$, $SD = 1.32$) indicate that the presence of climate-related content does not necessarily mean that the content is sufficiently adapted to audience circumstances. Likewise, the difference between the rating for the use of clear and simple language ($M = 3.68$, $SD = 1.11$) and ease of understanding ($M = 2.96$, $SD = 1.41$) illustrates the importance of how information is constructed and communicated.

The qualitative findings reinforce this interpretation. Radio practitioners described processes of consulting technical experts, verifying information, simplifying terminology and using locally understandable examples. These

practices demonstrate that the media agenda is constructed through a series of editorial decisions extending from what is selected to who communicates it, how it is framed, how it is localized and how it is disseminated.

The findings therefore extend the application of Agenda-Setting Theory to local radio-based climate communication by highlighting the institutional and professional processes through which the climate adaptation agenda is constructed for rural audiences. While the theory emphasizes the salience of issues, the present findings indicate that the practical value of the media agenda also depends on how selected issues are translated into credible, understandable and contextually relevant messages.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study concludes that radio editorial policy is significantly associated with the responsiveness of climate-change adaptation communication to smallholder farmers in Nyando and West Nyakach Sub-counties, Kisumu County. The quantitative analysis established a strong positive relationship between editorial policy and radio climate-change communication responsiveness. The findings indicate that editorial practices are closely related to how climate-change information is selected, sourced, framed, packaged and disseminated to farming audiences.

The study does not interpret the R^2 value of 78.5% as demonstrating that editorial policy causally determines 78.5% of farmers' uptake of climate-change adaptation information. Given the cross-sectional design of the study, the result is interpreted as indicating that the model accounts for 78.5% of the observed variation in the communication responsiveness outcome. This distinction ensures that the conclusion remains consistent with the design and analytical limits of the study.

The qualitative findings further demonstrate the importance of collaboration between broadcasters and technical information providers, including the Kenya Meteorological Department, agricultural extension officers, researchers and development organizations. Effective climate-change communication through radio therefore depends not only on the availability of climate information but also on the editorial processes through which technical information is selected, verified, translated, framed and transformed into content that farmers can understand and potentially use.

The study further concludes that access to and exposure to radio climate-related programming are important but do not, by themselves, guarantee effective utilization of climate-change adaptation information. The communication value of radio depends on the extent to which information is relevant, understandable, timely, locally contextualized and connected to farmers' practical information needs and agricultural decisions.

Overall, the findings demonstrate that radio should be understood not merely as a technical channel for transmitting climate information but as a communication institution in which editorial decisions shape the selection, presentation and accessibility of adaptation information. Strengthening radio-based climate-change communication therefore requires attention to audience orientation, localization, language, source credibility, programme design, timeliness, participation and editorial decision-making.

5.2 Recommendations

Based on the findings, the following recommendations are proposed. First, radio stations should develop or strengthen explicit editorial guidelines for climate-change adaptation communication. The guidelines should address issue selection, source credibility and verification, framing, language, programme format, scheduling, frequency and audience participation. This would encourage systematic coverage of climate-change adaptation issues rather than relying predominantly on episodic coverage. Second, radio stations should strengthen mechanisms for source verification and technical collaboration. Programme producers should work with the Kenya Meteorological Department, agricultural extension officers, researchers and other credible technical institutions to verify and appropriately interpret climate information before broadcast. Third, radio stations and agricultural and meteorological institutions should establish stronger and more consistent collaboration mechanisms for translating technical climate information into accessible and locally relevant messages. Such collaboration can help producers communicate forecasts, climate risks and adaptation options in forms that smallholder farmers can understand and relate to their farming circumstances. Fourth, editorial policies should explicitly incorporate localization and audience relevance. Decisions concerning the selection and presentation of climate-change adaptation issues should consider the crops, livestock, farming systems, climate risks and information needs of the communities served by individual stations. Programme producers should also use locally understood language, familiar examples and opportunities for farmers to ask questions and provide feedback. Finally, policymakers and climate-information stakeholders should recognize local radio as an important communication platform for climate-change adaptation. Support should promote partnerships among radio stations, meteorological institutions, agricultural extension services, research organizations and other relevant stakeholders to strengthen the availability, interpretation and dissemination of credible and locally relevant climate information.

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