

# Role of Community Radio in Demystifying Climate Change Concepts; the Challenges in Disseminating Information at Tulwoob Koony (TK) Radio in Mt Elgon, Kenya.

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## ABSTRACT

Climate change has been a pressing global issue, and Kenya, in particular, is highly vulnerable to its effects. Even though there are many forums where climate change is being discussed and debated, the discussions remain among the elites. A significant percentage of people from rural areas still lag in understanding the concept of climate change because of the complexity of scientific information about climate change. This paper examines the role of community radio in demystifying these concepts and terminologies during the dissemination process. It first examines the presenters' knowledge and ability to explain climate change concepts clearly and accurately in local dialects. Secondly, it also evaluates the listeners' knowledge of the targeted climate change concepts disseminated by Tulwoob Koony Radio and lastly, establish the major linguistic and communicative barriers in passing climate change information to Tulwoob Koony radio listeners. The paper adopts the linguistic and communicative theories of translation and the knowledge-gap theory. These theories are relevant because they point out the need to package content to local contexts and Language well understood by the audience to bridge the existing knowledge and use storytelling and relatable examples. The paper employes use qualitative and quantitative approaches to collect data. Tulwoob Koony radio is purposively sampled because Mt. Elgon is the primary water catchment area and the source of many rivers that flow downwards through Western parts of Kenya to Lake Victoria. The findings will help community radios to address challenges associated with disseminating scientific information in their local languages.

**Keywords:** Community Radio, Demystification, Climate change, Information dissemination, Language

## INTRODUCTION

Climate change initiatives and activities by various national, county, public, and private agencies, groups, activists, and international partners have been sparked by the milestones in climate change governance across the majority of Kenya's regions. Kenya has thus generated a substantial amount of climate change information that can inspire incredible adaptation efforts on the ground. For a given population to adopt the appropriate behavior change and climate-resilient behaviors, this knowledge must cascade from its custodians to the ground level (Ageyo & Muchunku, 2020). But the question is whether information about climate change is being disseminated to all Kenyans in a way that can facilitate well-informed choices at the individual and communal levels.

Kenya's ecosystems, excellent agricultural production, and all the lives and livelihoods have been affected negatively by climate change. Clearly, even though there are many forums where climate change is being discussed and debated, a significant percentage of people from rural areas still lacking in proper understanding the concept of climate change (Lungahi, & Ndavula ,2018). Also, packaging and disseminating complex scientific information about climate change to the general population in rural areas still remains a challenge. This paper addresses this issue by examining the ability of community radio in Kenya as a platform for delivering accurate and accessible climate change information to diverse audiences in rural areas. The study also examines the presenters' knowledge and ability to explain climate change concepts clearly and accurately in the local dialect and evaluates the listeners' knowledge of the targeted climate change concepts disseminated by Tulwoob Koony radio, and establishes the significant linguistic and communicative barriers to passing climate change

information to Tulwoob Koony radio listeners.

It is necessary to implement effective communication strategies that will assist in filling the knowledge gap on climate change in rural Kenyan societies. Even though the developments and debates on the impacts of climate change both worldwide and at the local level are still ongoing, the complex scientific knowledge on this issue of climate change continues not to reach the public, particularly the rural populace (Ageyo & Muchunku, 2020). Through this research action, we bridge the knowledge gap and expound further on the problem of translating and interpreting complex scientific knowledge on climate change into an easily accessible and comprehensible manner (Bucchi & Trench, 2014). The research also sought to understand the potential for more awareness and participation of the public.

## LITERATURE REVIEW

Climate change communication is a growing topic of serious concern in determining how to address the problems that environmental degradation and global warming have presented to humanity is. In recent years, community radio has come to be recognized for its ability to give rural people, particularly those in developing nations like Kenya, accurate, current, and simply comprehensible information. The purpose of this review of the literature is to review existing literature on climate change and community radio.

Particularly for the underprivileged in rural areas, who lack access to a variety of information sources regarding the state of affairs in their communities, climate change is a complicated problem with wide-ranging effects. Community radios offer a glimmer of hope for disseminating climate change information in a linguistically and culturally appropriate manner. In order to empower Kenyan rural people to adapt to climate change, this assessment will explain these limitations and other opportunities that community radio presents. The literature now in publication emphasizes how crucial good communication is to tackling the problems caused by climate change. The potential of radio for communicating about climate change in underdeveloped nations is also highlighted by a number of studies. The studies emphasize that vernacular languages promote comprehension and trust among listeners (Ageyo & Muchunku, 2020).

It is still difficult to translate complicated scientific data regarding climate change into easily understood formats because there isn't much study that focuses on community radio stations' roles in this regard (Kapinga et al., 2020). Limited advice on the best ways to use community radio in Kenya for climate change communication is available in the literature currently in publication (Lungahi & Ndavula, 2018). By investigating how vernacular radio stations could help reduce linguistic and cultural obstacles to comprehending climate change information, our study closes this gap.

### Community Radio and Climate Change Communication

Particularly in rural places where access to other mainstream media is extremely limited, community radio stations are recognized as efficient tools for distributing information to the diverse populace (Makwenda 2017). In terms of communicating about climate change, community radio stations can help close the information gap between local and scientific perspectives by empowering communities to adapt and lessen the effects of the phenomenon (Ashley & Carney, 2014).

Considering the fact that community radio stations are frequently deeply ingrained in the communities they serve, the language and content they provide are frequently pertinent to the local issues and concerns of that communities. Credibility and trust are typically involved in the relationship, which greatly contributes to community radio's effectiveness as a medium for disseminating information about climate change issues. According to additional research by Agyekum et al. (2017) and Lasco et al. (2014), community radios may improve risk perception, foster adaptive behaviors, and improve comprehension of climate change concepts.

Language has a vital role in the communication of information. Therefore, vulnerable groups would have greater access and reach if the necessary climate information were disseminated through vernacular radio stations. In order to package information for target audiences, it is necessary to evaluate the significance of language (Hurlimann et al., 2014). People in rural areas have been excluded from the decision-making and policy-making process, despite the fact that unchecked climate change is becoming a greater threat worldwide. They point out

that this has made their suffering worse, which is why the challenges posed by climate change are so perverse (Ingabo, 2018).

### **Knowledge of the Targeted Climate Change Concepts Disseminated By Community Radio**

Evaluation of the listeners' knowledge on the targeted climate change concepts disseminated by Tulwoob Koony radio. Important markers of the success of communication initiatives are how well the audience receives and comprehends information on climate change (Dilling & Lemos, 2011). The study is to evaluate the effect of Tulwoob Koony Radio in increasing community awareness and understanding of climate change issues by evaluating listeners' knowledge levels.

Assessing the presenters' knowledge and ability to explain climate change concepts clearly and accurately in the local dialect. Effective communication of climate change information requires presenters who are well-informed and capable of translating complex scientific concepts into Language that resonates with their audience (Leal Filho et al., 2021). Research suggests that presenters with a firm grasp of climate change science and local language proficiency are better equipped to engage and educate listeners effectively (Nerlich & Jaspal, 2012).

The third goal is to determine the major communication and language difficulties that Tulwoob Koony radio listeners have while receiving information on climate change. Effective communication and understanding of climate change concepts can be hampered by language difficulties and restricted access to scientific material (Hornsey et al., 2016). To maximize the impact of climate change messaging, it is crucial to comprehend these difficulties for the development of personalized communication tactics that cater to the audience's unique needs and preferences.

### **Challenges in Disseminating Climate Change Information**

Despite the promising potential of community radio as an avenue to disseminate climate change information, it still faces many challenges one of which is that presenters may lack in-depth knowledge of complex scientific concepts, and thus the listeners may end up being confused or even misinformed (Hurlimann et al., 2014). Other challenges emanate from the cultural beliefs and traditional systems of knowledge that, at times, are directly opposed to the scientific explanations about climate change (Agrawal & Bauer, 2000). This usually leads to difficulties in framing messages and poor reception on the part of the audience.

### **Linguistic and Communicative Barriers**

Language also proves to be a major stumbling block as scientific words used in the discourse of climate change may not be found in the lexicon of the dialect and may emerge wrong (Arthi, 2017). Besides, too much reliance on jargon or over-technical explanation may alienate people with low levels of formal education.

Packaging and distribution of climate information is key in helping communities make informed decisions and adapt to shocks whenever they occur. However, much information remains on shelves and offices. The most effective climate information is created and shared in a way that the intended audience can comprehend. Tools for disseminating information on climate change must be precise, accessible, efficient, timely, and in an understandable language.

These communities, where the majority do not have formal education, need to have access to climate information and support services in a language they can understand in order to increase their adaptive capacity. Language and communication channel used are fundamental factors that make climate information usable. Usability of climate information may vary mostly depending on the literacy levels and social roles of the users in a community. Repackaging and simplifying climate information for particular users" is important. Lack of simplified and accurate climate change information is a significant barrier to information and knowledge access, especially for the local community living around MT Elgon (Lungahi & Ndavula, 2018).

### **The Case of Tulwoob Koony Radio, Mt Elgon**

This study is centered around Tulwoob Koony radio in Mt Elgon, Kenya. Developing successful communication

strategies requires an understanding of the particular knowledge, attitudes, and habits of the station's listeners and presenters. Research on the programming of Tulwoob Koony radio can expound further on the prospects and difficulties of using community radio in this particular setting to communicate about climate change. Investigating how well Kenyan community radio like Tulwoob Koony (TK) Radio in Mount Elgon gives an avenue for informing a wide range of rural audiences about climate change in an accurate and understandable manner. This is in line with the more general ones of raising climate literacy and building community resilience to the effects of climate change (UNESCO, 2018).

## Problem Statement

There needs to be good communication strategies that helps in bridging the knowledge divide regarding climate change in rural Kenyan communities. Despite the ongoing developments and conversations about the effects of climate change globally and locally, complex scientific information about climate change still fails to reach the people in rural areas effectively in a simple manner and language they properly understand (Ageyo & Muchunku, 2020). This paper proposes using community radio stations that are trusted sources of information in rural areas as a platform to disseminate climate change information. Through this the paper will be contributing to bridging the knowledge gap. It will also bring to light the challenges of translating and interpreting complex scientific information about climate change into an easily accessible and understandable format that is in the vernacular languages or local dialects. Scientific communication is a discipline that was once treasured and regarded only in Europe but now it is spreading across the world, including the African continent. Climate change is a rising issue that has attracted the attention of many participants making it important for journalists to communicate or present information about climate change that falls under scientific communication to disseminate the content in languages that are understood by the audience and in a simplified manner (Bucchi & Trench, 2014). This scientific communication is a professional exercise which requires careful thought and particular practical skills to achieve the goal of demystifying the complex scientific information about climate change concepts. This study will, therefore, help in evaluating if technology can be used to demystify the complex information, whether relevant players do their work well from gathering, interpreting, translating and repackaging of the climate change is done effectively and whether the targeted audience understand the information disseminated to them (Bucchi & Trench, 2014). The study will also explore the opportunities for increased awareness and community engagement.

## METHODOLOGY

The Mt. Elgon Rural District study served as the basis for this research paper. The study used a cross-sectional research design and collected data using both qualitative and quantitative methods. Qualitative interviews with key stakeholders in the radio industry and quantitative surveys were used to assess audience perceptions and understanding of climate change information. With qualitative research playing a prominent role, the design enabled the collection of data at one point in time and allowed for the application of a questionnaire survey (Sedgwick, 2015). The design enabled the gathering of data from numerous subjects, thus saving money and time (Mugenda & Mugenda, 2003). The key informants were sampled on a purposive basis depending on their active participation in the community, possessing enough information about the topic, and owning a radio. The study also monitored the use of local metaphors, proverbs, and storytelling techniques at Tulwoob Koony radio in Mt. Elgon broadcasts by tracking the frequency of their use and conducting listener feedback surveys. Tulwoob Koony radio in Mt. Elgon was purposively sampled because Mt. Elgon is the primary water catchment area and the source of many rivers that flow downwards through Western parts of Kenya up to Lake Victoria.

To get in-depth information, interviews with 40 informants were carried out. The interviews involved Six radio presenters and program managers, five village leaders, and three broadcast staff. Interviews with two to three important informants were scheduled for every village. Questionnaires and structured interview schedules were created to ensure that all respondents were asked the same questions in the same manner and to give a means of obtaining high-quality data. One of the key informant interview schedules was for a collection of data from the persons in charge of programs on the community radio. The target population of the study was the 100 households or respondents in Mt Elgon wards. This population received radio programs from the community radio station of Tulwoob Koony radio broadcasting in the Pokot language.

Quantitative data coming from the survey research were obtained by the administration of a questionnaire, whereas qualitative data were obtained by the administration of Key Informant Interviews and Focus Group Discussions. Data for the research were collected from May to June 2024. Quantitative data were analyzed with the use of IBM Statistical Package for Social Sciences (SPSS) Statistics software Version 20 based on descriptive statistics, including frequencies, means, and percentages. Qualitative data were analyzed by content analysis through careful reading and interpretation of data that had been collected by the tape recorder. The recorded data were later transcribed for analysis and lastly note-taking was done to determine important qualitative information that might have been left by other data collection methods employed.

## **Theoretical Framework**

The paper is anchored on the linguistic and communicative theories of translation and the knowledge-gap theory which was first developed by C. N. Olien, P. J. Tichenor, and G.A. Donohue in 1970. These theories are relevant because they point out the need to package content to local contexts and Language well understood by the audience to bridge the existing knowledge and use storytelling and relatable examples. It demonstrates how crucial it is to package information on climate change to the linguistic and cultural context of the intended audience in order to improve understanding and involvement. Having the information on the impacts of climate change in a language that the target audience really understands well, that is, the vernacular Language, makes it easy for the audience to comprehend as it resonates well with their culture and can result in the effective adoption of resilient behaviors. This framework is relevant because it points out the need to package content to local contexts and make good use of storytelling and relatable examples (Bucchi & Trench, 2014).

## **RESULTS**

### **Evaluation of Presenters' Knowledge and Ability to Explain Climate Change Concepts Clearly and Accurately in The Local Dialect**

The ability and competency of the radio presenters to effectively explain the climate change concepts in the local dialect is very key to helping the audience get the appropriate information. This is because effective dissemination goes beyond just sharing information with the audience, as what is key is not just sharing climate change information but sharing it in a manner that the receivers are able to understand, resonate with, and apply fully. This makes the question of clarity and accuracy of disseminated information very critical hence, the first objective of this study. The information needs to be simple, clear, and accurate because the simplicity and appropriateness of how the climate change information is packaged and disseminated to people and how the recipients identify and deem the information fit for their consumption significantly impact on how they accept and use it. The results pertaining to this objective confirmed that all the presenters interviewed were from the local community and understood the local dialect.

On the education or literacy level, 70% of the presenters had a tertiary education of Diploma category while 30% had a bachelor's Degree in the field of Journalism and Mass Communication, where the majority were radio presenters while a few were both reporters and presenters.

The study found that the community radio station had no specific program dedicated to broadcasting climate change information. However, there was a program called "Kunku" that ran from 8-11 am. The program encourages the audience to work for themselves and partially touches on educating them to plant trees and take care of the environment.

Half of the presenters admitted to having basic knowledge of climate change, which they mainly got from school. However, the majority would not ascertain their ability to effectively communicate climate change concepts and information in their local dialects. Few were able to actually define climate change while the majority only said it is a change in the normal weather occurrence.

None of the presenters had any training on climate change, making them have difficulties in communicating climate change concepts and information to their audience. The study also found out that there was no

qualification or assessment for the presenters to be allowed to communicate climate change information at Tulwoob Koony Radio. "There is no specific requirement or training that a presenter needs to have to be allowed to broadcast climate change information in our station", Said the station manager.

The station manager also confirmed that they found it challenging to get the equivalent words to the climate change concepts in the local dialect as most of the information is in English and slightly Swahili. The presenters said that they mainly relied on call-in programs and SMS for feedback from their audience and, on rare occasions, field observation during reporting.

The study found that the presenters face translation challenges and the knowledge gap issue where they possess very little knowledge when it comes to climate change matters, considering there was no program dedicated to climate change and weather.

### **Evaluation of listeners' knowledge of the targeted climate change concepts disseminated by Tulwoob Koony radio**

Knowledge of climate change is key when it comes to adaptation and mitigation because when one has no knowledge of climate change, it becomes challenging to take part in mitigation initiatives. This objective was supported by the knowledge gap theory, which states that highly educated individuals acquire information much faster compared to less-educated individuals or those with no education. The knowledge gap goes on to say that although people with little to no schooling may acquire knowledge more slowly, it is not completely nonexistent, as some older ideas suggested. Using questionnaires, we asked the respondents if they had experienced changes in terms of climate, and all of them agreed to have experienced changes in the climate. The majority cited changes in weather patterns like varying temperatures, wind patterns, and rainfall. They also attributed the evidence of climate change to prolonged drought or rainfall that has been irregular over a period of time.

When asked about their understanding of climate change concepts like climate, climate change impacts, climate change mitigation, climate change adaptation, climate change resilience, global warming, carbon emissions, rising sea levels, vulnerability to climate change, and precipitation patterns, 80% understood at least three concepts apart from those with high education level who understood the majority of the concepts. "Climate change is the irregular change of patterns in rainfall, sunshine, and wind that result in rising temperatures, unpredicted droughts or floods that also affect their yields.

On where they learned the concepts, the majority who have a fair educational background stated that they learned about climate change in school, while 30% stated that they have the traditional knowledge and can detect the changes by observing the change in weather patterns and the impacts of the changes on their crops and animals. Others also attributed their knowledge to the media, especially radio. The group with traditional knowledge was made up of farmers who had immense explanations of how they mitigated the effects in the past and ensured they were not severely affected by the changes in climate. "In the past, the elders would not allow careless ploughing along river banks, even along the paths or roads there used to be a margin-left as opposed to nowadays where they plough up to where the path or road starts," Said one of the respondents. Another respondent indicated that some trees were not cut for firewood or domestic use with consequences like they would bring misfortune like the food being cooked burning or not being fully ripe, and this was a way to caution people from cutting down some trees so that the species could not suffer extinction and also preserve the forest.

The responses from questionnaires and interviews indicated that change in climate had been propagated mainly by pollution of the environment, with majority citing poor waste management and dumping mechanisms, deforestation, carbon emission in the form of smoke, and untreated waste from the industries.

More information is absorbed by people with greater socioeconomic status than by those with lower socioeconomic status, according to mass media masters. As a result, the knowledge gap between these two social groups widens. The majority of the respondents also agreed that they suffer a knowledge gap, especially when it comes to getting climate change information in their local dialect. "This information on climate change is mostly available in English as even the policies and reports are done in English with a few in Swahili."

## **Establishment of the major linguistic and communicative barriers in passing climate change information to Tulwoob Koony radio listeners**

Since circulation does not always equate to accessibility, these obstacles highlight the necessity of assessing the efficacy of access to widely distributed climate change information. During "use," recipients interpret the information "as per their socio-economic and political backgrounds," according to the encoding/decoding model. This means that each audience member may have a very different understanding of the same message, which in turn may have a very different impact (Stuart, 2020).

### **1. The challenge of finding Complexity and Equivalence of climate change information in local dialects**

Communicating information on climate change comes with its distinct challenges, from language barriers and socio-economic barriers to having complex scientific information that the disseminators find a challenge to demystify and to hold discussions about climate change that are easily accessible and relatable by the local communities.

One of the key respondents stated, "Climate change information should be clear and accurate and disseminated by individuals or groups that have done incredible work in collecting and repackaging that information in ways that climate change impacts the people socially, economically, and politically." He also added that the information should be available to the local communities in their vernacular languages

### **2. Language Barriers as a challenge to access climate change information**

The Kenya Climate Change Working Group says that poor message repackaging, inadequate communication methods, and language barriers prevent people from adopting climate change knowledge. During the interviews, it came out that the majority only interact with the climate change information in the English Language, making it difficult for those who are not well conversant with the Queen's Language to access this information.

According to the study (Ageyo & Muchunku,2020), accessibility to climate change information is therefore not adequate and cannot be expected to be if language barriers are not eliminated. In this sense, the key to its successful adoption and use is repackaging climate change information into regional languages and into clear, concise, and understandable messaging. This can be accomplished by audience profiling targeting diverse audience types with knowledge products, and reaching them in a variety of media. For example, repackaging information about climate change using less technical terminology and varying lengths based on the needs of the target group, or translating it literally into various local languages

### **3. Socio-Economic Barriers and Challenges**

According to the knowledge gap theory, people with greater socioeconomic position are more likely to have higher levels of education; as a result, they typically have a tendency to learn material far more quickly than people in lower socioeconomic classes. Thus, the knowledge gap theory's social implication is that those with more money, who have easier access to information because of their extensive resources, learn things far more quickly than those with less money. Because they have more money, wealthy people can attend some of the top schools, which may be out of reach for others in poverty.

Higher socioeconomic class people take in knowledge from the media more quickly than people from lower socioeconomic backgrounds. This leads to an increased gap in knowledge between these two segments of society as a result of the opportunities and exposure that come with it. For example, social factors like gender and the position a person holds in society may affect how they receive climate change information (Ageyo & Muchunku,2020).

### **4. Translation and Interpretation Capability Challenges**

However, the question of whether and how known information can be turned into concrete actions, and at what degree, is usually where the consensus on understanding of climate consequences and climate action ends

(Abdulai et al., 2021). Proponents of climate action frequently employ a variety of techniques to involve communities and other partners in discussions and the creation of adaptation plans. This ensures that a diverse range of community members participate in discussions about climate change, which increases the likelihood that new initiatives will be updated and provides opportunities for a more thorough comprehension of the range of climate realities.

### **Information Needs of the Audience**

To find out what kind of climate change information and support services the community members require, we used questionnaires to inquire from the respondents about their information needs. The Mt. Elgon Region's pastoralists and agropastoralists in the Chiva wards were found to be eager for weather alerts, market pricing and buyers, weather forecasts, information on the effects of climate change, and information on mitigation.

We had to investigate the information that was communicated to them in terms of its relevance, correctness, timeliness, productivity, frequency, efficacy, and efficiency. The manager of the Tulwoob Koony Community Radio Station and one of the locals we spoke with, said that it had been difficult to obtain simplified climatic information, making it difficult to repackage it into the local language for broadcast. He further said it is a big challenge for them as a community radio station to get simplified and relevant weather and climate change information promptly for dissemination to our audiences." This problem is associated with the translation and interpretation of skills and knowledge of both the development actors that use the radio to spread information about climate change and the radio stations that must set up appropriate systems for acquiring such information.

## **DISCUSSIONS AND RECOMMENDATIONS**

The finding of this study confirm that although there have been efforts to ensure that climate change information reaches the local communities in Kenya for proper mitigation and adaptation strategies to work, it is vital to acknowledge and support the role of community radio stations that are struggling to demystify the complex scientific information on climate change to simple, clear and accurate forms that the local communities especially those in rural areas understand. This is important because it is at the local level that most adaptation takes place. Therefore, there is a need to ensure the effective dissemination of climate change information to the local communities.

This paper advocates for employing the use of community radio stations as a vehicle of disseminating knowledge on climate change, given that they are reputable sources of information in the rural setting (Lungahi, & Ndavula, 2018).

As revealed by the study findings, the difficulty in demystifying climate change information by community radio stations is associated with a lack of training of journalists on climate change information and the ability to translate the available information clearly and accurately into local languages that can easily be comprehended by the audience. The study also showed the lack of interest by these community radio stations in giving climate change the attention it needs and slotting time in its programming for the same; for example, Tulwoob Koony radio had no specific program dedicated to climate change.

We infer from the experience that community radio can support community engagement and interest in climate change initiatives. Community radio has the potential to spread information and encourage engagement from a larger audience, particularly when combined with more conventional knowledge mobilization techniques like roundtables, presentations, and community and researcher-led conversations.

As a kind of social mobilization, we intend to use the lessons we have learnt from this research in future knowledge mobilization workshops. According to (Abdulai et al., 2021), in Africa's Congo Basin, radio shows about farming and local activities filled in knowledge gaps about climate change. These programs comprise everything from the translation of knowledge into local languages to formats that are meaningful to the local population, such as call-in shows, chat shows, radio drama, and short radio programs.

Being well-positioned, Community radio contributes to this form of social mobilization, especially alongside digital and more traditional in-person approaches to engagement. In many regions of the world, rural radio is

used in relation to socio-ecological issues, including communicating facts regarding food production, food security, and agricultural development, and it also influences social change on these issues. The study also suggests that to describe climate change action and information, the term "social mobilization" should be used instead of "knowledge mobilization," signaling that simply conveying information will not be sufficient; social change and transformation are required.

More research is needed to determine whether the camaraderie around equipment is unique to community radio or if it could apply to other types of live broadcasts. In addition, we acknowledge that the radio makes an effort to streamline the processes and procedures involved in mobilizing scientific knowledge. Members from places within the radio's catchment area might thus hear specialists, students, and community members who possess some traditional knowledge gathering at a single spot to engage in discussions. To determine its generalizability and reproducibility, more research would be necessary to test it in various situations and scenarios.

Community radio has the advantage of enabling participation from home and is not reliant on rural broadband availability, which can be problematic in rural places like the Mount Elgon region where long travel distances and unpredictable weather can make attending in-person workshops more difficult. We may argue that community radio has added value in situations where Internet connectivity may be slower or nonexistent, where distance may be a factor in participation in knowledge mobilization activities, or where radio broadcasts may reach a demography that is less readily involved in online forums for climate change discussions.

The study also suggests that Community radio stations that broadcast to Kenyans across the country should have their journalists trained on climate change issues so that they are able to demystify the complex scientific jargon and repackage the information into human interest stories in local dialects that the audience can easily understand and take the necessary mitigation measures to combat climate change impacts.

The study also recommends that community radio stations across the country have some selected members of the local communities trained and write short stories about climate change so that they can narrate them in local languages as part of their programs that are about climate change information.

The study also recommends that the community radio stations across the country, especially Tulwoob Koony radio, should dedicate at least one programme that is dedicated to climate change information and weather so that they are able to act as knowledge intermediaries who can reach out to the local communities and educate them on climate change. This will also help the community radio stations to contextualize the information and come up with simple and clear information that is necessary for the audience. This can be aided by inviting climate change experts and even representatives from the Kenya Climate Change Working Group or other relevant agencies who are well-versed in their broadcasting languages.

To ensure youngsters have a thorough awareness of environmental issues, particularly the threat posed by climate change, the study also suggests that information about climate change be enthusiastically incorporated into the school curriculum. Children will be made aware of this issue at a young age by such an approach, which will also guarantee that they apply this information to all aspects of their lives and recognize potential solutions.

### **Contributions to the Scientific Community and Future Research**

The study recognizes community radio's potential to help mobilize knowledge about climate change and to act as a medium for influencing decisions at the individual and community levels. Community radio provides a cheap and practical way to link locals, especially in rural areas. It also facilitates social embeddedness and one-and two-way communication. The principles of community radio are particularly pertinent when taking into account the demand for locally-sourced information that captures the inner workings of communities without undermining a sense of pride. The study, therefore, sets the stage for further research on how community radio can be a greater tool of communicating synthesized climate change information and concepts to rural communities and enhance behavior change and resilience when it comes to adapting to climate change.

## **CONCLUSION**

The study highlights the central position of community radio in demystifying the jargon of climate change and

disseminating information among rural communities in Kenya, with a focus on Tulwoob Koony (TK) Radio of Mt. Elgon. The research highlights the challenges of communicating complex scientific information relating to climate change to the local populace, primarily due to linguistic and socio-economic constraints. Despite the increased global and local discourse on climate change, the rural population is likely to be left behind, and consequently, there is a vast knowledge gap. The study revealed that Community radio being a trustworthy and culturally suitable platform, It has the potential to bridge the gap through the translation and re-packaging of information on climate change into local languages or dialects and accessible forms.

The results show that although TK Radio is crucial in informing its audience. There are significant challenges like the absence of specialized training for presenters on the subject matter of climate change. The research also revealed that there was no specialized programming for climate change and that the presenters and listeners had challenges in translating scientific jargon into local languages. The listeners especially those with lower levels of education encounter challenges in accessing and comprehending information on climate change that is available only in English and Swahili. The study also brings out the need for combining traditional knowledge with scientific knowledge to help improve the resilience and adaptive capacity of communities.

To overcome the challenges faced by community radios in communicating climate change concepts, the paper proposes a number of interventions like training radio presenters on climate change communication, the production of specialized climate change programs, and the use of local languages and storytelling formats to make the information more accessible. The study also proposes the introduction of climate change education in schools to raise early awareness and understanding. In summary the research emphasizes that community radio should be utilized as an effective tool for climate change communication, especially in rural communities, to enhance informed decision-making and community resilience.

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## REFERENCES

1. Abdulai, A. R., Chireh, V. K., & Tchoukaleyska, R. (2021). Engaging diverse audiences: The role of community radio in rural climate change knowledge translation. *Journal of Community Engagement and Scholarship*, 13(3), 8.
2. Ageyo, J., & Muchunku, I. G. (2020). Beyond the right of access: A critique of the legalist approach to the dissemination of climate change information in Kenya. *Sustainability*, 12(6), 2530.
3. Agrawal, A., & Bauer, K. (2000). Community engagement and environmental protection: A case study from the Narmada Valley, India. *World Development*, 28(8), 1643–1663.
4. Agyekum, D. A., Asantewaa, G. B., & Owusu-Sekyere, E. (2017). The role of community radio in disseminating information on climate change and adaptation strategies in rural Ghana. *Environmental Development*, 23, 11-20. <https://www.emerald.com/insight/content/doi/10.1108/GKMC-01-2022-0023/full/html>
5. Arthi, R. (2017). Community Radio and Climate Change Communication in India. In A. Malik & P. Upadhyay (Eds.), *Climate Change and Media* (pp. 131–143). Springer Singapore. [https://www.researchgate.net/publication/276236137\\_Communicating\\_Climate\\_Change\\_Using\\_Community\\_Radios](https://www.researchgate.net/publication/276236137_Communicating_Climate_Change_Using_Community_Radios)
6. Ashley, L., & Carney, T. (2014). The role of community radio in climate change communication in northern Ghana. *Applied Geography*, 52, 16–26.
7. Bucchi, M., & Trench, B. (2014). Science communication research: themes and challenges. In *Routledge handbook of public communication of science and technology* (pp. 17-30). Routledge.
8. Dilling, L., & Lemos, M. C. (2011). Creating usable science: Opportunities and constraints for climate knowledge use and their implications for science policy. *Global Environmental Change*, 21(2), 680–689.
9. Hornsey, M. J., Harris, E. A., Bain, P. G., & Fielding, K. S. (2016). Meta-analyses of the determinants and outcomes of belief in climate change. *Nature Climate Change*, 6(6), 622–626.
10. Hurlimann, A., Kienberger, T., & Kunz, A. (2014). The information gap and local adaptation

- knowledge: A challenge for climate change communication. *Regional Environmental Change*, 14(1), 147-157. <https://www.redalyc.org/journal/3213/321363062020/321363062020.pdf>
11. Ingabo, S. S. (2018). *The Old Meets the New: Understanding Climate Change Through Anyole 101.2 FM Community Radio*, Emuhaya, Kenya (Doctoral dissertation, School of Communication, Daystar University).
  12. Kapinga, M. D., Siyao, P. O., & Sife, A. S. (2020). The role of community broadcast media in the dissemination of climate change information among small-holder farmers in the Isimani division of the Iringa rural district. *The UONGOZI Journal of Management and Development Dynamics*, 30(2).
  13. Kenya Climate Change Working Group. Report on Access and Use of Climate Change Information in the ASALs; OXFAM & Kenya Climate Change Working Group: Nairobi, Kenya, 2013.
  14. Lasco, R. G., Bantayan, N. C., Pulhin, F. P., & Dizon, M. C. (2014). Climate change adaptation strategies for natural resources management in the Philippines: Utilizing community radio for information dissemination. *Climate and Development*, 6(2), 142-151.
  15. Leal Filho, W., Sima, M., Sharifi, A., Luetz, J. M., Salvia, A. L., Mifsud, M., ... & Lokupitiya, E. (2021). Handling climate change education at universities: an overview. *Environmental Sciences Europe*, 33, 1-19.
  16. Lungahi, E. G., & Ndavula, J. O. (2018). The role of vernacular radio in climate change information dissemination in Semi-Arid areas in Kenya. *African Multidisciplinary Journal of Research*, 3(1).
  17. Makwenda, B. (2017). Exploring the role of community radio in rural development and sustainability: A case study of Kariba community radio in Zimbabwe. *Journal of African Media Studies*, 9(2), 197–211.
  18. Mugenda, O. M. & Mugenda, A. G. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: ACTS Press
  19. Nerlich, B., & Jaspal, R. (2012). Metaphors we die by? Geoengineering, metaphors, and the argument from catastrophe. *Meteorologische Zeitschrift*, 21(6), 551-562.
  20. Sedgwick, P. (2015). Units of sampling, observation, and analysis. *Bmj*, 351.
  21. Stuart, H. Encoding and Decoding Model. Available online: <https://www.kcesmjcollege.in/ICT/English/Encoding%20Decoding%20final%20notes.pdf> (accessed on 20 January 2020).
  22. UNESCO. (2018). *Climate change education for sustainable development: A toolkit for educators*. Paris: UNESCO.