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Enabling Livelihoods In Transition In Africa's Drylands to Become More Resilient: A Technical Brief



Global Alliance for Action for Drought
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1. Introduction

Africa's drylands – arid, semi-arid, and dry sub-humid areas – are home to half the population of Africa and are vulnerable to multiple threats (Cervigni and Morris 2016). Three-quarters of Africa's agricultural land is on drylands, but climate variability, poor infrastructure, land degradation, conflict, and political marginalization constitute major challenges to drylands. Frequent and severe droughts and related humanitarian crises divert development funding and undermine poverty reduction efforts. Moreover, drylands are expected to expand and shift due to climate change such that some zones may no longer support livestock and intensive agriculture. By 2030, the number of people vulnerable to drought is expected to increase up to 70 percent.

This brief focuses on the Horn of Africa, where a majority of the population has traditionally relied on pastoral and agro-pastoral systems as their main livelihood. Recent changes to pastoral and agro-pastoral systems such as changes in land tenure, increasing urban settlement, and more frequent drought are pushing people out of livestock-keeping and into alternative livelihoods. Opportunities to generate off-farm income are often classified as 1) rural non-farm agricultural activities (e.g., value chains, marketing, input supply, services), 2) rural non-agricultural activities (e.g., small businesses, vendors), and 3) urban-based activities (OECD, 2007). Evidence is mixed, though, regarding the impact of livelihood diversification on resilience, or the ability to mitigate, adapt to, and recover from shocks and stresses (USAID N.d.). Poor people tend to be more involved in agriculture and diversify into other agricultural activities, which are also climate sensitive, so although they have diversified in terms of income streams, they have not diversified in terms of risk (e.g., drought) (Nelson et al. 2016).

The Global Alliance for Action for Drought Resilience and Growth convened a technical meeting in September 2016 to review and reflect on a series of thematic papers that were independently commissioned by DFID and USAID on livelihoods in transition in the drylands of the Horn of Africa. The meeting was the second in a series of Global Alliance-sponsored reviews of key topics to help address critical research gaps and inform programming and policy initiatives. The technical review focused on off-farm, non-agricultural livelihoods aspects, including the current scale and scope of these livelihood activities, opportunities for expansion, and the programmatic implications of both. The meeting objectives were as follows:

1. Increased understanding of livelihood dynamics with a focus on off-farm, non-agricultural opportunities and how to expand these (from both the supply and demand side) as a source of diversifying livelihood risk profiles in relation to climate shocks.
2. Enhanced learning among the Global Alliance members and partners to improve resilience programming in the region.

3. Increased collaboration among Global Alliance members and partners.

The meeting brought together a group of experts to consider livelihood dynamics in the Horn of Africa to develop recommendations for programming and policy. The meeting recognized that investments to improve current livelihoods activities (e.g., herding and farming) and funds for social protection programs are essential in enhancing resilience of dryland populations, however these strategies face limitations. Thus, complementary interventions are needed to support the transition to alternative livelihoods that are less sensitive to climate shocks.

The purpose of this brief is to summarize the meeting of the Global Alliance for Action for Drought Resilience and Growth and to inform programming by USAID Missions in the Horn of Africa. The following sections summarize the four recent research papers on livelihoods in the Horn of Africa that were presented at the meeting followed by programming-related recommendations to expand off-farm, nonagricultural opportunities.

2. Recent research on livelihoods in the Horn of Africa

This section synthesizes the four papers presented at the meeting and highlights key findings from each paper in Boxes 1-4.

2.1 Livelihood interventions reduce vulnerability

Improvements to pastoral and agro-pastoral outcomes are important and have wide-reaching effects, as livestock keeping is the principal livelihood for 40 million people in the Horn of Africa and the Sahel and provides a significant share of income for an additional 40 million people in the two regions (De Haan et al. 2016, 77). Better management of livestock, farming, and natural resources can improve resilience affordably and within the range of current development budgets (Cervigni and Morris 2016).

Interventions to improve livestock productivity such as providing animal health services, removing bulls early, destocking before drought, and improving access to grazing could increase the proportion of resilient households by 50 percent by 2030 (Cervigni and Morris 2016, 11). Additional interventions such as increased

Box 1: Confronting Drought in Africa's Drylands

The book, edited by Cervigni and Morris (2016), assesses the effectiveness and cost of interventions to enhance resilience in drylands. Their main messages are:

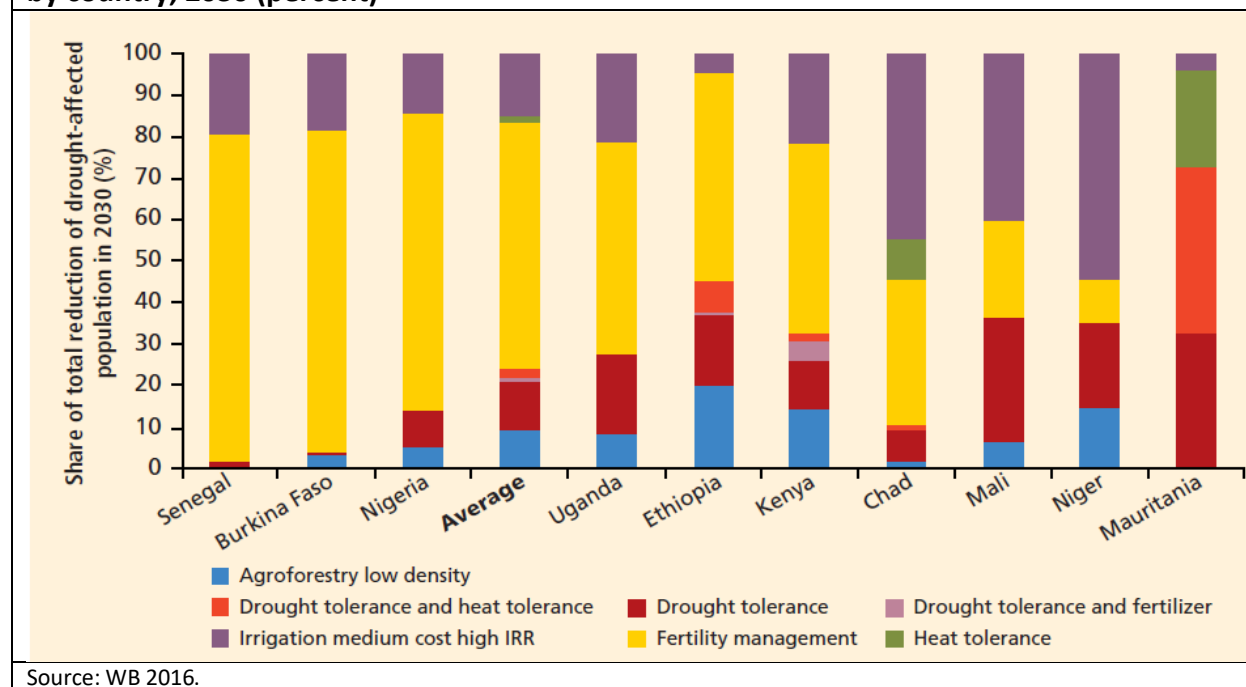
1. Business as usual is not an option
2. Better management of livestock, farming, and natural resources is effective and affordable
3. Interventions supporting current livelihoods need to be complemented by
 - Better safety nets
 - Contingent finance mechanisms
 - Alternative livelihoods
 - Landscape restoration

access to feed and reduced inequality can further reduce the number of people who get pushed out of livestock-keeping.

Investments in rain-fed crop management can reduce drought impacts, and adding trees further increases resilience to drought in both pastoral and agro-pastoral systems (Cervigni and Morris 2016). The impact of livelihood interventions vary across conditions. Technical crop farming interventions reduce vulnerability to varying degrees across countries, based largely on the level of aridity (Figure 1). In drier parts of the semi-arid zone irrigation, soil fertility management practices, and drought-tolerant varieties are likely to have the biggest impact, whereas adoption of fertility management practices was more important in areas with more precipitation. In Horn of Africa countries Ethiopia and Kenya, soil fertility management and low density agro-forestry made large contributions to resilience; irrigation was also important in Kenya.

Landscape restoration of degraded drylands could lead to large gains, even more than smaller scale interventions, by improving productivity, climate resilience, and carbon sequestration and by reducing the risk of uncoordinated and conflicting resilience interventions by different programs in the same area.

Figure 1: Relative contributions of technical interventions in the reduction of vulnerability, by country, 2030 (percent)



2.2 Conditions are changing in the Horn of Africa

One of the most significant trends affecting pastoralism is the fragmentation of rangelands due to changes in land use, privatization, and commodification of rangeland resources (Lind et al. 2016). This fragmentation threatens customary pastoral systems by reducing mobility as an adaptive process to cope with seasonal variations and even drought.

Abebe and colleagues (2016) highlights numerous “push” factors that drive people out of their current livelihoods and toward diversification. “Push” factors have accelerated different patterns of diversification in the past 15-20 years and include the cumulative effects of drought-induced livestock loss, new forms of violence, land loss due to rangeland fragmentation, reduced land productivity, animal disease, and depletion of herds to buy food. These trends influence greater sedentarization and town growth.

Changes are evident in five Horn of Africa pastoralist systems (Lind et al. 2016) (Figure 2). In the **Maasai** system in Kenya's South Rift Valley, the introduction of group ranches in the 1970s has resulted in the sub-division of rangelands. That, in addition to the recent growth of flower

Box 2: Changes in the drylands of Eastern Africa

Lind and colleagues (2016) discuss some paradoxical dynamics of changing pastoralism:

- Mobile and semi-mobile livestock-keeping are still the most productive activity in nearly all drylands although most have diminishing herd sizes.
- Commercialization in the livestock sector and export trade is intensifying, but levels of poverty and vulnerability are worsening.
- The mobility of people with herds has greatly decreased yet the locational separation of household members is more common
- Climate risks necessitate flexibility and adaptability yet rangelands are fragmenting and key grazing resources are being commodified

farms, has benefitted a small minority but pushed others out of pastoralism. The **Somali** Region of Ethiopia has shifted from traditional mobile pastoralism to commercialized livestock keeping for export. In the **Borana** zone in southern Ethiopia, many pastoralists have shifted from traditional pastoralism to smaller-scale commercialized livestock-keeping (i.e., goats and sheep), while many have turned to small scale rain-fed cultivation. Traditional pastoralism and small-scale agro-pastoralism are still prevalent in **Karamoja** (northern Uganda), although many have left livestock keeping and survive by earning small amounts of income through wage labor. In the northern **Bahr el Ghazal** region in South Sudan, traditional livestock-keeping remains widespread, but

many of those who remain active are connected to a wider network of livestock trade and marketing focused largely on cattle. Ongoing conflict has contributed to high livestock losses and shifts to other types of subsistence work.

These different trajectories are influenced by varied levels of access to markets and resources and the nesting of these pastoral systems in diverse political economies and ecological and socio-cultural systems. Awareness of these diverging pathways across and within pastoral systems highlights the challenge of programming to reduce vulnerability and strengthen resilience. Conflict in pastoral areas has been heavily influenced by power struggles across sub-national offices and by various trans-national actors making it difficult for customary structures and central governments to manage violence occurring in pastoral areas.

Figure 2: Livestock flows in eastern Africa and pastoralist systems covered by the Lind et al. (2016) study



Source: Map adapted by Lind et al. 2016 from Gertel and Heron 2011, ICPALD 2015, Majid 2010, McPeak and Little 2006, and Simpkin 2005.

Looking to the future, conditions will continue to change and will become even more challenging. The population in drylands is expected to grow, depending on the fertility scenario, by 58-74 percent by 2030, putting increasing demand on already limited natural resources

(Cervigni and Morris 2016). At the same time, climate change projections indicate expansion of drylands, where livelihood options are limited. Higher population density could result in conflict over limited resources on the one hand, and – because of factors such as increased market size and cost savings in provision of public services – create opportunities for economic development on the other.

2.3 Diversification alone does not always improve resilience

Livelihood diversification as a mechanism for coping with shocks and stresses needs to be better understood in the local context in which programs are being implemented and for specific demographic groups such as youth and women.

In some cases, pastoralists earn income through alternative sources until they can rebuild their herds and return to livestock-keeping as a primary livelihood (Lind et al. 2016). Some adaptive strategies, though, such as switching to smaller herds, allow pastoralists to maintain livestock but make it harder to rebuild herds; smaller herds tend to be milked intensively and have a lower reproductive rate (Lind et al. 2016). Those who combine livestock-based livelihoods with other income have the highest level of wellbeing and the least vulnerability.

Recent analysis of two programs in the Horn of Africa – the Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) program in Ethiopia and the Build the Resilience and Adaptation to Climate Extremes and Disasters Program (BRACED) in Karamoja, Uganda and Wajir county in Kenya – found mixed results regarding the influence of livelihood diversity on recovery after drought (Nelson et al. 2016).

In Borana, Ethiopia, PRIME program **households with multiple diversified livelihoods were more likely to recover**. Not surprisingly, Borana households that *only* engaged in climate-sensitive activities (I.e., crops and livestock) were *less* able to recover after a drought than

Box 3: Resilience and Risk in Pastoralist Areas: Recent trends in Diversified and Alternative Livelihoods

Case studies were conducted in three areas – Karamoja in northeastern **Uganda**; Borana Zone in southern **Ethiopia**; and Garissa County in northeastern **Kenya** (Abebe et al. 2016).

Waged/self-employed activities have increased a lot but are mainly low waged.

Diversification can have negative impacts (e.g., unregulated charcoal making, firewood collecting, rain fed agriculture in key livestock production areas, alcohol production).

Livelihood diversification that improves dryland resilience without damaging the environment and/or conflicting with the predominant livelihood (pastoralism) include:

- activities that support and/or complement livestock production (e.g., sustainable collection and sale of natural resins, gum arabic; bee keeping)
- dairy sales and processing; and livestock-related businesses
- salaried employment.

households that were more diversified (e.g., on-farm and off-farm). In particular, households engaged in casual wage labor, salaried work, or are self-employed recovered better from drought. In contrast, **in Karamoja, neither the number of livelihoods nor livelihoods with different risk profiles affected the impact of drought** on HH food consumption. In Karamoja, a larger percentage of households had diversified into low wage jobs (e.g., casual wage laborers, self-employed, selling charcoal) that were not sufficient to reduce the impact of shocks.

Women are more likely to take advantage of new town-based opportunities and in some cases control more of the income but are risk-prone (Abebe et al. 2016). Women sell milk, harvest fodder, engage in petty trading (e.g., *khat*), and find domestic work in national and international urban centers. Domestic work puts women at high risk of abuse and non-payment (Mahmoud 2016). Selling *khat* and engaging in prostitution pose numerous risks to women and especially increase women's risk of rape.

Young people lack job opportunities, skills, and aspirations. In southern Ethiopia, lack of opportunity in rural areas pushed youth into town (Gode), where opportunities were also scarce. Young people needed three to four years to get established, and these have been described as abject, miserable years. Youth from poor/marginalized clans have a particularly difficult time. Moreover, pastoralism and agro-pastoralism are such strong parts of traditional livelihoods and culture that many youth aspire to return to pastoralism and agro-pastoralism. This desire, combined with the absence of role models who have successfully transitioned to other livelihoods such as urban employment, limits people's aspirations and their desire to maintain urban employment. As a result, people work just long enough to earn money to buy livestock and return to rural areas. Employers thus struggle to retain qualified workers.

In addition to the "push" factors described above, "pull" factors or opportunities encourage people to diversify their livelihoods: better employment and business prospects in towns and urban areas, as well as education, security, and health. Increases in the number of people going to school indicates interest in obtaining skills needed for non-pastoral employment (Little 2016, 9). Moreover, improvements to roads and transport services have improved market access and promoted the commercialization of livestock trading for wealthier households. However, unlike wealthier pastoralists who diversify in urban businesses to mitigate risk, many poorer households that move to urban areas do so because they were pushed out of pastoralism and lack capital and skills needed to diversify into higher income opportunities (Little 2016). Such households may be further restricted to low paying casual work by lack of marketable skills, education, and supporting policies.

All diversification and livelihood changes come with risks (e.g., economic, social, health, environmental). **Programming should focus on minimizing risks and achieving long-term benefits.** Diversification can work where opportunities exist to engage in high-return activities

and non-climate-sensitive activities with high remuneration. Livelihood diversification in areas where such opportunities do not exist will not necessarily lead to better adaptation. In terms of programming, investment in expanding economic opportunities that diversify livelihood risk profiles is a lynchpin for increasing the resilience of vulnerable households and communities moving out of pastoral-based livelihoods.

3. Recommendations for future programming

Based on the evidence, complementary approaches are needed to (1) improve current livelihoods, (2) strengthen safety nets, and (3) promote alternative livelihoods that are less climate sensitive (WB 2016, 33-34). This section presents the key opportunities highlighted during the meeting about expanding off-farm, non-agricultural opportunities. Broadly speaking, programming needs to focus on maximizing positive aspects of migration and urbanization and reduce potential risks.

3.1 More private investments are needed to create employment opportunities

More private investment in employment opportunities, particularly outside the livestock and crop agriculture sectors, **can provide more diverse livelihood options** that are less sensitive to climate risks. A balanced portfolio of investments, including promotion of micro-enterprise with an emphasis on small, medium, and large scale enterprises, will provide greater opportunities for off-farm livelihood employment. Accelerating migration and urbanization in the drylands requires greater focus on creating supply and demand for employment in urban areas. Engagement with regional governments and private financing through Public Private Partnerships (PPP) can help to provide direct and indirect opportunities for employment, smooth the transition process, and contribute to resilience of urban and rural communities.

Public Private Partnerships can incentivize foreign and domestic private investment. In many Horn of Africa states for instance, large ongoing infrastructure projects can create opportunities for local small businesses by providing growth opportunities through supply contracts in sectors such as roads, transportation, drinking water, waste management, and telecommunications.

In addition to quantity, the composition and quality of finance are also important. In some countries in the Horn (e.g., Kenya), a recent credit boom and high interest rates have resulted in some areas of the economy being overly indebted while smallholders remain cut off from any access to credit. Small enterprises need financing mechanisms tailored to specific groups to increase access, such as subsidized financing for women, especially in smaller urban centers.

To stimulate lending to micro, small, and medium-sized enterprises (SMEs), banks could make greater efforts to make loans accessible to smallholders. Banks with support from sub-national and national government have a special role to play as a stable source of SME finance,

highlighting the need for long-term focus by banks to directly benefit borrowers. Lastly, effective and efficient SME lending and contracting to SMEs can also be stimulated by the establishment of well-functioning regulatory frameworks at the sub-national level that protects small investors and borrowers.

3.2 Job readiness programs are needed, especially with work experience opportunities for youth

Offering non-agricultural job-readiness before and during migration is important, especially for youth. While employers seem to struggle to find qualified individuals ready to work in the regions' small urban areas, the underlying theme in the studies presented is work readiness. Many job seekers lack the skills needed to gain and maintain entry-level jobs. There is a sense that young Afar and Somali lack 'soft skills' – reliability, trustworthiness, and ability to work well as part of a team. In other cases, workers lack skills necessary to maximize opportunities resulting from jobs. For example, In Turkana, many young people left herding to find temporary work with oil sub-contractors, but there was no support – financial literacy and planning, setting up bank accounts – to help workers to build up assets; nor was there job placement support after the work ended. When the work ended, these young people found it difficult to return 'home.'

Employment promotion programs are needed to:

- develop job-related skills, abilities, confidence, and hands-on job experience
- provide career development workshops such as literacy and numeracy training, industry-specific training, and soft-skills in areas like food services, hospitality, and recreation.
- address psycho-social problems and address cultural barriers to seeking alternative job opportunities
- provide career guidance to enhance youth aspirations
- identify success stories and share information so that people can make informed choices, such as the costs and benefits of migrating to town or internationally
- engage with employment brokers, set up small trading centers, and provide work placement especially for newcomers in urban areas
- ensure protection issues are taken into account, particularly for women and other vulnerable groups
- promote savings behaviors.

Funds from Governments, NGOs and civic efforts focused on these issues will be critical in future.

3.7 Address negative issues of alternative livelihoods related to migration

Programming needs to address demographic impacts of rapid population growth, promote reproductive health, and address impacts on education and gender. Policy development is needed to allow and facilitate free movement of population and cross-border trade to allow faster and cheaper movement of food during crises such as drought. Market regularization and rationalization of formal/informal trade will make it easier for people to migrate across borders for work and for employers to hire skilled laborers. Environmental regulation enforcement and land conservation are needed to protect natural resources, especially pastoral and agro-pastoral lands. Public policy needs to encourage investment in urban housing.

3.3 Rural-Urban linkages need strengthening

Several actions can help smooth the transition from rural to urban living. First, programs should **understand how social capital influences migration/urbanization** and should reinforce the positive aspects of these processes, such as rural-urban flows of money, information, and goods. The mobile money system, M-PESA, for example, makes it easier to transfer money to and from friends and family in urban/rural areas or abroad (Box 4). **Infrastructure and service provision need to be improved** to allow easier and more affordable movement between rural and urban areas (e.g., roads, access to services). **Social protection mechanisms should be mobile**, allowing freedom of movement between rural with urban systems; basic urban social services can further smooth the transition. Providing client cards to migrants could enable them to access social transfers, health, and education services even when they move, easing their transition to urban areas.

Conflict mitigation will be important to smooth tensions between newcomers and people already settled in urban areas. Some tensions exist due to higher skilled communities from highlands/other regions getting employment and job opportunities in arid areas due to the high industrialization policy and development of big agricultural schemes in the region.

Integration between national macro-economic and sector-specific policies and local initiatives needs to improve. For example, development partners can work with governments to develop and implement policies to improve reproductive health, trans-border and urban/rural movement, and other initiatives which support programs to build resilience and reduce poverty.

3.4 Strengthened safety net programs are also needed

Safety nets are a type of social protection mechanism that targets the poorest and most vulnerable and provides support such as cash transfers, public works, and in-kind support (e.g., fee waivers, school feeding) (Cervigni and Morris 2016, 166). Safety net programs have the potential to smooth income and reduce negative coping strategies among shock-affected populations, but limited and unpredictable funding is a major constraint. Safety nets funded at

1 percent of GDP, a level considered reasonable by the development community, is expected to cover the needs of drought-affected populations in just 4 out of 10 dryland countries in 2030 (Cervigni and Morris, 17). Adding resilience-enhancing interventions reduces the cost of relying on safety nets such that 1 percent of GDP would fully cover the drought-affected population living in drylands in some Horn of Africa countries (e.g., Uganda) and reduce the cost to below 1 percent of GDP in others (i.e., Ethiopia, Kenya). In countries where safety net spending at 1 percent of GDP would not cover all of the drought-affected population (e.g., Niger), promoting alternative livelihoods that are less vulnerable to drought and other shocks is most important. **Contingent finance** mechanisms such as sovereign insurance can help governments respond to occasional urgent needs.

3.5 Support shifts from temporary coping strategies to longer term adaptations

Even after migrating to new areas, many people rely on coping strategies and behaviors to which they are accustomed, and they fail to implement actions geared toward longer-term livelihood security. With limited awareness of alternative strategies, individuals engage in short-term, reactive coping strategies such as selling off productive assets like livestock and supplementing their income through charcoal production. These coping strategies can result in reduced ability to earn income in the future and, as in the case of charcoal, degrade the resource base. While these strategies may help deal with occasional short term climate risks, they are insufficient for dealing with the contemporary reality of more frequent and severe drought. Programming needs to help communities graduate from ‘coping’ to ‘adapting’ through mechanisms such as livelihood diversification, sustainable natural resource use, and identifying sustainable strategies to cope with long-term climate change.

Box 4: M-PESA

M-PESA allows people to transfer money with their mobile phones to pay bills, withdraw cash, and purchase items from stores (Mas and Radcliffe 2010). In just three years after its introduction in 2007, the Kenyan mobile phone operator Safaricom reported that it had 9 million registered M-PESA customers, most of whom were active users. As of January 2010, Safaricom reported that US\$320 million per month in person-to-person (P2P) transfers and US\$650 million per month in cash deposits and withdrawals at M-PESA stores.

3.6 Transform Education in ASALs

Basic education adapted to the drylands and ongoing transitions will be the long term foundation of resilient livelihoods, economic growth, and well-being in the Horn of Africa. Pastoralists constitute the majority of the socially and economically vulnerable groups in the region. Private education institutions have expanded in the drylands, but curriculum and sector-specific standards are lacking. Thus, the education programs are not necessarily giving people the skills they need for employment. In Afar and Somali, programs could be put in place to

enhance the skills among students in trades such as carpentry, masonry and brokers could match employers and those seeking employment.

Key program interventions include working with governments to develop policies to provide schooling for pastoralist groups and develop standardized curriculum and methods of delivery. Youth also need support to define and achieve their aspirations and develop skills to succeed in the formal job market. Programming should include mentorship components.

3.8 Promote policies that support innovation

Innovations that offer livelihood opportunities beyond natural resources, commodities, and land and labor power are critical for driving development. Rapidly expanding markets and pockets of success in the region help reduce poverty and provide employment opportunities for growing urban populations. Opportunities exist in the retail sector for the rapidly expanding middle class in countries such as Kenya and Ethiopia. One of the most well-known and successful innovations in Kenya is M-PESA (see Box 4). The benefits extend beyond mere convenience. A study found that rural Kenyan household income has risen by 5 to 30 percent as a result of adopting M-PESA, and many start-ups have been created using M-PESA's operations as a foundation. Further innovations from this part of the world are very likely.

4. Conclusion

Resilience is a vast subject area and this brief is by no means exhaustive. Instead, this brief looks in detail at a few issues – livelihood diversification in urban settings and non-agricultural sector contributions to resilience. Strategies such as providing multiple livelihood pathways can help strengthen the adaptive and transformative capacities of individuals, communities, and systems and increase resilience to future shocks. A greater variety of technical expertise will be needed to support a positive transition process. The studies guiding this assessment rightly point out that no single solution or technology will enhance resilience in drylands, including diversification; rather a combination of complementary actions is needed.

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