

# Creating opportunities for sustainability through understanding of livelihood transformations in the drylands of Sub-Saharan Africa

Policy brief, February 2019

Photo by Megan Hodges on Upsplash

## Key Messages and Recommendations

- Livelihoods in drylands are hit hard when disasters such as droughts strike. This is expected to worsen as droughts increase in frequency and severity.
- Prioritizing investments that build resilience to shocks is key in reducing disaster risk expenditures and stabilizing livelihoods in the drylands. These include investment in livestock wellbeing through vaccination, providing feed through pasture and fodder growing and conservation as well as by improving market infrastructure.
- The public sector needs to increase its budget allocation to such investments. The private sector can support through research collaborations.
- Institutional support for sustainable land management under different land tenure regimes is needed to improve drylands productivity.
- Pastoralists need support services to orient their production to markets.

## Introduction

Most drylands in Sub-Saharan Africa are characterized by sporadic rainfall, degraded landscapes and low productivity. As a result, livelihoods in the drylands are severely affected when disasters strike. Many efforts channelled in the drylands are often in response to a disaster crisis, such as drought and famine. However, these efforts have not yielded much in improving people's livelihoods. There is a need to understand the transformations occurring in the drylands and their impact on people's livelihoods and what sort of interventions are needed in the process.

The Triple L (Land, Livestock and Livelihood) research initiative is rooted in the land-use and livelihood transformations that have taken place in West Pokot, Kenya, over the last three decades. These transformations are relevant and common to vast areas of drylands in Sub-Saharan Africa in general.

This brief is based on the annual Triple L workshop held in February 2018 at the Vi Agroforestry Centre in Kitale. The workshop included presentations on the transitions in the drylands, their drivers and their impact on crop and livestock production and mitigating extreme weather shocks.

## Adaptation and mitigation strategies - transformations that build resilience for sustainable development

Disasters like droughts hit livelihoods in drylands hard. Over the years, the occurrence of droughts has been increasing in frequency and intensity. As detailed in the Sustainable Development Goal 13 (SDG), adaptation and mitigation measures are necessary for improving people's resilience to shocks from extreme weather. This will help in poverty and food insecurity reduction thus leading to the attainment of SDGs 1 and 2.

Climate change and variability combined with population growth and intensive agricultural commodification increased the pressure on land. As a response farmers/herders are increasingly enclosing their pastures (Figure 1). This adaptation strategy facilitates pasture and fodder production and conservation and has greatly reduced livestock mortality rates during drought. Enclosures have been successful in improving degraded landscapes too. With enough livestock feed from

enclosures, some households have adopted improved/cross bred livestock that yield more milk, which helped people to stabilize their food security status. Other forms of adaptation include diversified farm enterprises through bee keeping, fruit growing, camel rearing and planting more tolerant crop varieties such as cassava, millet and sorghum.



Figure 1. Degraded land before establishing enclosures.

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

## Tenure transformations in drylands

Traditionally most drylands were governed by communal land tenure where kinship ties were the basis of ownership and access to land. However, as the population grows together with urbanization and monetarization of the economy, there is a push towards a more individualized process of making land management decisions and subsequently individual tenure.

The consequences of these changes are two-fold. As competition increases, access to and production from land becomes more commercialised. This leads to the replacement of communal land tenure with individual tenure and those with more financial resources gain more control over land. Weaker groups of the population especially women and youth are left with little access to



Figure 2. Rehabilitated land after establishing enclosures.

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

the very resources they depend on for their survival. Furthermore, as climate change advances, there is a need to find both individual and communal land tenure systems that can ensure resilience. This calls for knowledge of different land tenure systems, how they are associated with different land use systems, how incentives affect land tenure systems and the relationship between land tenure and sustainable land management practices that can combat the effects of climate change. The Pastoralists Paradox Project under the Triple L consortium will fill this knowledge gap. The project will be conducted in West Pokot, Baringo, Isiolo and Laikipia Counties in Kenya.

### From livestock keeping to livestock production

The livestock sector is growing globally creating higher demand for livestock and its products. The existing markets are expanding due to population growth, growing incomes and urbanization. This requires a robust and resilient production system that will meet the market demand and requirements. Livestock held on natural grasslands generally produce well below their potential. However, improved management of pastures has the potential to both enhance their nutritional quality and biomass cover, allowing for higher productivity of meat and milk. This would increase the incomes and level of food security for livestock based agro-pastoralists and pastoralists.

Healthy animals are key for any economically viable livestock production. Disease and death of single, or in worst case, many animals can have dramatic effects on a family's livelihood. So, investment in livestock



Figure 3. Livestock trading at Chepareria market.

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

health is important. In addition, food borne diseases, such as Brucellosis pose a risk to human health.

Effectively functioning markets require developed road networks and other infrastructure, such as holding grounds and availing livestock feed and water. Additionally, there is the need to improve access to services, such as extension advice, credit, inputs and market information all essential for higher productivity and marketing.

### Public private partnership can spur development in the drylands

The priority areas identified for investment in the West Pokot livestock sector include establishing livestock improvement centres, pasture and fodder growing, promoting camel rearing and bee keeping and livestock health care activities. In the crop sub-sector, priority areas include promotion of traditional crops and fruits, increasing area under irrigation, extension training and value addition of produce. These investments would pay off by increasing people's adaptive capacity to shocks and thus reduce disaster risk mitigation expenditure.

However, the progress of these investments is quite slow, the main set back being lack of funding. Most countries in Sub Saharan Africa allocate less than 10% of their annual budget to the agriculture sector. In Kenya, the current national allocation to the agricultural sector is 2% and in West Pokot County 4%. While the responsibility of reducing disaster risk lies primarily with both the national and county governments, other non-government actors can support the counties in implementing investment-based projects aimed at reducing risks from shocks by lending their expertise, goodwill and resources. This includes research collaborations on needs established by community members and by disseminating research findings to all stakeholders for necessary action.

The governments, both on the national and county level, need to increase the budgetary allocation of funds to agricultural and livestock programmes that enhance people's livelihoods. These programmes should be clearly indicated in the County Integrated Development Plans with specific and measurable objectives and their outcomes compared with a reduction in disaster risk expenditure. This will result in more vibrant drylands that will not only sustain the livelihoods of pastoralists but contribute to the overall nation development.

This brief was prepared by Deborah Namayi Muricho, Department of Agricultural Economics, and University of Nairobi, Kenya with inputs from Ewa Wredle, Gert Nyberg of Swedish University of Agricultural Sciences, (SLU) and Stephen Mureithi of the Department of Land Resource Management and Agricultural Technology (LARMAT), University of Nairobi, Kenya.

The brief is based on a seminar held on 6th - 10th February 2018 at Vi Agro forestry Centre, Kitale. Presentation slides and minutes for the meeting are available at [www.triplel.se](http://www.triplel.se).



The views and content in this document are the authors' own, and do not necessarily represent the views of SIANI or its members or partners

The Swedish International Agriculture Network Initiative, SIANI, is an open and inclusive network that supports and promotes multisector dialogue and action around our vision of sustainable agriculture for food security, improving nutrition and the eradication of hunger. Our work is aligned with Agenda 2030 and in particular Sustainable Development Goal 2. SIANI believes that agriculture matters - to get involved go to [www.siani.se](http://www.siani.se)

