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LIBRARY AND INFORMATION

BARRIERS TO DISSEMINATING INFORMATION IN THE CURRENT STRATEGIES FOR DROUGHT MANAGEMENT IN THE ASAL

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ABSTRACT

Purpose: The study sought to examine barriers to effective dissemination of drought information among pastoralist communities in Kenya's Arid and Semi-Arid Lands (ASAL.

Methodology: A mixed-methods approach with a correlation survey design was used, collecting data from 600 pastoralist households and 12 NDMA officers through questionnaires, interviews, and FGDs, with analysis done using SPSS Version 22 and thematic coding.

Results: The study revealed major barriers to drought information dissemination including illiteracy (40%), lack of funding (21%), gender inequality (11%), communication gaps (7%), and political interference (8%). Further findings indicated that current dissemination approaches rely heavily on technical bulletins and inaccessible media channels, with limited use of local languages or participatory strategies. NDMA informants cited understaffing, outdated communication formats, and insufficient resources as additional institutional constraints.

Conclusion: The study concludes that the current top-down communication strategies are inadequate in reaching remote and marginalized pastoralist communities. A shift towards inclusive, culturally sensitive, and locally driven communication approaches is essential to improve drought preparedness and response in ASAL regions.

Recommendations: The study recommends the development of localized audio-visual materials, use of radio programs in local dialects, integration of scientific and indigenous knowledge, and the creation of drought information champions within communities. It also calls for the establishment of robust monitoring and evaluation systems and stronger coordination among government and local actors to enhance information flow and community resilience.

Keywords: *Drought information, ASAL regions, communication barriers, indigenous knowledge, early warning systems, NDMA, pastoralist communities, drought preparedness.*

INTRODUCTION

Several studies highlight significant problems with drought information dissemination to pastoralist communities in Kenya's ASALs, hindering effective drought management and impacting progress towards Sustainable Development Goals (Rai et al., 2020). A key issue is the top-down approach often employed by government institutions, which may not align with the preferred information channels of the pastoralist communities (Omollo et al., 2018). This paternalistic approach, rooted in historical neglect of the region, often overlooks the valuable Traditional Ecological Knowledge (TEK) held by these communities, which could enhance drought preparedness and response (Ratemo et al., 2020). Furthermore, information is often disseminated through channels like official websites, which are inaccessible to populations with high levels of illiteracy (Awolala et al., 2022; Kimaru et al., 2023).

The literature emphasizes the need for a shift towards a more participatory, bottom-up approach that integrates both scientific and indigenous knowledge (Mwangi, 2016; Manei, 2013). Effective communication requires understanding the specific information needs and preferred channels of pastoralists (Oluoko-Odingo, 2011). While some initiatives like the County Climate Change Funds (CCCF) aim to involve local communities through capacity-building workshops (Alliance, 2019), significant challenges remain. These include ensuring information is delivered in simple formats and local languages (Singh et al., 2018), addressing delays in disseminating early warning information from Drought Early Warning Systems (DEWS) (Apgar et al., 2017), and overcoming the lack of focus on the substance and timeliness of information sharing (Coffey et al., 2015). Addressing these barriers is crucial for building community resilience and mitigating the devastating impacts of drought in the ASAL regions (Nyaoro, 2023).

Statement of the problem

The problem of ineffective drought information dissemination among pastoralists in Kenya's ASAL regions is a significant barrier to drought management, stemming from infrastructural limitations in reaching remote communities, a lack of culturally sensitive communication methods, and challenges posed by low literacy levels and linguistic diversity. This results in pastoralists receiving delayed, inaccurate, or skewed information, hindering their ability to make informed decisions about livestock management, migration, and resource allocation, thus perpetuating vulnerability and dependence on external aid. While formal studies on drought

management exist, few focus specifically on information dissemination as a crucial component, particularly regarding the integration of indigenous knowledge with modern methods to improve timely and relevant communication for these communities.

Objective of the study

The objective of this study was to determine the possible barriers to disseminating information in the current strategies for drought management in the ASAL.

LITERATURE REVIEW

Several interconnected challenges hinder the effective dissemination of drought information, ultimately weakening drought response efforts. These include difficulties in translating technical data into usable knowledge for end-users (Ward et al., 2021; Shrum et al., 2018), a lack of inclusive and context-driven knowledge development and the need for customized drought warning content and diverse distribution methods tailored for agricultural decision-making (Calvel et al., 2020). Furthermore, the pathways for communicating data from Early Warning Systems (EWS) to stakeholders, particularly in drought-prone areas with fragmented institutional landscapes, are often unclear and require assessment (Prabhakar & Krishna, 2022).

In the Arid and Semi-Arid Lands (ASALs), these barriers are exacerbated by the erratic rainfall patterns (Kasuki et al., 2023) and high poverty rates (World Bank, 2020), despite devolution efforts aimed at bringing resource management closer to communities (Akuja & Kandagor, 2019). Moreover, developing nations, including those in Africa, often lack adequate meteorological infrastructure and analytical tools, leading to inappropriate information products and poor data exchange (Kalisa et al., 2020; Nicholson, 2014). Low levels of literacy, poverty, and cultural beliefs among pastoralist communities also impede the effective reception of information (Simiyu et al., 2022; Hampson et al., 2015). The historical marginalization of ASAL regions has resulted in inadequate infrastructure and connectivity (Chege et al., 2019), further hindering information access for pastoralists who often rely on traditional sources (Kinyili, 2023). Addressing these multifaceted challenges, including infrastructural deficits, cultural considerations, and the integration of indigenous knowledge, is crucial for improving drought preparedness and response in these vulnerable regions.

RESEARCH METHODOLOGY

The study's target demographic was pastoralist villages in Garissa County, Kenya, and it used a mixed-methods approach with a correlation survey design and a pragmatic mindset. 600 pastoralist homes were chosen through a multi-stage sampling process, and 12 key informants from the National Drought Management Authority were included in the census. The paper also details the steps taken, such as piloting in Wajir County, to guarantee the validity and reliability of data gathering tools. In order to collect data, questionnaires were given to pastoralists, key informants were interviewed in semi-structured interviews, and pastoralists participated in focus group discussions (FGDs), with gender balance ensured in the latter. Using Microsoft Excel and SPSS version 22, descriptive and inferential statistics were used to evaluate the data. Additionally, qualitative data from interviews was transcribed and subjected to thematic analysis. Ethical considerations were also noted throughout the study at every stage of the investigation.

FINDINGS

Barriers to Dissemination of Information on Drought and their Effects on Drought Management

The researcher asked respondents to indicate from the questionnaire list some of the challenges faced in dissemination of drought information. The findings were as presented in Table 1;

Table 1: Barriers to Dissemination of Information On Drought

Challenges	Frequency	Percentage
Illiterate pastoralists	106	38
Lack of funds	55	20
Gender inequality	42	15
Communication of drought information	18	7
Complexity of information	16	6
Political interference	21	7
Outdated drought information	13	5
Bias of drought information	5	2
Lack of training of staff	0	0
Total	**276**	**100**

Most respondents, 264 (68.5 %), indicated challenges, as shown in Table 4.13. However, 86 (22.3%) said they had no challenges, while 35 (9%) indicated that they were not aware of any.

The researcher went further by asking respondents to identify the particular barriers that impeded dissemination of drought information. From the foregoing data, 106 (40%) of the respondents said that the primary obstacle to pastoralists receiving information about the drought was illiteracy while 55 (21%) cited inadequate funding. This highlighted the need for additional funding to enhance the pastoralists' infrastructure for communication and education. Forty two (11%) of pastoralists mentioned gender inequality, highlighting the fact that women and girls encountered more obstacles to education and resources than men and boys. Additionally, 21 (8%) participants, mentioned political interference as a barrier to information dissemination.

Although inadequate staffing and lack of staff training were not a major problem to the pastoralists, the two factors were cited by key informants from the NADMA to be a key barrier to sharing drought information among the pastoralists in ASAL Kenya. Other barriers cited by the participants included complexity of information 16 (6%), outdated drought information 13 (5%), communication gaps 18 (7%) and bias and subjectivity 5 (2%).

To complement the above findings, qualitative data from semi structured in-depth interviews and FGDs by pastoralists and NDMA staff were analysed. During FGDs one pastoralist said the following:

> *"There is also no chance for further explanation or for asking questions…It is a case of either you understand, or you do not". {*FGDs 2*}*

Participants during FGDs also said that including scientific names and technical jargon in the pamphlets made it challenging to understand the message. Many respondents during FGDs said they did not understand the information disseminated for drought management due to the language barrier.

> *"I wish I could interpret what the media says about drought management, but I do not have formal education. I cannot read, write, or understand, so I ask my neighbours and friends with basic education to assist me…" {FGDs 1}*
>
> "*The Government of Kenya and the drought information reporters forget that most of us in rural communities are not educated, but expect us to participate and use the English language used to disseminate information on drought in various*

media. It is extremely difficult to undertake the responsibility. No wonder we keep losing our livestock every year." *{FGDs 2}*

"The language used to pass the information on drought in meetings needs to be as much as possible in the local Somali dialect to ensure free expression."{FGD 2}

Some respondents believed that drought is an external calamity that required the intervention of God. One respondent said the following:

"We see drought as an act of God, not human'' {FGDs 1}

Other Findings from the key informants further confirmed that;

"Resources to fight drought are only released when there is an emergency of drought and ignore warning messages". {NDMA staff 6}

"No funds were set aside to develop and advertise alert messages". {NDMA staff 8}

"Our bulletins are written in English with technical words which cannot be understood by a layman". {NDMA staff 4}

"Our alert messages have been difficult to reach far places and to reach every pastoralist...for a person to be sent to community he requires facilitation which at the moment NDMA is not in a position to provide". {NDMA staff 5}

"Currently we lack funds to support and advertise drought alerts in radio as we did before because our development partner withdrew". *{NDMA staff 6}*

The above verbatim responses showed that most of the pastoralists resided in remote areas that suffered from low literacy with customs and traditions that were usually practised by society that were against adoption of new information about drought. There was also limited penetration of print media that captured alerts in the form of bulletin. These findings corroborated that of Hussein et al. (2023); Walker's *et. al.* (2022) and Vincent *et al.* (2020) who contended that poverty, illiteracy, and religious beliefs were barriers to successful drought information dissemination. With the preceding challenges, institutional repositories may encounter difficulties in processing and disseminating drought information.

Improving the Dissemination of Drought Information among Pastoralists

Participants were asked whether they had heard of any research aimed at improving the dissemination of drought information among pastoralists. The survey aimed to gauge awareness and impact of research on improving the dissemination of drought information among pastoralists. The responses were 289 (75%) for NO and 96 (25%) for YES. Those who responded positively were further asked about the impact of the research on drought management in various areas. The results were that 48 (50%) indicated a positive impact on drought reconstruction.

Regarding their level of awareness, 289 (75%) of the pastoralist said they were not aware of any research focused on enhancing drought information dissemination for pastoralists. This implied a gap in communication or outreach efforts relating to these research initiatives. Only 96 (25%) of the respondents reported being aware of such researches. This indicated that while some stakeholders were informed about the researches, many were not. Furthermore, only 77 (20%) of the respondents who were aware saw a positive impact of the researches. This relatively low percentage indicated that while there was some improvement, the researches had little effect on enhancing preparedness and mitigation strategies compared to other areas.

Pastoralist's Involvement in Planning Information Dissemination for Drought Management

To assess the involvement of pastoralists in planning the dissemination of drought information, respondents were asked whether they had participated in such processes. A majority, 277 (71.9%), reported that the County had not involved them or other stakeholders in planning, while only 108 (28.1%) indicated they had been included. This limited stakeholder involvement likely contributed to less effective communication and may have undermined the overall success of drought management efforts. The findings underscore the need for greater inclusivity in planning to enhance the relevance and impact of information dissemination strategies.

The researcher further assessed the coordination mechanisms used by the County by asking respondents to identify relevant areas listed in the questionnaire. The findings revealed that 88 respondents (81.6%) stated their County involved stakeholders by profiling them and defining their roles, indicating a strong emphasis on identifying key players and clarifying responsibilities in drought management. Additionally, 54 respondents (49.6%) noted that their

County invested in research and development for information dissemination, reflecting a moderate level of commitment to evidence-based approaches and innovation.

Moreover, 70 respondents (64.4%) indicated that the County had formed specific groups to manage information dissemination, showing a commendable organizational effort to streamline communication and foster collaboration among stakeholders. However, only 41 respondents (38%) acknowledged the presence of effective monitoring and evaluation processes, suggesting a critical area for improvement. Monitoring and evaluating dissemination efforts are essential for measuring impact and making necessary adjustments, as also emphasized by Owino (2020) and Taylor et al. (2018).

SUMMARY

This study has shown that there were a number of important barriers preventing pastoralists in ASAL Kenya from learning about the drought alerts. Forty percent of respondents cited insufficient literacy as the main obstacle, while 21% cited lack of finance as a major problem impeding efficient communication and the infrastructure of education. Eleven percent of respondents cited gender inequality, emphasizing that women and girls had more obstacles compared to men or boys when it came to getting resources and education. Eight percent of participants expressed concern about political influence and expressed displeasure with its effect on decision-making and resource allocation. While key sources from NDMA identified these as major hurdles, most respondents did not emphasise on issues like inadequate staffing and lack of training. Information complexity (6%), out-of-date drought data (5%), communication gaps (7%), and bias (2%) were the other issues prevalent in the dissemination of drought information.

CONCLUSION

The study concludes that ineffective dissemination of drought information among pastoralists in Kenya's ASAL regions remains a major barrier to timely and informed decision-making for drought preparedness and response. Key challenges identified include low literacy levels, inadequate funding, limited use of local languages, gender disparities, and insufficient stakeholder involvement in planning communication strategies. Furthermore, institutional limitations such as lack of trained personnel, poor infrastructure, and over-reliance on technical language in bulletins hinder the reach and impact of drought alerts. To overcome these barriers,

the study emphasizes the need for inclusive, context-sensitive, and multi-channel communication approaches that integrate both scientific and indigenous knowledge systems.

RECOMMENDATIONS

To address the widespread challenge of low literacy among pastoralist communities in Kenya's ASAL regions, the study recommends the development of visual and audio-based information materials that are easy to understand and locally accessible. These should be complemented by financial inclusion programs and initiatives specifically targeting women and girls, including access to microfinance, to bridge existing gender disparities in resource access and drought preparedness.

The study further advocates for the use of local dialects in radio programming to enhance message clarity and reach. It also emphasizes the need to establish robust Monitoring and Evaluation systems that can assess the impact of drought communication strategies. These systems should include performance indicators and regular feedback mechanisms to adapt messaging to community needs over time.

Additionally, the integration of indigenous knowledge with scientific insights is crucial for ensuring culturally relevant and practical solutions. The creation of local networks of trained information champions—such as respected community members—can enhance timely access to drought alerts and foster greater community resilience. A multi-channel, community-driven approach is therefore key to strengthening drought information dissemination efforts.

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