Global Disaster Preparedness Center

Executive Summary

Utilization of Early Warning Information and the Factors Influencing Actionability of Early Warning Messages Among Last Mile Communities in Drought-Prone Areas In Eswatini

Authors:

Sipho Felix Mamba, Sizwe Mabaso, Samkele Tfwala
University of Eswatini, Eswatini

Nosizo Mthupha
National Disaster Management Department, Eswatini

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Introduction

The Kingdom of Eswatini faces significant vulnerability to drought and other climate-related hazards, including cyclones, flash floods, and windstorms. Among these, drought remains the most pervasive, undermining rural livelihoods and economic progress, particularly in the drought-prone regions of Lubombo and Shiselweni. The 2015/16 El Niño-induced drought exemplified these challenges, with 30% of the population experiencing food insecurity and socio-economic impacts costing E3.843 billion, or 7.01% of the GDP in 2016. Projections suggest an increase in the

frequency and intensity of droughts due to climate change, heightening the urgency for effective preparedness measures.

A 2020 evaluation of Eswatini's Early Warning System (EWS), conducted by the National Disaster Management Agency (NDMA), identified gaps in risk knowledge and the monitoring of warning services' effectiveness, despite advances in EWS governance, dissemination, communication, and response capabilities. A study by Baphalali Eswatini Red Cross Society on indigenous knowledge of weather-related disasters and their consequences in Eswatini highlighted key obstacles to the effective use of early warning messages. Addressing these challenges requires a deeper understanding and incorporation of local knowledge into early warning frameworks.

Methodology

This study examined the utilization of early warning information and the factors influencing the actionability of messages among marginalized farming communities in Lubombo and Shiselweni. Employing a mixed-methods approach, data were gathered from 796 households through semi-structured interviews and supplemented by focus group discussions. This approach provided a comprehensive understanding of the barriers to effective early warning dissemination and response.

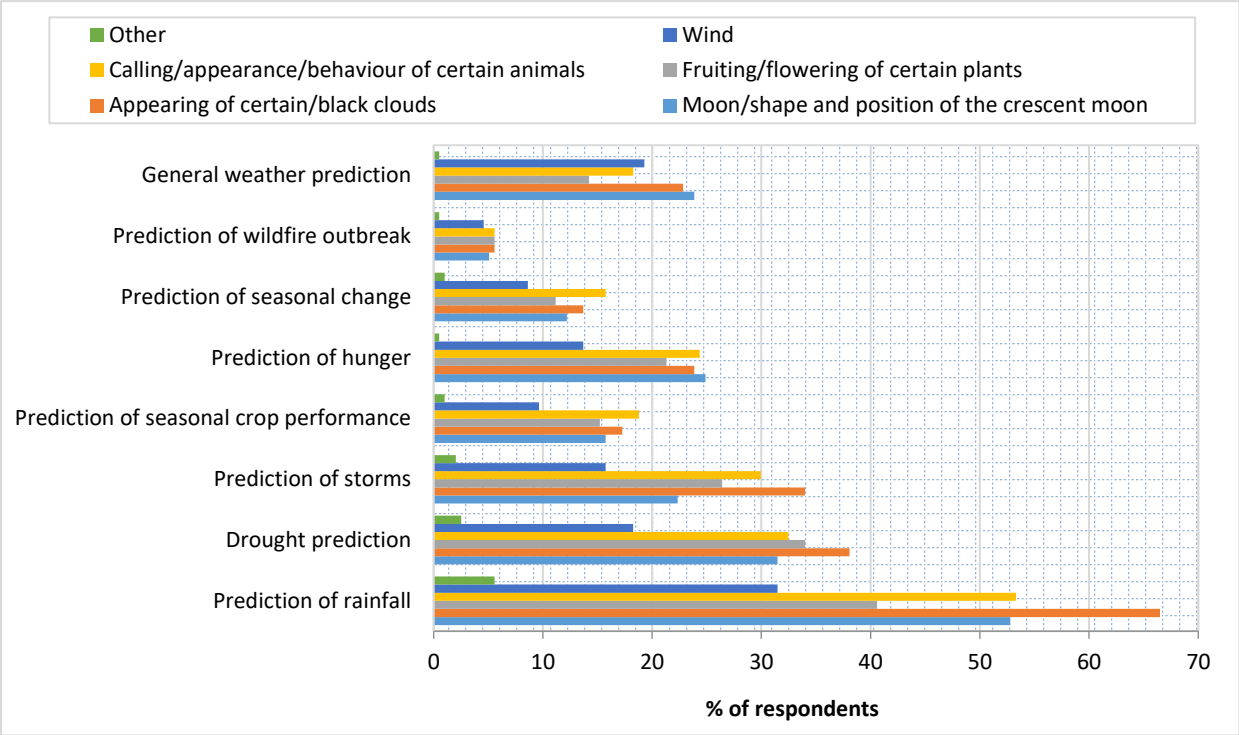
Key Findings

- **Drought remains a persistent hydrological disaster**, severely impacting the livelihoods of households in Eswatini's remote rural communities. This vulnerability is driven by overreliance on rain-fed agriculture. Climate change amplifies these challenges, with its impacts further exacerbated by inadequate access to and ineffective utilization of early warning information. Over 61% cited poor access to early warning information as a major driver of vulnerability.

- **While 75% of households in the study area reported access to early warning information**, 25% in the drought-prone regions of Lubombo and Shiselweni continue to face significant challenges in accessing this critical information.

- **A significant 88% of households rely on radio as their primary source of early warning information**. While modern platforms like WhatsApp, TikTok, and Facebook are gaining popularity, the continued dependence on outdated channels such as radio reduces the effectiveness of communication efforts.

- **Approximately 23% of households use Indigenous Knowledge (IK) for climate predictions**, with 99% finding it effective. Indicators include lunar phases, animal behavior, and plant phenology.



Indigenous knowledge systems (IKS) indicators used and the predicted variables

- Among the 75% of the population who reported having access to early warning information, 19% noted that they do not utilize it. **Several factors contribute to this low utilization of EW information** in drought-prone areas of Lubombo and Shiselweni:
    - Lack of trust in early warning messages, often perceived as inaccurate.
    - Rejection of 'foreign prediction systems' due to insufficient consultation on locally relevant approaches.
    - Limited awareness and understanding of climate change issues.
    - Overly technical language in disseminated warnings and insufficient education on interpretation.
    - Delays in delivering early warning information, reducing its relevance.
    - Limited practical application of early warning messages to daily household activities.
    - Socio-cultural barriers, such as the lack of decision-making authority among women in patriarchal communities.
    - Messages often presented in English rather than translated into SiSwati, making them inaccessible to some farmers.

- Addressing these barriers is essential to improve the utility and actionability of early warning systems for last-mile communities.

Implications and Recommendations

Improve Early Warning Dissemination and Reach: Leverage popular communication platforms such as WhatsApp and Facebook, alongside expanded radio and mobile network infrastructure, to disseminate timely and localized early warning messages in remote areas.

Simplify Early Warning Messages: Translate messages into local languages (SiSwati) and use non-technical, actionable advice tailored to local agricultural practices.

Training and Capacity-Building Initiatives: Conduct educational and training programs aimed at enabling rural farmers to accurately interpret and effectively utilize received weather information and early warning messages.

Integrate Indigenous Knowledge Systems: Combine IK with scientific tools to improve community trust and relevance of early warning systems.

Promote Gender-Inclusive Approaches: Address cultural barriers by empowering women through inclusive decision-making processes and targeted capacity-building.

Enhance Public Participation: Encouraging public participation in early warning system planning ensures the integration of local knowledge, fostering a sense of ownership and enhancing long-term sustainability.

Conclusion

Addressing the gaps in Eswatini's EWS requires a multifaceted approach that prioritizes accessibility, community involvement, and actionable messaging. By integrating local knowledge, enhancing trust, and leveraging modern communication platforms, resilience to drought impacts can be significantly improved, safeguarding livelihoods and promoting sustainable development.

Follow this link to read the full paper.

This work was part of a multi-country research initiative led by the Global Disaster Preparedness Center of the American Red Cross.