


Assessing the Level of Community Resilience to Drought in Kitui County, Kenya

Agnes Kalekye Kithikii, Masinde Muliro University of Science and Technology, Kenya*

 <https://orcid.org/0009-0001-3259-956X>

Edward Musungu Mugalavai, Masinde Muliro University of Science and Technology, Kenya

Samuel Soita China, Masinde Muliro University of Science and Technology, Kenya

ABSTRACT

In Kenya, arid and semi-arid lands are more affected by drought due to their fragile ecosystems and unfavorable climate. The main objective of this study was to determine the level of community resilience to drought in Kitui County, based on the conceptual framework of community resilience building to drought. The results indicate that social ($F(860.969) = 397, p = 0.000 < 0.05$) and economic factors ($F(5316.236) = 397, p = 0.000 < 0.05$) significantly influenced community resilience to drought; however, environmental factors did not have much effect. The study recommends the need to adopt appropriate strategic policy options for enhancing community resilience to drought through capacity building on successful humanitarian aid interventions. The research findings will be beneficial to policy makers and stakeholders generally to improve strategies for enhancing community resilience to drought against the effects of climate change.

KEYWORDS

Adaptive Capacity, Climate Change, Collective Action, Disaster Risk Reduction (DRR), Food Insecurity, Households, Livelihoods, Vulnerability

1. BACKGROUND

The concept of community resilience has gained prominence in the past years in disaster risk reduction (DRR), climate change, and development policy discourse and has been widely used by disaster response professionals, policy makers, and academics (Twigg, 2015). The current resilience discourse tends to focus more on the utility of the concept, either in disaster risk management (DRM) (Twigg, 2015) or in climate change and variability (IPCC, 2022). In this study the term “community resilience” is used to mean the ability of a community to recover from a shock, as well as the degree of community preparedness to shocks.

DOI: 10.4018/IJDREM.335480

*Corresponding Author

This article published as an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and production in any medium, provided the author of the original work and original publication source are properly credited.

Patel et al., (2017) identified nine core elements of community resilience that include: local knowledge, community networks and relationships, communication, health, governance and leadership, resources, economic investment, preparedness, and mental outlook. Consequently, it may be more productive to focus on these individual elements than making attempts to define and study community resilience as a distinct concept. Additionally, the Communities Advancing Resilient Toolkit (CART) describes a resilient community as one that has the ability to transform the environment through deliberate, collective action and is able to cope effectively with and learn from adversity (Pfellerbaum et al., 2011). According to Frankenberger et al., (2013) resilience is the ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth.

As a systems-level characteristic, resilience has been described as an emergent property of complex adaptive systems (Aldune et al., 2015) and refers to the capacity of a system to sustain core functions in the face of disruption and change (van der Merwe et al., 2018). From the normative perspective, resilience is not merely the ability to sustain core functions, but the ability to sustain specific outcomes, such as continued production of specific ecosystems or essential services (Folke et al., 2016). The ability to bounce back after interruptions may entail systematic transformation and involve not only bouncing back to the original state, but also bouncing forward to a more desired and stable position (van der Merwe et al., 2018). According to Béné et al., (2014) while the ability of resilience in fostering an integrated approach across sectors is recognized, it is not a pro-poor concept since it may not be applicable to people living in persistent poverty. Thus, the objective of poverty reduction cannot be simply replaced by resilience building. It has also been argued that the discourse of disaster resilience could stigmatize individuals and communities with low levels of resilience since community resilience is a reflection of people's shared and unique capacities to manage and adaptively respond to extraordinary demands on resources and the losses associated with disasters (Norris et al., 2008).

Although the conceptualization of resilience and adaptive capacity in the three dimensions of DRR, climate change and variability, and the socio-ecological perspectives has been quite informative, Nyamwenza (2012), sees a clear disconnect with the livelihood resilience and adaptive capacity perspective because the impact of DRR and climate change is perceived to be dependent on resilient and adaptive livelihoods. Murphy (2007) defines a community as a group of people in a shared geographical space with diverse characteristics and priorities, linked by social ties, interactions shaping local life, shared identity, collective action, and providing a means for accessing external resources. Nonetheless, this study assumes a definition of a community as a group of people in a shared geographical space with diverse characteristics and priorities, linked by social ties, interactions shaping local life, shared identity, collective action, and providing a means for accessing external resources. The main objective of this study was to determine the level of community resilience to drought in Kitui County.

2. METHODOLOGY

2.1 Study Area

The study areas consisted of Mwingi North and Mwingi West Sub-Counties in Kitui County. Kitui County is located between Latitude 1°22' and 1°06'' South and longitudes 38°00' and 39°00'' East (Figure 1). The county has an altitude that ranges between 400-1800 meters above sea level. Kitui County is classified as an arid and semi-arid land (ASAL) county (MoALFC, 2021). Due to its semi-arid climate, the county is among the most drought-vulnerable regions in Kenya. The average annual precipitation range is 400-1000 mm, with an annual average of 750 mm. Precipitation during the long rainy season, from March to May, is erratic and unreliable. While in the short rainy season, October to December, it is more reliable in terms of its amount and distribution. Most farmers in

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/article/assessing-the-level-of-community-resilience-to-drought-in-kitui-county-kenya/335480

Related Content

"You've Been Warned?": Public Perceptions of Outdoor Sirens and Their Alternatives for Tornadoes

Linda Plotnick, Starr Roxanne Hiltz and Matthew Burns (2013). *International Journal of Information Systems for Crisis Response and Management* (pp. 37-62).

www.irma-international.org/article/youve-been-warned/96921

The Relationship between IT Director Values and Extent of IT Disaster Recovery Planning in the Banking Industry

Jordan Shropshire and Christopher Kadlec (2012). *Managing Crises and Disasters with Emerging Technologies: Advancements* (pp. 122-136).

www.irma-international.org/chapter/relationship-between-director-values-extent/63308

Navigating Digital Transformation in Zimbabwe's Higher and Tertiary Education Post the COVID-19 Pandemic: Lessons From Selected State Universities

Barbara Tsverukayi and Leon Poshai (2024). *Building Resiliency in Higher Education: Globalization, Digital Skills, and Student Wellness* (pp. 354-375).

www.irma-international.org/chapter/navigating-digital-transformation-in-zimbabwes-higher-and-tertiary-education-post-the-covid-19-pandemic/345232

Ethical and Privacy Implications of the use of Social Media during the Eyjafjallajökull Eruption Crisis

Hayley Watson and Rachel L. Finn (2014). *International Journal of Information Systems for Crisis Response and Management* (pp. 29-41).

www.irma-international.org/article/ethical-and-privacy-implications-of-the-use-of-social-media-during-the-eyjafjallajokull-eruption-crisis/129604

A Systemic Approach to Organizational Safety Modeling and Analysis

Alexei Sharpanskykh (2012). *International Journal of Information Systems for Crisis Response and Management* (pp. 42-56).

www.irma-international.org/article/systemic-approach-organizational-safety-modeling/73019