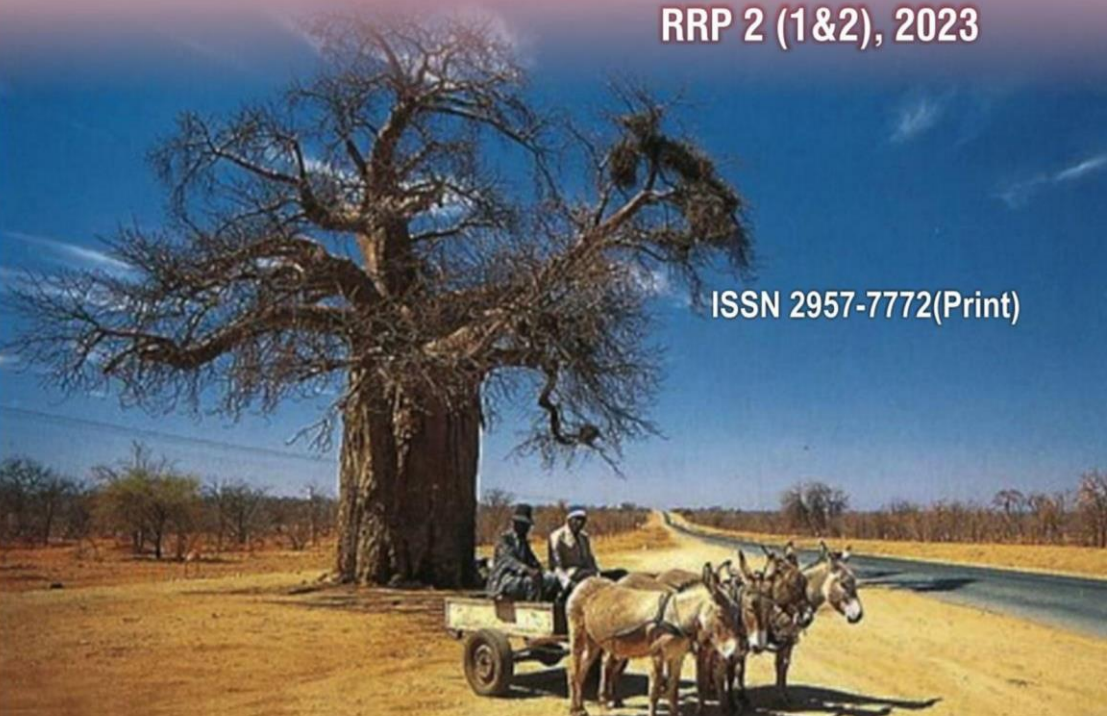




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JOURNAL PURPOSE

The purpose of the *Review of Rural Resilience Praxis* is to provide a forum for disaster risk mitigation, adaptation, and preparedness.

CONTRIBUTION AND READERSHIP

Sociologists, demographers, psychologists, development experts, planners, social workers, social engineers, economists, among others whose focus is that of rural resilience.

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Review of Rural Resilience Praxis

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SCOPE AND FOCUS

As much as the urban territory is increasing by each day, the rural economy, especially in many developing countries, still retains a great proportion of the extractive and accommodation industry. Retaining some space as rural remains critical given the sectors role in providing ecosystem services to both wildlife and humanity. In this

REVIEW OF RURAL RESILIENCE

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PRAXIS

light, rural resilience as practice beckons for critical studies especially in the face of the ever-threatening extreme weather events and climate change that then impact on the livelihoods and lifestyles of the rural communities. Review of Rural Resilience Praxis (RRRP) comes in as a platform for critical engagement by scholars, practitioners, and leaders as they seek to debate and proffer solutions of the rural sector as well as trying to champion the philosophy of the right to be rural. The issue of conviviality between the different constituencies of the sectors, compiled with the competing challenges of improving rural spaces while also making the conservation, and preservation debates matter is the hallmark of this platform of criticality. The journal is produced bi-annually.

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Body: Where the authors are more than three, use *et al.*, Italicise *et al.*, *ibid*, words that are not English, not names of people or organisations, etc. When you use several authors confirming the same point, state the point and bracket them in one bracket and in ascending order of dates and alphabetically separated by semi-colon e.g. (Falkenmark, 1989, 1990; Reddy, 2002; Dagdeviren and Robertson, 2011; Jacobsen *et al.*, 2012).

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„Climate Change News Is Awash Everywhere, The Phenomenon Is Hitting Hard“: Dialoguing with Rural Communities of Selected Districts in Zimbabwe

MTHABISI MSIMANGA, PRECIOUS MUBANGA, NOMQHELE NYATHI, GILBERT MUSHANGARI, SITHANDEKILE MAPHOSA, DERECK NYAMHUNGA¹, FELIX MADYA²

ABSTRACT

The article explores how the availability of climate change news in Zimbabwe is pushing the rural communities' understanding of threats posed by climate change on rural livelihoods and ways of life. Climate change has become a global threat to the rural livelihoods with the erosion of livelihoods leading to rural-urban exodus that is draining rural brains. This article is based on the argument that the mainstreaming of climate change news increases the awareness of rural people and aids their adaptation and resilience strategies. The study used a qualitative methodology with a bias towards an exploratory research design. The study used focus group discussions and in-depth interviews to gather data. The study used purposive sampling and adhered to all ethical principles. It found that climate change is hitting communal areas hard but rural communities have been benefiting from government and private media of information dissemination of news. The rural communities have been building resilience and adaptation to the vagaries of climate change. The study concludes that climate change remains a global threat to food security and rural development and more focus on climate news targeting rural communities must be introduced to fast-track rural development and resilience building. The study recommends the introduction of community radios and media outlets.

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Keywords: *communal areas, awareness, livelihoods, mediums, government, vagaries*

INTRODUCTION

Climate change is a challenge that is affecting agriculture activities at national, continental and global levels. The four components of food security,

I.e. food accessibility, food utilisation, food system stability and food availability, are negatively affected by the effects of climate change on agriculture (Kutyauripo *et al.*, 2021). Some of the impacts of climate change are an increase in global temperatures and changes in rainfall patterns that might include excessive rainfall or droughts (Wheeler and Von Braun, 2013). The increasing temperatures, flooding or droughts result in lower crop yields, whilst heat stress and drought lower livestock growth and productivity (Myers *et al.*, 2018). Climate change is adversely affecting communal areas in developing countries more than what scientists had anticipated. Significant attention has been given to improving the understanding of real and imminent impacts of climate change (Madzwamuse, 2010).

The antagonistic effects of climate change on agriculture increase the chances of food insecurity, mostly in Africa and Asia (Kutyauripo *et al.*, 2021). Happer and Philo (2016) observed that the connection between public consumption of mass media and subsequent behaviours has been subject to much debate with the view that the contemporary world is composed of passive and isolated individuals who are subject to the effects of powerful propaganda messages. While the power of audience to resist media messages focused on the polysemy of the text (Morley, 1980; Jenkins, 2006), in the digital environment, conceptions of the audience are being redrawn to reflect the greater potential for participation in public life and the more interactive relationship individuals have with the range of the media at their disposal (Bruns, 2009). Curran *et al.* (2012) observed that in Britain in spite of the potential offered by digital media, there is currently no demand for significant political and cultural change and string evidence for the continuing role of mass media in shaping public understanding (Briant *et al.*, 2011).

Commentators have attempted to associate changes in public concern and growth in scepticism regarding climate change to media attention, and other researchers have examined the complex and dynamic process that media messages influence beliefs (Whitmarsh 2011). Lieserwitz *et al.* (2012) observed that membership of cultural groupings, values and political ideologies are significant factors in shaping public interpretations of climate change and drive the information that people seek. In rural areas, most of the population depend on agriculture for survival. Agriculture is the backbone of the country's economy (Chamboko, 2007). Though rural communities already have a better understanding of local climate patterns and are accustomed to dealing with them, an important consequence of climate change is that the future climate will be less familiar, more uncertain and possibly more extreme (World Bank, 2012). Qaisar *et al.* (2022) observed that agricultural informatics, also referred to as e-agriculture, is an emerging field aiming to provide better agricultural services, enhanced technology dissemination, improved communication and information delivery and learning processes, among relevant actors in agriculture through the advances in information and communications technologies (ICTs). The article examines the role played by the media in mainstreaming climate change and how access to climate change news has helped rural communities build resilience and mitigate the impacts of climate change in Zimbabwe.

THEORIES UNDERPINNING THE STUDY

The theory that laid grounding for this study is the climate resilience theory. Resilience is the capacity to regain the original shape or position after bending, stretching, or any other form of deformation (Korber *et al.*, 2017). Rural resilience has become crucial as most of poor families in low-income countries are located in rural areas. Rural resilience is augmented by enhanced network formation of donor agencies and government departments and accepting that change is part of life and avoiding seeing crisis as insurmountable (Van Breda, 2018). It is the capacity of individuals to navigate their way to the social, cultural and physical resources that sustain human well-being and individually and collectively to negotiate for resources to be provided and experienced in culturally meaningful ways (Masten, 2012). Rural resilience is not dependent only on household characteristics, but also external factors such as aid and information dissemination on how to deal with climate change through the media. That is a good risk disaster management system of information dissemination. Resilience

is a process that leads to an outcome and the main focus of resilience is on mediating processes. Thus, one could say that an individual, a household or a social system, is resilient because it evidences good outcomes in face of adversity (Chazovachii *et al.*, 2019). The need to build resilience and responsive communities in Zimbabwe pushes the calls for a media that mainstreams climate change dialogues with rural communities as they are the most affected.

LITERATURE REVIEW

This section presents the literature review that guided the construction of the discourse for this article as past studies were used to inform the current study on the pathway and pitfalls involved in the research process, whilst identifying the gaps in literature. The literature was reviewed along the lines of the impacts of climate change and the role of media in climate change.

THE IMPACTS OF CLIMATE CHANGE

Sub-Saharan African countries are dependent mostly on rainfall for their agricultural activities, making them highly vulnerable to climate change through changes in rainfall patterns threatening food security (Calzadilla *et al.*, 2013). Agricultural activities in Sub-Saharan Africa are likely to suffer more compared to Western countries due to the ever-rising temperatures as this region already has high temperatures (Hall *et al.*, 2017). Extreme periods of wet weather have been reported in Zimbabwe, resulting in crop failure and flooding has also been reported to have destroyed crops, livestock and agricultural infrastructure (Muzari *et al.*, 2014). In Zimbabwe, livestock disease prevalence has been attributed to the rising temperatures and drought (Kutyauripo *et al.*, 2021). Lack of enough grazing pastures induced by drought has resulted in low productivity for livestock (Mubaya *et al.*, 2010). The impacts of climate change are heavy rainfall, floods and extreme heat that are moderated by the extent that people and assets are exposed to and vulnerable to these hazards (Kutyauripo *et al.*, 2022).

In low and lower-middle income countries, the impacts are more severe due to weaker revenue capability, lower institutional capacity to upgrade infrastructure and limited capacity to manage emerging risks (Mavhura *et al.*, 2019). Urban areas in Sub-Saharan Africa presently have a population of 472 million and that number is expected to double by 2050. Most of the urban population growth in

Sub-Saharan Africa is absorbed by high-density low-income urban settlements, home to more urban dwellers (Kuyaga *et al.*, 2020). These areas are unserved or underserved, lack secure tenure or property rights and are dominated by unregulated structures with limited formal physical planning, making them vulnerable to climate change (*ibid.*). The impacts of climate change have been adverse on poor and low-income countries such that there is need for the amplification of the conversation on climate change on all forms of media to help smallholder communities grasp the challenges therein.

MEDIA AND CLIMATE CHANGE

Anderson and Huntington (2017) observed that X (formerly Twitter) is a digital forum where publics seek out and discuss scientific issues as X-oriented research offers opportunities for capturing user knowledge of and views on issues like climate change. Kutyauro et al. (2021) observed that several factors have influenced media coverage of climate change, as climate change news is difficult to report due to uncertainties associated with it and the reaction it might bring to a society as others might feel powerless about the future. Stathers *et al.* (2013) observed that there was no climate change news related to food safety, fisheries and post-harvesting management.

Stathers *et al.* (*ibid.*) argued that climate news is influenced by the fact that at a global scale, there are limited studies on climate change and the entire food system that includes food safety and postharvest management. Climate change news coverage is influenced by policies put in place or donations made towards the implementation of climate change mitigation and adaptation measures (Kutyauro *et al.*, 2021). Baykoff and Rajan (2007) are of the observation that scientific studies on climate change are reported mostly in terms of possibilities and uncertainties, thus it might be very difficult for a journalist to simplify results from peer-reviewed journals and translate them into comprehensive news that can be understood by the general populace. Agwu and Amu (2015) observed that climate change awareness and rainwater harvesting have the highest news coverage by percentage. This can be attributed to that risks associated with climate change are regarded as news worthy of publishing.

RESEARCH METHODOLOGY

The study utilised the qualitative methodology with a case study research design. Crowe (2011) observed that the case study research design allows indepth multifaceted explorations of complex issues in their real-life settings as researchers can deeply immerse themselves in the setting. To craft the discourse forming this study, the researcher engaged purposive sampling to sample the rural people with knowledge on the dissemination of climate news. A total of 15 participants were selected from a population of 150 people who had attended a meeting with Agritex officers in Mudzi District. The study used focus group discussions and semi-structured interviews to gain inside views of the respondents. The study used thematic data analysis to analyse the findings as to answer the research questions of, is climate information available in rural communities, and how knowledgeable are rural people about climate news? The study adhered to ethical considerations with the ethics of confidentiality, respect to privacy and anonymity being observed. The study observed anonymity to protect the identity of the participants through adopting alphabetical letters as names for participants.

FINDINGS

The findings of this study emerged in the form of three themes, i.e. the theme of the availability of climate news, how rural communities learn about climate change, and how knowledgeable rural people about climate change are. These findings were found in the wards in Mudzi District through focus group discussions and semi-structured interviews.

THE CLIMATE NEWS

AVAILABILITY OF

In a bid to understand the understanding of rural communities on climate change as it remains the biggest impediment to rural development, the study asked participants if they heard about climate change. The researcher asked the participants if they had heard about climate change and, if so, through what channel. The findings of the study revealed that the news is awash in rural areas as community members showed vast knowledge about climate change. Participants indicated that they heard about it through different channels in rural communities. Participant C indicated that the news is available in the communities through radio channels. Participant C said: We have heard about climate change from the radio. National FM [radio] taught us that there is climate change and that it has been affecting our communities in so many ways

than one as we notice that the signs that they indicate such as the unavailability of ground water and the crop failure are worsening.

These findings showed that climate change news is awash as it is accessed through national radio channels and this indicates that there is large coverage of climate change news in Zimbabwe. Most people with access to radio can access climate change news as the participants revealed that radio channels have programmes on climate change to share adaptation strategies with communities. The study revealed that news about climate change is awash in rural communities, with most of the rural communities having heard of climate change through Agritex Officers in rural districts and wards. Participant A said:

We have heard about climate change from the Agritex Officers in our wards as they try [to] educate us about the impacts that climate change is having on our livelihoods and how we can adapt to these impacts. Agritex Officers have been sharing news and knowledge about climate change in our communities with some of us now aware of the deadly effects of climate change on the crops as it is leading to pests' invasion of our crops.

The findings have revealed that Agritex Officers are disseminating the news about climate change in rural communities to educate farmers about the impacts of climate change and the reasons behind crop failures and the invasion of crops by pests and diseases. The findings revealed that the Agritex Officers are sharing the news about climate change with communities to craft livelihoods diversification as most rural communities now look to other livelihoods other than agriculture. The findings revealed that climate information is also disseminated through non-governmental organisations

(NGOs) in rural communities. Participant B said:

We have heard about climate change from NGOs like World Vision that have come to help us cope with the impacts of climate change through the initiation of projects such as gardening and borehole drilling. They have educated us about what has driven groundwater further downwards.

These findings have revealed that NGOs play a pivotal role in the dissemination of climate change information and that the news is awash through communities in rural Zimbabwe as the problems of climate change continue to push rural

communities towards change of normal livelihoods. Through crafting new livelihoods for rural communities, NGOs are teaching and spreading news about climate change. The findings of the study revealed that the information is coming to rural communities from schools, as children are taught about climate change, they educate their parents about the issues around it. Participant E said: —We hear climate change news from these children from school as they learn from school they talk about it here at our homes.‡

The findings of this study revealed that climate change news is awash across rural communities as most of the people in rural communities are aware of it through various ways and communication channels.

THE LEVEL OF KNOWLEDGE THAT RURAL PEOPLE HAVE ABOUT CLIMATE CHANGE

The study aim was to understand how well spread climate change news is to understand how rural development can be spearheaded amid the vagaries of climate change. At this juncture, the knowledge ability of rural communities becomes important as it gives an understanding of how useful the climate change news has been to the rural communities. Participant F revealed that: I have knowledge about climate change as I have noticed a change in the rainfall patterns as we used to start the farming season as early as October and the rains would go for months raining, but now, the rain is just for two months or three with less intensity. I have come to understand climate change a bit well as it is all facets of life from agriculture to livelihoods.

The study has revealed that people have knowledge about climate change through rainfall variability and the failure of agriculture and other rural livelihoods, revealing that climate change news is awash in rural areas, and it has given people knowledge and context to build an understanding of climate change. The study indicated that some of the participants had knowledge about climate change through lack of survival of certain animal species in the forests. Participant G said:

—I have come to understand and have knowledge about climate change through the lack of survival of certain animals as they are failing to survive the dry

climatic conditions that are characterised by the lack of water and long dry spells.¶

The study revealed that people in the rural communities have knowledge about climate change through the extinction of certain wildlife as the prolonged dry spells have become the main characteristic of communities in Zimbabwe and beyond. The study revealed that some other participants ‘knowledge of climate change is based on the disappearance of ground water in rural areas. Participant E said:

—My knowledge of climate change has been based on the disappearance of groundwater as the existing boreholes and wells can no longer have water. The current boreholes have dried up, even the wells, as the hot temperatures continue to dominate than the wet seasons and that’s how we have come to know climate change.¶

The study findings revealed that rural communities’ knowledge about climate change is from dissemination of information through various channels and these communities understanding of the changes in the rainfall variability, the extinction of certain animals and the dwindling of groundwater in Zimbabwe.

DISCUSSION

The study on the news about climate change in rural Zimbabwe revealed that in Zimbabwe, the news is awash as most of the educational media are disseminating information about climate change to make communities understand the scope of the impacts of climate change and shift the focus of communities from viewing climate change as a spiritually induced phenomenon. The study revealed that climate change news in rural Zimbabwe is spread across communities through national radio stations mainstreaming climate change news and programmes to communities to enhance preparedness and resilience building through adaptation strategies. *NewsDay* (2020) is in line with the findings of the study by observing that radio broadcasting provides a great deal of information on how to approach and deal with climate change issues and conditions in Zimbabwe. Similar to the findings of the study is Perez-Teran (2015) who observed that in the Congo, radio has been used to disseminate information about climate change, showing that climate change news is awash in rural communities. The findings of the study revealed that NGOs are playing a pivotal role in the dissemination of climate change news in

rural areas as the vagaries of climate change continue to ravage rural communities with livelihoods washed away.

The NGOs are teaching communities about climate change as they prepare communities for climate change adaptation and resilience building through teaching poor communities on the impacts of climate change. Similar to these findings is Morahanye (2020) who observed that school-based knowledge dissemination on climate change is very minimal. However, NGOs have spearheaded the climate change information dissemination, teaching communities on mitigation and adaptation to climate change. Consistent with the finding of the study are William *et al.* (2015) who observed that the NGOs have the ability to generate and use knowledge to build adaptive capacity for rural communities, inspiring robustness. In concurrence with the study is Harvey (2019) who observed that specific roles of the NGOs in climate change service delivery include knowledge brokering, teaching communities on climate change, the impacts of climate change and the adaptation process to climate change. The study revealed that Agritex Officers in rural communities are spreading the news about climate change as they teach communities climate change and causes of climate change so that the communities can deviate from the belief that climate change is due to spiritual causes. Consistent with these findings is the theoretical framework, the resilience theory, as Koeber *et al.* (2017) observed that resilience is the ability to restore the capacity of households to the pre-destruction period and the Agritex Officers are teaching rural community's climate change to build their resilience through adaptation processes such as small grain farming to restore food security. In support of the findings is Ella (2013) who observed that the role of extension officers in the dissemination of climate information is crucial for resilience and adaptation building in rural communities. Chazovachii (2020) is consistent with the findings as he observed that extension officers are crucial in the dissemination of climate smart agriculture in the rural areas to cope with the impacts of climate change. Grey (2019) is concurrent with the findings of the study as the study observed that Agritex Officers disseminate information on weather forecasts to rural communities. The study revealed that these officers are teaching rural communities climate change and adaptation methods to climate change. The study indicated that schools are teaching climate change in the rural communities and as the children learn, they share the information with their parent, proving that climate change news is awash in Zimbabwean communities. Consistent with this is the Ministry of Primary and Secondary

Education (2020) that observed that taking lessons from the cholera outbreak that cost over 4 000 lives in Zimbabwe, it is believed that children are suitable change agents needed in the area of climate change as they can promote information dissemination and resilience building through spreading information they learn from school across communities.

The study revealed that rural people have information on climate change and their knowledge base has expanded such that the information has led them to observe rainfall variability, the disappearance of groundwater and extinction of certain wild animals that require water and good climatic conditions.

CONCLUSION AND RECOMMENDATIONS

The study concludes that climate information is awash in Zimbabwean communities as most of the media and stakeholders are pushing for the spreading of climate information. It has been concluded that the knowledge on climate change is triggering rural communities into action towards resilience building and adaptation strategies in the rural areas of Zimbabwe. The study concludes that information dissemination in the school-based model is lagging as the impact of school-based information was observed to be minimal across communities. The study concludes that climate news is awash across the Zimbabwean rural communities as most rural communities are now diversifying their livelihoods because of the new understanding of climate change beyond the scope of spirituality triggering a change in the livelihoods. The study recommends equipping of extension officers with viable transport empowering them to spread climate information to remote areas to ensure rural development, as rural areas remain in danger from climate change and poverty. The study observed the need for a broad information dissemination model that can mainstream climate change impacts and adaptation methods to rural farmers. There is need for the development of non-agricultural rural communities in developing countries as climate change is increasing, leaving rural communities vulnerable. Further studies should look into the accuracy of the information dissemination media in the rural communities of Zimbabwe.

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