

Building resilience and disaster risk reduction among pastoralist communities

Lessons from West Pokot county

Policy brief, February 2019

Photo by Megan Hodges on Upsplash

Key Messages and Recommendations

- Investment in long term resilience stabilizes livelihoods and reduces the need for humanitarian emergency response. To this end, there is a need to understand practices that minimize the negative impacts of shocks on pastoralist communities so that future investments are properly directed to similar initiatives.
- Access to necessities, such as healthcare, water, education and markets, together with fodder conservation, ethno veterinary livestock treatment, degraded land restoration, livestock vaccination, livelihood diversification, access to credit and extension services increase pastoralist's resilience to shocks.
- There is a need for forging multi-stakeholder partnerships and collaborations to improve infrastructure, such as roads, market infrastructure and water points, like boreholes, and provide the training and extension needed in order to improve people's livelihoods.
- Another powerful resilience building strategy is investment in human capital through capacity building and formal education, for example school feeding programs and scholarship opportunities to motivate learning and increase literacy levels.

Pastoralism, either nomadic, transhumant or agropastoralism is the main livelihood activity in the arid and semi-arid lands (ASAL's) of Sub-Saharan Africa (SSA). Pastoralists heavily depend on the natural water and pastures for the wellbeing of their livestock. Natural resources in the ASAL have been on the decline due to land degradation, burgeoning population growth that has led to human encroachment of grazing lands. The bleak situation is worsened by the negative effects of climate-change induced shocks, such as droughts. Pastoralists are vulnerable to extreme weather as they derive most of their food and income from livestock. So, it is necessary to develop effective emergency disaster response and build long-term adaptive capacity among pastoralists. Mostly, investments in the ASAL's focus on responding to risks when disasters strike and not on building long term resilience. Resilience building would stabilize livelihoods and reduce the need for humanitarian emergency response to recurrent shocks that often affect millions of vulnerable households.

There is a need to understand what kind of interventions work in the pastoralists' context and the extent to which they contribute to livelihood resilience so as to guide investments in similar initiatives.

This brief builds on the **"Building pastoralists' resilience to shocks for sustainable disaster risk mitigation: Lessons from West Pokot County, Kenya"** study by **Muricho, D.N.**, Otieno, D.J., Oluoch-Kosura, W. and Jistrom, M. who analysed resilience building factors on a household level among the pastoralists of West Pokot County in Kenya. Data was collected on shocks, coping mechanisms and adaptation strategies through focus group discussions (FGD), key informant consultations and individual interviews on 191 households.

Shocks are increasing and becoming more severe

Kenya has had 28 droughts over the last 100 years with the last 20 occurring in the last 50 years. This has left at least 3 million people, the majority of who are pastoralists, in need of emergency aid. From the survey, shocks related to droughts, livestock and crop diseases, human conflicts and the market were cited among those affecting households the most.



Figure 1. Even though pastoralists are more sedentary today, livestock is still their primary livelihood.

Photo by Ewa Wredle, Senior Lecturer, Associate Professor, Swedish University of Agricultural Sciences, SLU.

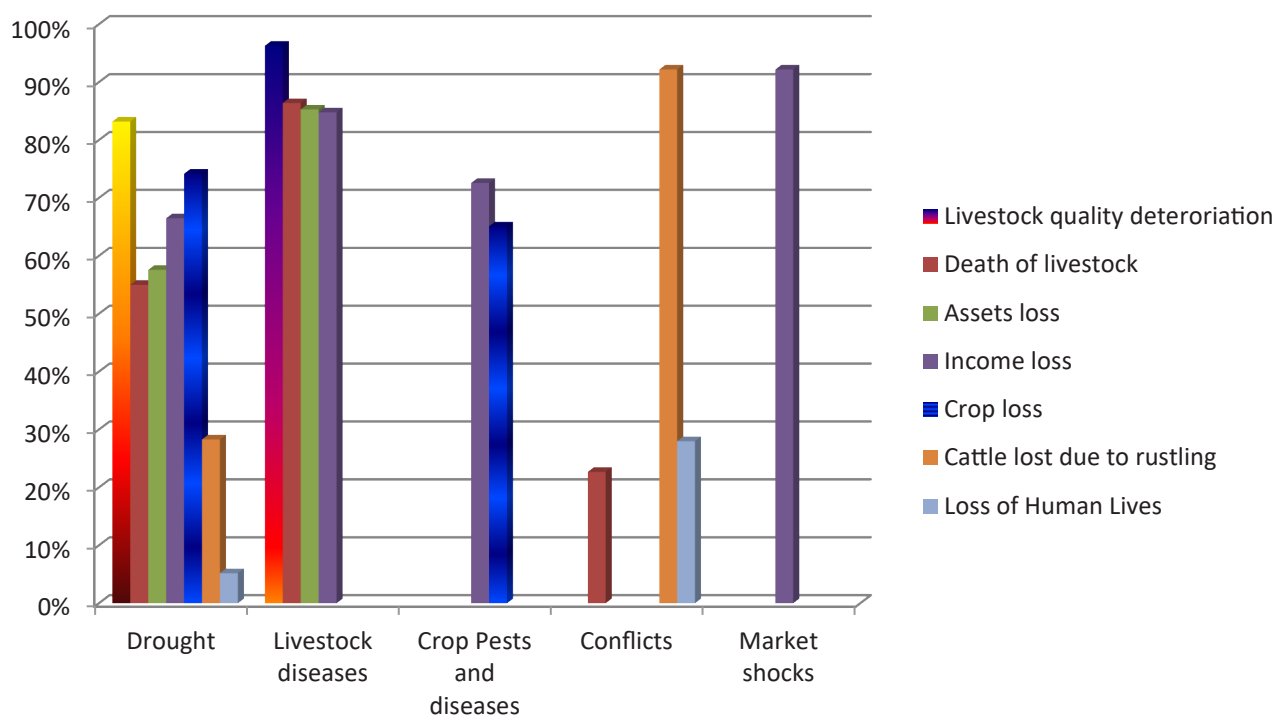


Figure 2. Exposure to shocks and the effects on households.



Figure 3. Traditional method of preserving forage for use during seasons of scarcity.

Photo by Deborah Namayi Muricho, Department of Agricultural Economics, and University of Nairobi, Kenya

Indigenous practices together with external support help pastoralists adapt to shocks

Indigenous or local knowledge possessed by local people enables them to make a living and survive in a given environment. In this study, this knowledge manifested in herd and land management practices such as seasonal livestock migrations to new pastures and ethno-veterinary treatment of livestock as well as pasture conservation.

With droughts, livestock diseases and other shocks are becoming more frequent and severe. At the same time, the land available for open grazing and transhumance is decreasing. So, external support becomes necessary to bolster local practices. These include training on the adoption of production practices that help to mitigate and adapt to the harsh effects of climate change like droughts. Such practices include restoration of degraded land, fodder growing for livestock feed availability (Figure 4), agroforestry, bee keeping, camel rearing and livestock vaccination.

To what extent do the interventions contribute to pastoralist's resilience?

Following the Resilience Index and Measurement Framework (RIMA), resilience is the outcome of the coping and long-term mitigating strategies adopted by the pastoralists. Resilience index was computed based on the income of individual households and their access to food, agricultural and non-agricultural assets, access to basic services, agricultural production technology, social safety nets, economic activity and adaptive capacity. The average index was 0.41, distributed as shown in Figure 4. Ranging between 0 being the least and 1 being the most resilient. Most households are not resilient and are adversely affected when disasters strike.

To estimate what makes some households more resilient than others after exposure to the same shocks, an ordered probit regression analysis was done. The following household characteristics were found to significantly increase resilience:

- Years of formal schooling
- Livelihood diversification
- Proximity to basic services such as water, healthcare and schools

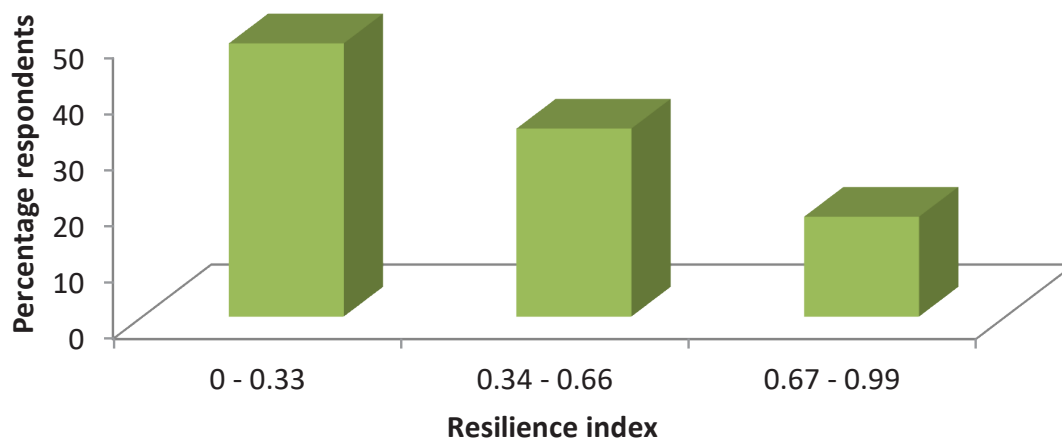


Figure 4. Distribution of households' resilience index.

- Access to credit services and extension advice
- Traditional pasture conservation and ethno-veterinary treatment of livestock
- Restoring degraded land through enclosures and agroforestry
- Improved livestock breeds
- Livestock vaccination

Proximity to services such as healthcare, schools and water reduces vulnerability. For instance, livestock need a lot of water for their survival and has higher chances of survival if there is access to water.

Access to agricultural credit coupled with capacity building and extension advice significantly enhance household resilience. Extension training facilitates the adoption of on-farm practices while access to credit enables households to meet the initial costs of investment in resilience building strategies.

Formal education elevates local knowledge and thus improves decision making that builds resilience. Livelihood diversification minimizes risks during disasters, stabilizing livelihoods.



Figure 5. Fodder grass preserved as standing pasture.

Photo by Deborah Namayi Muricho, Department of Agricultural Economics, and University of Nairobi, Kenya



Figure 6. Pasture during the dry season.

Photo by Ewa Wredle, Senior Lecturer, Associate Professor, Swedish University of Agricultural Sciences, SLU.

Most households could not access formal veterinary services, so indigenous knowledge about ethno-veterinary treatment helped prevent losses due to livestock diseases. Traditional forage conservation increases livestock feed availability during droughts and thus reduces livestock mortality while maintaining their productivity. Land restoration practices, such as establishing enclosures, increases access and availability of fodder for livestock. Improved livestock

breeds that are locally adaptable mature faster and yield more, ensuring food security. Livestock vaccination prevents outbreaks of contagious diseases, preventing mass herd losses. Incorporating other income generating activities, such as bee-keeping and agroforestry, helps household diversify their food, energy and income sources which have high impact on their resilience.

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