RESILIENCE EVIDENCE FORUM REPORT

APRIL 18, 2018

USAID
FROM THE AMERICAN PEOPLE

CENTER FOR RESILIENCE

TABLE OF CONTENTS

KEY TAKEAWAYS 3

FUTURE AREAS OF FOCUS 5

1. INTRODUCTION 6
   - 1.1 Why the forum, why now? 6
   - 1.2 Framing Resilience / Key Resilience Principles 7

2. MOTIVATING ANALYTICS 8
   - 2.1 Early Action and Value for Money 9
   - 2.2 Sustainable Poverty Escapes 10

3. SOURCES OF RESILIENCE 12
   - 3.1 Diversifying Livelihood Risks 12
   - 3.2 Social Protection and Graduation 14
   - 3.3 Resilience and Social Capital 15
   - 3.4 Financial Inclusion and Resilience 16
   - 3.5 Human Capital as a Transformative Capacity 18
   - 3.6 Aspirations and Psychosocial Dimensions of Resilience 19
   - 3.7 Gender Equality and Social Inclusion 20
   - 3.8 Sustainable Agriculture and Natural Resources 22

4. CASE STUDY: COLLECTIVE ACTION, COLLECTIVE IMPACT: KENYA'S ENDING DROUGHT EMERGENCIES (EDE) 24

5. FUTURE DIRECTIONS 26
   - 5.1 Resilience in Urban Settings 26
   - 5.2 Resilience in Fragile Contexts . . . 27

THIS PAGE: © KELLEY LYNCH FOR USAID; **FRONT COVER:** © NANCY MCNALLY / CATHOLIC RELIEF SERVICES

© DEPROSC NEPAL FOR USAID BUSINESS LITERACY PROGRAM

ACRONYMS

ACCCRN	Asian Cities Climate Change Resilience Network
CDAPS	Community Development Action Plan
CWG	Citizen working group
EDE	Ending Drought Emergencies Initiative
FAO	Food and Agricultural Organization
GDP	Gross Domestic Product
GOK	Government of Kenya
GRAD	Graduation with Resilience to Achieve Sustainable Development
IP	Implementing partner
MSME	Micro, small and medium enterprises
MUAC	Middle upper arm circumference
NDMA	National Drought Management Authority
NGO	Non-governmental organization
ODI	Overseas Development Institute
PREG	Partnership for Resilience and Economic Growth
PRIME	Pastoralist Areas Resilience Improvement through Market Expansion
TANGO	Technical Assistance to Non-governmental Organizations
UN	United Nations
USAID	United States Agency for International Development
USG	United States Government
VEO	Violent extremist organization

The United States Agency for International Development (USAID) organized the Resilience Evidence Forum in October 2017 to take stock of the latest evidence on resilience and its implications for policy and programming. Over 150 people participated in the forum, including USAID headquarters and field-based staff, implementing partners, non-governmental organizations (NGOs), United Nations organizations, donors, universities, research organizations, and partner-country government officials. The evidence presented provided new insights on sources of resilience that enable households, communities, and countries to manage and adapt to adversity and change without compromising their well-being.

EARLY ACTION AND VALUE FOR MONEY: A recent study established the value for money of investing in resilience to recurrent crises, as well as responding earlier and more effectively when shocks such as droughts occur. It is estimated that every $1 invested in resilience and early response over a 15 year period will result in nearly $3 in reduced humanitarian spending and avoided asset losses.[1] Questions still remain, however, about which interventions or combinations of interventions—among the many shown to build resilience at the individual, household, community, and systems levels—have the greatest impacts in different contexts and additional evidence is required to inform investment decision making.

SUSTAINABLE POVERTY ESCAPES: Research on the alarming rates at which people are escaping and then falling back into poverty in the face of shocks and stresses underscores the broader relevance of resilience to sustainably reducing hunger, poverty and malnutrition. It also highlights the need to look at the compound nature of shocks and stresses over time, including the everyday shocks and stresses that inhibit the ability of households and communities to sustainably escape poverty.

SOURCES OF RESILIENCE: Some sources of resilience are context specific. However, the growing body of evidence on resilience makes clear that many sources of resilience transcend contexts. As outlined below, these sources of resilience cut across and transcend sectors, underscoring the importance of a holistic approach to building and strengthening resilience.

- **Social capital** (bonding, bridging and linking social capital) is the ability to lean on your social network for support, both to seize new opportunities and as social support in times of need. This includes bonding social capital within groups, bridging social capital between groups, and linking social capital to people or groups in positions of power and influence. A wide variety of development projects work with groups such as village savings and loans groups and have the potential to strengthen social capital. However, few explicitly aim to do so.
- **Financial inclusion** in the form of access to savings, credit, insurance, and remittances provides an important source of resilience in many contexts. Financial services contribute to resilience through investments that build assets that households and communities draw on in times of need. They also help speed recovery. Digital financial services are rising in importance in many contexts and can lower transaction costs, including for remittances.
- **Aspirations, self-efficacy, and confidence to adapt** are important psychosocial sources of resilience. Evidence shows that people with aspirations and confidence to adapt are less likely to use negative coping strategies following a shock. Self-efficacy and perceived control over one's life are also positively associated with the ability to recover from shocks. Translating these important findings into programmatic implications remains a significant challenge. Graduation programs that include mentorship hold promise in this regard.

1 USAID. 2018. Economics of Resilience to Drought in Ethiopia, Kenya and Somalia. Report produced by Courtenay Cabot Venton. https://www.usaid.gov/sites/default/files/documents/1867/Summary_Economics_of_Resilience_Final_Jan_4_2018_BRANDED.pdf.

- **Women's empowerment and gender equality** are also important sources of resilience in many contexts. Women's empowerment has been shown to be a strong predictor of whether households can escape and remain out of poverty in the face of shocks and stresses. It is also an important outcome in its own right. Refinements in measuring women's empowerment are helping development programs tailor interventions to address context specific needs.
- **Diversification of livelihood risk** can help households maintain their food security in the face of shocks and stresses by reducing risk exposure. While some households can manage risk by increasing agricultural activities, accumulating assets and savings and accessing insurance, many others will need to step a foot out of agriculture or move out of agriculture altogether to reduce their exposure to climate risk, including through migration to rural hubs and towns. Their choice to do so depends on the risk environment, the range of livelihood opportunities available to them, and their assets, resources, and aspirations.
- The **sustainability of natural resources** is foundational to household and community resilience. Strong evidence exists on the contributions of climate smart agriculture to resilience, but scaling these proven strategies has been challenging because they require long-term investments, supportive local governance structures, and behavior change. The spread of Farmer Assisted Natural Regeneration in Sahelian West Africa demonstrates that, over time, scaling through farmer to farmer information sharing is possible.
- **Access to markets** is yet another important source of resilience, be it markets for agricultural products and services or labor markets targeted by migrants seeking to increase their incomes and diversify their livelihood risk. Programing has tended to focus on agricultural markets. However, new research shows that removing barriers to labor markets can have a substantial impact on rural resilience by increasing income during the lean season.

© USAID SENEGAL

COMMON MEASUREMENT PRINCIPLES:

Despite some differences, the resilience measurement community—including donors, universities, and implementing partners—has coalesced around several common measurement principles. The first is the need to measure not only well-being outcomes like hunger, poverty and malnutrition, but the shocks and stresses that households and communities experience and the potential sources of resilience (or resilience capacities) that explain why some households and communities are able to maintain their well-being in the face of these shocks and stresses, while other (less resilient) households and communities are not. Second is that resilience is best captured analytically through multifaceted measurement approaches, not a single indicator. Third, collecting both objective and subjective data using mixed methods is critical, as is incorporating temporal dimensions—ideally through panel designs that follow the same households and communities through time—to capture the dynamic nature of resilience.

© CFNA

RESILIENCE IN URBAN SETTINGS: The potential impact of shocks can be greater in urban settings, given the population density, pace and scale of urbanization, and interlinked nature of urban sub-systems. Urban resilience programs have focused primarily at the systems level and rarely linked analyses to household level outcomes. Evidence on impact is just beginning to emerge through two measurement approaches—*resilience dashboards* that track the resilience capacities of different urban subsystems and post-event analysis that models the pathways through which shocks become disasters and how disasters translate into economic and social impacts. An important finding is that fragmented urban institutions and infrastructure create challenges for balancing economic growth with environmental safeguards and resilience.

RESILIENCE IN FRAGILE CONTEXTS: In 2010, a third of the world's extreme poor lived in fragile states. Just eight years later, the proportion has increased to one half and is projected to reach two-thirds by 2030. Illegitimate governance, weak institutions, conflict, and violent extremism have also led to unprecedented levels of humanitarian need in recent years, including four famines or near famines in 2017. The ultimate goal must be to address the underlying causes of conflict and fragility. However, there is an urgent need for understanding what makes households and communities more resilience in the face these types of shocks as a complement to conflict mitigation and management efforts.

MEASURING RESILIENCE OF MARKET, SOCIAL, AND ECOLOGICAL SYSTEMS: Much of the progress on resilience measurement has been made at the household and community scales. However, it's recognized that market, social, ecological, and other systems are an important sources of resilience for households and communities, as well as an important locus of resilience in their own right. Reliable systems scale resilience measures remains elusive and constitute an important measurement gap. Some innovative approaches hold promise in this regard such as the use of tree density as a proxy for ecological systems resilience and measuring the spread of Farmer Managed Natural Regeneration.

SHARED LEARNING AND TRANSLATING EVIDENCE INTO ACTION: There is broad consensus that a collaborative approach to resilience measurement and learning is urgently needed to ensure that the growing body of evidence on resilience informs donor and government investment decision making, as well as policy and program design. Data sharing is fundamental to moving forward, but we need to act now on what we are learning. We need to be more systematic and timely in translating measurement into policies and programs implications and in distilling lessons from pilots about which investments have the greatest impacts.

The current gap between the growing body of evidence on resilience and programming aimed at strengthen resilience exemplifies the problem and challenge. The approach to translating evidence into action must be 'good enough' rather than perfect and tighter time frames on data generation and analysis are needed. Our approach must be 'fit-for-purpose' and in line with the urgency of building resilience to recurrent crises.

© MERCY CORPS

1.1 WHY THE FORUM, WHY NOW?

The concept of resilience has been around for some time and features prominently in disciplines ranging from psychology and ecology to engineering. However, it wasn't until the large-scale drought emergencies in the Horn of Africa and Sahel in 2011–12 that building resilience to recurrent crises emerged as a development priority among governments, donors, and a wide array of partners.

By 2013, the concept had gained traction and began to appear in the titles of workshops, proposals, and events around the globe. Yet, there was limited evidence to support this enthusiasm, and resilience ran the risk of becoming little more than a buzzword. One refrain at the time was that resilience was "old wine in new bottles." Another was, "resilience cannot be measured."

Since then a substantial and growing body of evidence on resilience has been generated. Not only have we collectively demonstrated that resilience can be measured, we have gained incredible insights into sources of resilience that enable households and communities to manage and adapt to adversity and change. We also have demonstrated the broader relevance of resilience to sustainably ending hunger and poverty everywhere we work.

To take stock of the evidence on resilience and its implications for policy and programming, the United States Agency for International Development (USAID) organized the Resilience Evidence Forum in October 2017. Participants included over 150 USAID headquarter staff, implementing partners, non-governmental organizations (NGOs), United Nations organizations, donors, universities and research organizations, and partner-country governments.

During the two-day meeting in Washington D.C., researchers and participants shared the latest evidence

on strengthening resilience in different contexts in four plenary and 12 side sessions. They further examined approaches to resilience measurement and analysis that have generated this evidence, along with different ways resilience evidence has been used to scale up and support government efforts to end recurrent crises.

The meeting concluded with a discussion of the ramifications for policy and programming, including the need to work across sectors through collective action, and the institutional and operational changes needed to do so. Potential areas identified for future attention include strengthening and measuring resilience in urban settings and in fragile contexts.

1.2 FRAMING RESILIENCE / KEY RESILIENCE PRINCIPLES

Shocks and stresses are increasing in frequency and intensity around the globe. Climate and weather variability, population dynamics, local and global price shocks, illness and disease, political instability, and conflict are combining in complex ways that threaten the lives and livelihoods of people and erode hard fought development gains. Billions are at risk; national and regional economies are being undermined; and the cost of humanitarian response is unsustainable and rising.

USAID defines resilience as "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." More simply, resilience is the ability to manage adversity and change without compromising current and future well-being.

USAID's initial resilience efforts focused on people and places subject to recurrent crisis where these crises have resulted in repeat, large-scale humanitarian emergencies. However, the high rate at which people around the world are escaping poverty, only to fall back into poverty in the face of shocks and stresses makes it clear that building resilience is also essential to sustainably reducing poverty, hunger, malnutrition and other well-being outcomes everywhere we work.

Strengthening resilience requires strengthening three overlapping capacities. Absorptive capacity is the ability to minimize exposure and sensitivity to shocks and stresses and to take preventative measures and appropriate coping strategies to avoid permanent negative impacts. Adaptive capacity is the ability to make proactive, informed choices and changes in livelihood and other strategies in response to longer term social, economic, and environmental change. Transformative capacity refers to the governance mechanisms, policies and regulations, cultural and gender norms, infrastructure, community networks, and formal and informal social protection mechanisms that constitute the enabling environment for systemic change.

Strengthening these capacities requires long-term, multi-sector investments to expand and diversify economic opportunities, increase access to financial services, and strengthen local capacity to manage conflict and natural resources and effectively respond to shocks when they occur. It also requires foundational investments in education, health, self-efficacy, and other forms of human capital.

Strengthening resilience also requires a change in mindset. This includes treating people and places subject to recurrent crises as development priorities, rather than perpetual humanitarian risks. It also includes recognizing that shocks and stresses as perennial features of the landscapes in which we work, not anomalies. This in turn promotes proactive efforts to respond to and manage complex risks and encourages flexible programming to respond at scale when shocks occur. Strengthening resilience also requires acknowledging the compound nature and complexity of shocks and stresses, and the corresponding need for governments and development partners to work across sectors and bridge the divide between humanitarian and development assistance. Finally, the concept of resilience shifts the focus from deficits and vulnerabilities to the capacity and agency of people, households, communities, systems, and countries and how these can be strengthened to achieve and sustain well-being outcomes in the face of shocks and stresses.

2. MOTIVATING ANALYTICS

© MORGANA WINGARD FOR USAID

Despite some differences, the resilience measurement community—from donors to universities and IPs—have coalesced around several common resilience measurement principles.[2] Together, the operationalization of these principles has led to the body of evidence presented throughout the REF. This section highlights some of the major resilience measurement principles governing this evidence.

One major resilience measurement principle is that resilience cannot be captured through one indicator. Rather, it is best captured analytically through multifaceted measurement approaches. Resilience analyses should examine the interrelationship between shocks and stresses, resilience capacities, and well-being outcomes over time. This requires actually measuring shocks, capacities, and well-being—all core elements of strengthening resilience.

There also is agreement on the need to capture *both objective and subjective data* using mixed methods. This is because objective data is comprised of standardized measures such as for weather and commodity prices, whereas subjective data generally relies on self-reported quantitative and qualitative data and tends to focus on events experienced, the perceived severity of shocks and stresses, the ability to recover from them, and coping strategies used.[3]

Mixing qualitative and quantitative methods can strengthen the credibility (that is, the internal and external validity) and usefulness of findings. While quantitative data can show what is happening, qualitative data can help to explain why something is happening and add a subjective perspective. For example, FAO RIMA's qualitative research in Somalia found that villages had very different words for resilience, which helped them contextualize the questions on their quantitative surveys and improve the reliability of the responses.[4]

Another common measurement principle is the need to *capture the dynamism of resilience* through measures that incorporate temporal dimensions. *High frequency*

recurrent monitoring surveys, for instance, can vastly improve our understanding of resilience by measuring coping strategies and resilience capacities used in response to shocks.[5] Recurrent monitoring data can reveal how people make decisions, whether their responses lead to more positive or more negative outcomes, and why some households are doing better than others. Recurrent monitoring surveys also can capture combinations of shocks and their downstream effects.[6]

Linking resilience analysis findings and conclusions to program and policy recommendations strengthens their usefulness, and allows for *adaptive management*. A TANGO International evaluation of the Pastoralist Areas Resilience Improvement through Market Expansion (PRIME) project in Ethiopia provides an example of how a clear research design can translate into programmatic implications.[7] The baseline and subsequent studies have looked at how food security changes over time in response to shocks, what kind of capacities households use to manage shocks, and how some capacities are more effective in dealing with shocks than others. Recent recurrent monitoring found that early receipt of formal cash and food transfers can lead to early recovery, reducing the need for prolonged humanitarian assistance.[8] The findings also provided a basis for recommending that programs focus on building social capital, supporting informal safety nets and community groups, and maintaining and enhancing assets. In Bangladesh, research found that households with high women's empowerment managed better than others. In Somalia, (SOMREP) positive deviant analysis underscores the importance of savings.

In terms of the level of data collection, *household*, *individual*, and *community level data* are valuable for understanding these multiple dimensions of resilience and resilience capacities and how they interact. Combining primary and secondary data can provide a wider and deeper understanding of the context of shocks, coping strategies, and recovery capacities. Fuller use of secondary data can improve the cost effectiveness of evaluation and other research. A repeated theme in the Forum was the importance of putting communities in the drivers' seats in measuring resilience, fostering collaboration and cross learning, and creating data pools for findings to be shared and compared across stakeholders.

A critical question for the future is how to capture resilience at levels besides the household level (and the interaction of resilience at different levels). TANGO, for instance, has found examples where households are resilient but their communities are not. Future work to capture the interaction between communities and households is planned. In general, there is a need for more clarity on what systems resilience means to move the needle on this. In addition, greater focus on behavioral research and measurement techniques is needed to support programming related to behavior change.

2.1 EARLY ACTION AND VALUE FOR MONEY

The REF featured two tracks of analytic work that exemplify the measurement principles, above, and complement USAID's mainstream approach for capturing resilience. In the next two sections, we'll discuss each of these analytic tracks in turn—first, the value for money analyses and second, analytic work on sustainable poverty escapes.

2 For example, the Resilience Measurement Practical Guidance series by USAID (2018), available at https://spark.adobe.com/page/rSG16sulleW7d/ E-learning modules are available at https://www.agrilinks.org/post/resilience-training-modules-now-available.

3 Vaughan, E. (2018). Resilience Measurement Practical Guidance Note Series 3: Resilience Capacity Measurement. Produced by Mercy Corps as part of the Resilience Evaluation, Analysis and Learning (REAL) Associate Award.

4 d'Errico, Marco (2017). *Measuring household resilience to food insecurity: RIMA-II*. FAO [PDF Slide deck]. Retrieved from https://www.fsnnetwork.org/sites/default/files/Marco%20d%E2%80%99Errico%20B.pdf.

5 Sagara, B. (2018). Resilience Measurement Practical Guidance Note Series 4: Resilience Analysis. Produced by Mercy Corps as part of the Resilience Evaluation, Analysis and Learning (REAL) Associate Award.

6 Frankenberger, Tim (2017). Robust approaches to resilience measurement, evaluation, application, and focus on climate shocks. USAID, TOPS REAL, TANGO {PDF Slide deck]. Retrieved from https://www.fsnnetwork.org/sites/default/files/Robust%20approaches%20to%20resilience%20measurement%2C%20evaluation%20application.pdf.

7 Ibid.

8 Ibid.

A key rationale for early investing in resilience is that it reduces the costs associated with recurrent crises, including lost lives and livelihoods, the cost to national and regional economies, and the unsustainable costs of responding to repeat, large-scale humanitarian emergencies in the same places every few years. Early action leads to more efficient and more cost effective emergency response by helping people, households, communities, and systems to better manage risks, by enabling international and national actors to respond faster, and, in some instances, by reducing the likelihood of risks occurring at all. A growing body of evidence shows the value for money of investments in early resilience action by reducing future humanitarian liabilities and creating sustainable escapes from poverty.

Early action in Kenya in 2016–17 aimed to protect livestock assets, incomes and food security of pastoralists facing drought by providing livestock feed and supplements, water, animal health treatments and borehole rehabilitation. The value of the animals saved, extra milk produced, and increased value due to improved body condition shows that for every 1 dollar spent on livestock interventions, households had a return of 3.4 dollars. Similarly, early action in Ethiopia in 2017 resulted in even higher benefits to cost. For every 1 dollar spent on livestock interventions the household had a return of 6.4 dollars.[9]

Timely humanitarian assistance (food aid, food or cash–for-work, and hazard insurance) combined with social capital development (informal safety nets and community groups, household asset building, access to savings and credit, and access to communal natural resources) strengthened resilience to drought for USAID Ethiopia PRIME households in communities that had high intensity engagement with the project. They had longer standing food security and recovery following a drought compared to households in communities with low intensity engagement.[10]

© WINROCK INTERNATIONAL FOR USAID KISAN II PROJECT

A 2017 study comparing a range of investment and response scenarios in Kenya, Ethiopia and Somalia modeled the costs, avoided losses, and benefits of three scenarios: a late humanitarian response, an early humanitarian response, social safety net transfers and investments in resilience that lead to increased incomes. The findings show that combining early humanitarian response, safety nets, and investments in resilience is far more cost effective that responding after a shock, when prices have destabilized and households have already engaged in negative coping strategies. The study found that for every US$1 spent on safety net, or resilience programming, between US$1.8 and US$2.7 in aid costs are offset (respectively). When avoided losses are incorporated, the net benefits are even higher (between US$2.3 and US$3.3 depending on the context).[11]

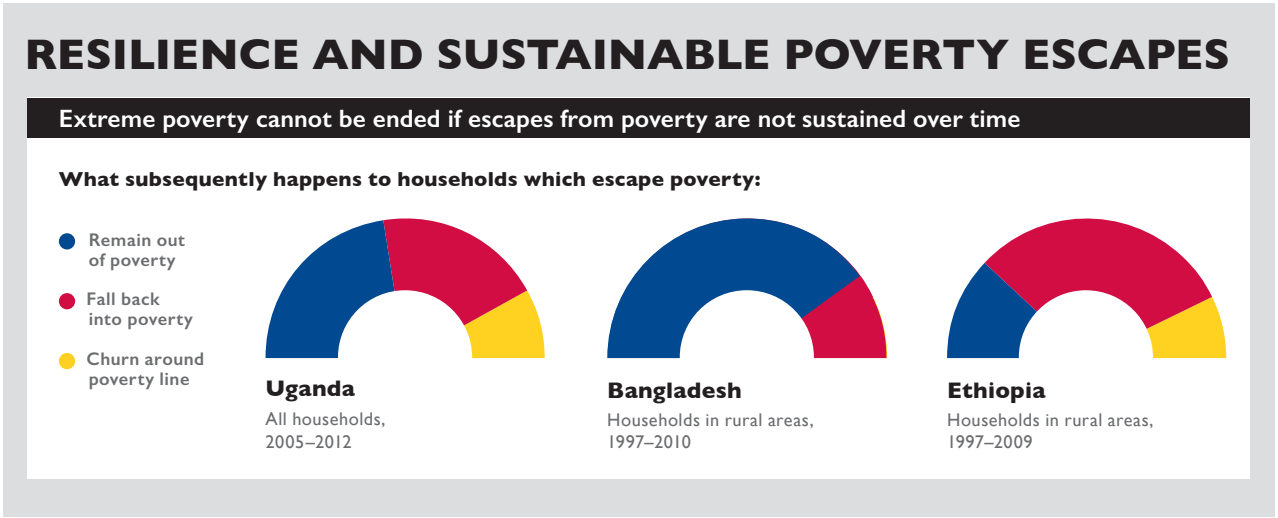
2.2 SUSTAINABLE POVERTY ESCAPES

The concept of resilience has been most commonly applied to contexts or populations subject to recurrent crises and development programs focused on humanitarian assistance. However, investments in resilience programming can support a wider range of development objectives. Recent evidence on poverty dynamics underscores the broader importance of resilience for ensuring that people not just escape poverty temporarily, but stay out of poverty over time.

Three case studies conducted by ODI on the poverty dynamics of households in Bangladesh, Ethiopia, and Uganda used household level panel data and qualitative life histories to examine what happens over time to households that escape poverty. In Uganda, most people either remain out of poverty or fall back into poverty and a small portion churn around the poverty line (all households 2005). In Bangladesh, the majority of people remain out of poverty and a small portion fall back into poverty (households in rural areas 1997–2010). In Ethiopia, a larger percentage of people fall back into poverty. About a quarter of the people remain out of poverty and a small portion churn around the poverty line (households in rural areas 1997–2009). Events driving households back into poverty include a series of shocks in quick succession, such as ill health, or natural events (floods and drought); lifecycle stresses (birth, death, household formation, marriage); or systemic stressors (changes in prices of food, agricultural inputs and outputs, or wages, other market shocks, employment opportunities, land degradation, etc.).[12] Other studies have found downward pressures to include climate effects on agriculture, gendered labor practices, as well as limited availability of basic services, market access, and social capital.[13]

PROGRAMMATIC IMPLICATIONS: The sources of household resilience identified by the research suggest focal points for programming: productive asset ownership such as land and livestock; smaller household size, especially those with educated household heads; engagement in non-farm activities; well-being of female heads of household; and remittances, especially those transferred to female-headed households. More emphasis on understanding the dynamics of poverty for households just above the poverty line could help to identify approaches to prevent them from falling below the poverty line. Beyond the household level, taking a systems approach in understanding sustainable poverty escapes is particularly important, especially in considering the impacts of migration, adaptive livelihoods and indirect interventions at other levels (such as investments in road and transport infrastructure).

FIGURE 1: Sustainable poverty escapes (ODI)



9 FAO (2017). FAO Early investment in the Horn of Africa. Return on investment key findings [PDF Slide deck]. Retrieved from https://www.fsnnetwork.org/sites/default/files/FAO%20EWEA%20ROI%20Key%20Findings_Resilience%20Evidence%20Forum_Oct2017_280917.pdf.

10 USAID and TANGO (2017). Ethiopia PRIME Recurrent Monitoring Survey 2: Value for Money analysis (Preliminary Results) [PDF Slide deck]. Retrieved from https://www.fsnnetwork.org/sites/default/files/DC%20VfM%20presentation_TANGO.pdf.

11 Cabot Venton, Courtenay (2018). Economics of resilience to drought in Ethiopia, Kenya and Somalia Executive Summary. USAID Center for Resilience. [Power point slide] Retrieved from https://www.agrilinks.org/event/economics-resilience-ounce-prevention-pound-cure.

12 O'Planick, Kristin, Anna Garloch, Syed Hashemi, Andrew Sheperd (2017). Resilience and sustainable poverty escapes [PDF Slide deck]. Retrieved from https://www.fsnnetwork.org/sites/default/files/Resilience%2C%20poverty%20escapes%20REF%20Oct%202017.pdf.

13 Innovations for Poverty Action (2017). The ultra poor graduation model: influencing global debates. https://www.poverty-action.org/impact/ultra-poor-graduation-model.

3. SOURCES OF RESILIENCE

© USAID SOMALIA

Strengthening resilience requires long-term, multi-sector investments to strengthen sources of resilience including expanded and diversified economic opportunities, social capital, access to financial services, increased human capital, gender equality and social inclusion, and sustainable agriculture and natural resources. These sources of resilience should not be seen as ends in themselves, but rather as resilience capacities that enable people, households, communities and systems to effectively respond to shocks and stresses when they occur.

3.1. DIVERSIFYING LIVELIHOOD RISKS

Livelihood diversification has long been recognized as a risk management strategy and source of resilience. However, it is complex and not always clearly associated with either positive or negative changes in livelihoods. Diversification of activities, income and or assets may

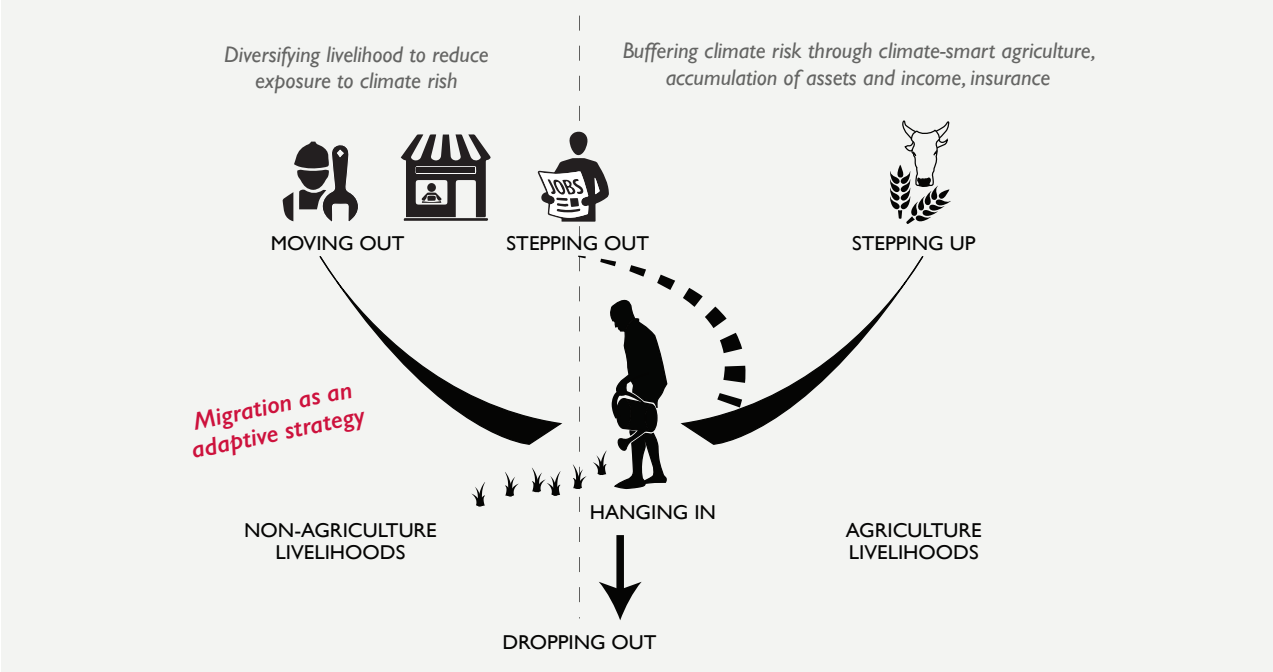
Diversifying risk portfolios: Sorghum farmers in South Central Somalia "diversifying" into sesame production made lots of money and used the money to buy cattle. They successfully diversified their income streams and assets and became wealthier. However, not only were these income streams and assets vulnerable to the same hazard (drought), sesame offered significantly fewer options in the event of a crop failure—a failed sorghum crop could at least be fed to livestock as fodder. The shock of 2011 led many in this group to lose everything whereas even less wealthy households that had diversified outside of the rural economy—maybe only with some laborers in towns or other low return income streams with facing a different set of hazards—lost less and were more able to recover. The issue is not how diversified the activities are, but how diversified the risk portfolio is. (Maxwell 2017)

be less important than diversification of risk. Context is especially important in shaping both the risk environment and the range of livelihood opportunities open to people to diversify risks.

Three main adaptive pathways to livelihood diversification include:

- Stepping up within agriculture/livestock and buffering risk through agricultural diversification, increasing agricultural trade and income and increasing the ability to build savings and/or buy insurance
- Stepping partially out of agriculture/livestock to engage in livelihoods that have a different risk profile as a complement to agriculture-based livelihoods
- Moving out of agriculture/livestock entirely and into livelihoods that have a different risk profile

FIGURE 2: Pathways to livelihood diversification



STEPPING UP AND MOVING OUT OF KENYA'S LIVESTOCK SECTOR: The commercialization of pastoralism in Kenya's Northern drylands, has enabled those with greater control over natural resources to 'step up' by amassing larger herds, privatizing some key rangeland resources and taking advantage of the growing demand for livestock linked to Nairobi's insatiable demand for meat. This allows them to better withstand and recover from drought and other shocks. However, poorer herders with dwindling herd sizes are generally are less able to capture private land and market opportunities and withstand recurrent shocks, leaving many to 'hang on' with no real prospect of stepping up and driving others to 'drop out' of the pastoral economy and into activities with low income or wages and/or negative long-term environment or social outcomes. These include casual labor (which is often not in high demand), farming (which is extremely risk-prone in dry land areas) or natural resource extraction. All of these are "diversified livelihoods sources", but tend to trap people in a cycle of poverty and vulnerability that is difficult to escape.

More promising opportunities for diversification may include proactively 'stepping out' by shifting to small ruminants, but this is highly context specific and dependent on market demand. Shifting to agriculture is another option that can complement livestock production at the household level. But success is highly contextual—where rainfall is highly variable, it is riskier than herding given mobility is a key strategy for managing drought risk. There may also be opportunities in trade, marketing and service activities linked with pastoralism however these activities are unlikely

to absorb the number of people moving out or dropping out of pastoral production as a primary livelihood source.[14]

STEPPING OUT THROUGH MIGRATION: Migration to urban labor markets is a common adaptive strategy for managing seasonal hunger for millions of people every year. While migration can entail significant risk, particularly for young men and women, it can also afford a critical source of resilience and income for the migrant and household members that remain at home. Migration is particularly adaptive for people and places that experience recurrent, large-scale covariate shocks that impact all livelihoods in a geographic area as it allows them to diversify by engaging in economic activity in a wholly different risk environment.

Evidence from Ethiopia (2014–2016) shows differences in the 'resilience effect' of diversifying income through migration across activities, wealth groups, and livelihood zones. In Amhara region, poor households often engage in more than one type of casual labor—local agricultural labor (linked to local demand from middle and better off households), construction labor (linked to regional towns and Addis Ababa), and migrant labor to work on large farms (linked to farms in other regions). But the hazards for each are different, ranging from local drought risks to urban labor market risks to migration risks. While migrants might be somewhat insulated from drought, they could be more vulnerable to crackdowns on migration or fluctuations in labor markets. Research in one area found that many better off households that used to hire labor from poorer households can't afford to anymore, so people in these poorer households now migrate to meet cash needs. In another area, poorer households used to depend on urban migration for income but higher local demand now allows them to remain near home.

Changes over time in the demand side of labor markets and the full costs of migration—not only transportation and living costs, but the social costs of splitting up families and the burdens placed on women left behind —will influence the 'resilience effect' of migration.[15]

Evidence from Bangladesh (2008) shows that removing capital constraints to migration can have positive impacts on seasonal hunger and well-being. An experimental study found that cash or credit travel subsidies induced more households to migrate, the migrants earned $110 on average at the destination and saved and carried back about half of the income. The families of these migrants consumed 600 calories more per person per day, raised their per-capita expenditures by 30 percent, increased protein consumption by 35 percent, and spent more on child education. In doing so, they effectively eliminated the lean season. In terms of value for money, the same amount of food in the form of food aid would cost five times as much.[16]

PROGRAMMATIC IMPLICATIONS. Livelihood diversification can spread risks and increase income streams or assets—but it doesn't always achieve that. Livelihood security and resilience, not diversification per se, should be the goal. Increasing diversification at the household level—farmers expanding into livestock, pastoralists expanding into farming and the other activities noted—requires sequenced, layered, and integrated programs that specifically promote progress towards resilience goals. Geographical boundaries of policies and programs need to extend beyond pastoralist areas to include growth oriented non-livestock economic opportunities, including urban employment. Reducing gender inequality in access to education and labor opportunities is a critical issue for program and policy designs supporting livelihood diversification. Migration should be a choice and rural livelihood programs and policies should help to prepare individuals and households who make that informed choice based on their assets, resources and aspirations.

3.2. SOCIAL PROTECTION AND GRADUATION

An increasing number of governments are investing in shock responsive social protection systems and safety nets as a means of addressing the needs of the extreme poor and cushioning the impact of shocks when they occur. A growing body of evidence shows the importance of safety nets in reducing household vulnerability,

especially when they combine cash transfers with support to strengthen other resilience capacities, including access to financial services and resilient livelihood pathways. In Ethiopia, a comparison of Productive Safety Net Program (PSNP) and non-PSNP households following a drought shows that PSNP households do better in both in terms absorbing the initial impact of the shock on their food secure and in terms of recovery to pre-drought food security status (2 years vs. 4 years). Households with more than one hectare of land fare even better. Non-PSNP households with less than one hectare of land were the most vulnerable to the initial impact of drought and had the slowest recovery.[17]

Across countries, the Graduation Approach—initially developed by BRAC in Bangladesh in 2002 and subsequently adapted across 60 programs in 40 countries—is a powerful programming model that strengthens resilience capacities for the extreme poor. The model integrates social protection (consumption support, health, and social integration), livelihood promotion (market linkages, asset transfers and technical skill development), financial inclusion (savings, financial literacy, linkages to formal financial inclusion), and psychosocial support (coaching and caseworker support to build confidence and life skills). A study of 21,000 graduation program participants in six countries showed that one year after the program ended—three years after receiving the assets—program participants on average had significantly more assets and savings, spent more time working, went hungry on fewer days, and experienced lower levels of stress and improved physical health compared to those who did not participate in the program. The study showed that, overall, for every dollar spent poor households had $4.33 in long-term benefits. Assessing whether or not these benefits translate into greater resilience in the face of shocks and stresses remains an area for further investigation.[18]

A version of the graduation approach is being tested in six Sahel countries in West Africa. The World Bank's Adaptive Social Protection (ASP) complements government cash transfer programs with an integrated support package including coaching, savings groups, community sensitization, life skills training, micro-entrepreneurship training, capital injection (cash grants), and market access. The program, which targets 600,000 households, is implemented through different hybrid models including government workers, NGOs, community facilitators, and private sector providers. An ongoing study of 25,000 participants in 5 countries is comparing the impact of three different packages of support (core plus psycho-social support; core plus cash grants, core plus psycho-social support and cash grants plus one control group) on resilience outcomes (food security, income diversification and risk management strategies). The results will be available in 2019.[19]

3.3 RESILIENCE AND SOCIAL CAPITAL

Social capital (bonding, bridging and linking social capital) is a powerful source of resilience in a wide variety of contexts. In all cases, social capital consists of reciprocal obligation networks that give people the ability to lean on each other during times of need. Bonding social capital entails the horizontal links between family members, close friends, and neighbors; bridging social capital connects communities and groups; and linking social capital connects social networks with some form of authority. Social capital makes collective action towards goals possible and is a capacity that people, households and communities can draw on to protect against, mitigate or manage shocks or stresses.

14 Maxwell, D. (2017). Livelihoods Diversification and Resilience in Dryland Areas. Feinstein International Center. [Presenter notes for Resilience Evidence Forum] https://www.fsnnetwork.org/sites/default/files/Main%20Points%20-%20Livelihoods%20Diversification%20%28FINAL%29%20%282%29.pdf.

15 Boudreau, Tanya (2017). Off farm income in Ethiopia and resilience: Evidence from Amhara and Tigray regions. Food Economy Group. [Power point slide for Resilience Evidence Forum] [no external link] https://www.fsnnetwork.org/sites/default/files/DIVERSIFYING%20LIVELIHOODS%20AND%20RESILIENCE%20FINAL%20CUT.pdf.

16 Goldberg, Nathaniel (2017). Encouraging seasonal migration to address income insecurity. Evidence Action, Innovations in Poverty Action. [Powerpoint slide for Resilience Evidence Forum] link] https://www.fsnnetwork.org/sites/default/files/Goldberg_Seasonal%20Migration.pdf.

17 Knippenberg, Eric and John Hoddinott (2017). Shocks, social protection and resilience: Evidence from Ethiopia. Cornell University [PDF slide deck]. Retrieved from https://www.fsnnetwork.org/sites/default/files/3%20Knippenberg%20Building%20Resilience%20%28USAID%29.pdf.

18 Innovations for Poverty Action (2017). *The ultra poor graduation model: influencing global debates*. https://www.poverty-action.org/impact/ultra-poor-graduation-model.

19 Bossouroy, Thomas (2017). *Resilience and productive inclusion in the Sahel. The six-country adaptive social protection (ASP) program.* The World Bank [PDF slide deck]. Retrieved from https://www.fsnnetwork.org/sites/default/files/4%20USAID%20conference%20-%20Productive%20Inclusion%20and%20Resilience%20in%20the%20Sahel.pdf.

MEASURING SOCIAL CAPITAL: Social capital is challenging to measure because it is context specific, and assumptions about why, how and with whom people in different social and geographic contexts

1establish relationships that form social capital are not always understood. The contribution of social capital to resilience depends on the nature of the shock and changes over time. Mixed-method approaches (qualitative and quantitative) are critical for measuring social capital, as many dimensions are not easily quantified.[20]

SOCIAL CAPITAL AND RESILIENCE: Notwithstanding measurement challenges, a growing body of evidence shows that social capital does play a role in strengthening resilience capacities. A Mercy Corps multi-country study in Uganda, Nepal, and the Philippines provides strong evidence that bonding capital contributes to resilience. Following shocks in these settings, households with bonding social capital were more food secure, were more able to recover through investment in productive assets, had better quality shelter, and believed they were better able to cope with risks. Evidence on the role of bridging social capital in making households more resilient was weaker, showing highly variable expectations of reciprocity and obligation across groups, depending on context and the type of disaster or shock. Evidence on linking social capital and resilience was mixed. For example, in the Nepal case, the weak links to government among Nepalese affected by the 2015 earthquake suggests that over reliance on governments that are fragile for support during an acute disaster may not effectively contribute to resilience—as compared to others that are stronger.[21] Program evaluations of USAID resilience projects in Ethiopia, Uganda, Kenya, Niger, and Burkina Faso found that bonding and bridging social capital are significantly associated with the ability of households to maintain and even increase their food security in the face of droughts. Linking capital was also positively associated with the ability of households to maintain their food security in the face of shocks in Niger and Burkina Faso, but not other countries. The same looked at the relationship between social capital and wealth status and found that wealthier households have greater expectation to receive assistance through social networks, but are not always more likely to provide assistance.[22]

PROGRAMMATIC IMPLICATIONS: Building social capital across humanitarian and development initiatives can strengthen resilience capacities by contributing to women's empowerment, promoting behavior change, and transforming of social norms. Going forward, there is scope for strengthening social capital in programs that promote collective action. For example, working through self-help groups, or supporting market facilitation through socio-economic networks can strengthen bonding and bridging social capital. More explicit intention and measurement of social capital can help to enhance resilience programming. Improved understanding of the interaction and relationship of different capitals—for example, how social capital influences production of human capital and vice versa—can also help to identify strategic entry points to stimulate the development of different types of social capital. Better understanding of existing social capital in communities also can help to ensure that programs do not unintentionally disrupt it. There is potential for developing alternate/creative qualitative measures of social capital and more research and measurement of the 'break points' on social capital—that is when a social network and the social capital connecting people within it is overwhelmed by shocks or stresses to the point they no longer have resources to support others.

3.4 FINANCIAL INCLUSION AND RESILIENCE

Financial services, including credit, savings, insurance, payment mechanisms and transaction accounts, make it possible to move resources across time and space: from good years to bad, and from locations with normal conditions to others suffering from natural disasters. Financial inclusion—a key resilience capacity—allows for broad based participation of poor and marginalized groups in these financial intermediation processes. Financial inclusion can be defined as access to useful and affordable financial products and services that meet the

needs of low income and vulnerable groups delivered in a responsible and sustainable way. Cross-country evidence shows the positive impact of financial inclusion on increasing household resilience to external shocks. *Digital payments* enhance the impacts of risk sharing (formal and informal insurance) by lowering transaction costs and expanding the social network able to contribute, including across borders. They also increase efficiency and targeting for cash transfer programs. These improvements in efficiency enhance the impacts of financial inclusion on household resilience. For example, following a drought in Kenya, mobile money (M-PESA) users experienced no reduction in consumption compared to 6–10 percent reduction in consumption among nonusers.[23] Among women in Niger targeted for cash transfers after a drought, digital payments increased their diet diversity, the amount of food consumed, and women's empowerment.[24] In the Philippines, international remittances responded to income shocks related to rainfall, replacing 60 percent of lost household domestic income.[25]

Removing barriers to savings accounts, including cost and behavioral barriers, helps to smooth consumption in the face of unexpected setbacks. In Nepal, no-fee accounts offered to women led to a smaller drop in income after an expensive health shock compared to those without an account.[26] Savings groups in Malawi, Uganda and Ghana had positive—though not definitive—impacts on resilience to income shocks following a drought.[27] In Chile, participants with access to a savings account reduced consumption cutbacks associated with a negative income shock by 44 percent.[28]

Limited demand for *insurance* from low-income households is a persistent problem for providers. However, when these households do invest in insurance they may be better able to manage food insecurity and income shocks.[29] In Senegal and Burkina Faso women who invested in insurance had higher average yields and better-managed food insecurity and income shocks. In the same study, women were less likely to invest in insurance, preferring savings. Rainfall index insurance led to higher investments in agricultural production in Ghana.[30]

Using econometric methods and panel data to estimate the impact of insurance and asset transfers on the well-being of individuals and households Cisse and Ikegami (2017) found that index-based livestock insurance builds resilience capacities (measured by household herd size and child middle upper arm circumference (MUAC)) among Northern Kenya herders. A related study found that combining heifer training and asset transfers also built resilience capacities. A preliminary conclusion of this work is that interventions that address financial market failures—e.g., through insurance or credit/grants—causally increase resilience for rural poor.[31]

Mercy Corps' resilience research found that *informal financial* systems tend to be much more important in immediate aftermath of disaster/crisis but the results did not convince policy makers of the value of investing in informal finance. The research also looked at formal insurance products and found that businesses may be better consumers than individuals because they're subject to bigger losses.

---

20 Mock, Nancy (2017) Social Capital and Human Capital. [Audio transcript of Resilience Evidence Forum session on social capital] https://www.fsnnetwork.org/resilience-evidence-forum-october-3#Human.

21 Petryniak, Olga (2017). Social capital: examining what it means for resilience. Mercy Corps. [Powerpoint slide for Resilience Evidence Forum] Retrieved from https://www.fsnnetwork.org/sites/default/files/MC%20Social%20Capital%20%26%20Resileince.pdf.

22 Longworthy, Mark (2017). *Two hypotheses about social capital in relation to resilience.* TANGO. [Powerpoint slide for Resilience Evidence Forum] Retrieved from https://www.fsnnetwork.org/sites/default/files/DC%20social%20capital%20presentation_TANGO.pdf.

23 Jack, William and Taveneet Suri (2014). *Risk Sharing and Transaction Costs Evidence from Kenya's Mobile Money Revolution.* American Economic Review. Vol. 104. No 1, January.

24 Aker, Jenny C, Rachid Boumnijel, Amanda McClelland, Niall Tierney (2016) "Payment mechanisms and anti poverty programs: Evidence from a mobile money cash transfer experiment in Niger." *Economic Development and Cultural Change. Vol. 65, no. 1.* (*October 2016*).

25 Yang, Dean and Hwa Jung Choi (2007). "Are remittances insurance? Evidence from rainfall shocks in the Phillipines (English)." *The World Bank Economic Review Vol. 21, no. 2* (*May 2007*).

26 Chiapa et al 2015.

27 Karlan, Dean, Beniamino Savonitto, Bram Thuysbaert and Christopher Udry (2017). "Impact of savings groups on the lives of the poor." *Proceedings of the National Academy of Sciences of the United States of America. March 21, 2017.* 114. http://www.pnas.org/content/114/12/3079.

28 Kast, Felipe and Dina Pomeranz (2014). "Saving more to borrow less: Experimental evidence from access to formal savings accounts in Chile." *Working Paper 20239 National Bureau of Economic Research.* (*June 2014*) http://www.nber.org/papers/w20239.

29 Delavallade, Clara, Felipe Dizon, Ruth Vargas Hill, Jean Paul Petraud (2015). "Managing risk with insurance and savings: Experimental evidence for male and female farm managers in West Africa." *IFPRI 144.*

30 Rouse, Rebecca (2017) *Impact of financial inclusion on resilience to external shocks.* Innovations for Poverty Action [Power point slides]. Retrieved from https://www.fsnnetwork.org/sites/default/files/Rouse%20%20USAID%20Reslience%20Forum%20Oct%203%209.12.17.pdf.

31 Barrett, Chris (2017). Development resilience: What evidence do we have so far? [Power point slide] Retrieved from https://www.fsnnetwork.org/sites/default/files/Barrett%20USAID%20Resilience%20Evidence%20Forum%20Oct%202017.pdf.

PROGRAMMATIC IMPLICATIONS. These studies demonstrate that financial services contribute to resilience through both ex ante investment and ex post recovery effects and offer practical guidance on the design of products. Going forward, more research is needed on the efficacy of insurance (including how to improve product design, standards for ensuring quality, pricing, helping people understand contract terms and what they are paying for, and uptake) and under what circumstances insurance vs. cash transfers vs. emergency credit is the best over all use of resources in different contexts. Research is also needed on whether formal insurance products compete with informal risk management mechanisms and how best to situate insurance within broader risk management portfolios of households, communities and countries. Stronger monitoring and evaluation is needed to show the impacts of various insurance schemes as well as mobile money. Greater attention is needed to gender-informed product design as women and men may have different needs, preferences and priorities for financial services. It is also important to create enabling environments that address constraints to finance by women and other groups traditionally excluded from formal financial systems (lack of formal identification cards, lack of appropriate forms of collateral, limited mobility to access banks, and lower phone ownership). More attention to consumer protection as it relates to mobile money also is needed.

3.5 HUMAN CAPITAL AS A TRANSFORMATIVE CAPACITY

Resilient people and households need human capital to manage adversity and change. This includes being well nourished, healthy, and possessing the education, skills, and acumen to pursue new and resilient livelihood opportunities. Investments in education and health play a key role in developing these resilience capacities. Over the long run, such investments can also help to shape cultural and gender norms that constitute the enabling environment for systemic change. Education and health are not only key capacities, but also key development outcomes related to well-being and broader transformative change.

EDUCATION AND HEALTH AS TRANSFORMATIONAL CAPACITIES: Human capital, defined as education or training of an adult household member, was found to contribute to resilience and reduced need for humanitarian assistance in multiple countries such as Ethiopia[32], Bangladesh[33], and Burkina Faso and Niger[34]. Experience from West Africa supports a theory of change that links investments in girls education and reproductive health to resilience strengthening. Reproductive health can be defined as the rights and ability of a woman to control her reproductive life. While the cultural norm of high fertility has served an important socio-economic function in the past when mortality rates in the Sahel were extreme, in today's environment, high fertility creates stress affecting the health and nutrition of women and children, compromising the sustainability of natural resources and overburdening weak social services (health, education). High fertility is driven by cultural norms that value large family size, early age at marriage and child bearing, and short birth intervals. These factors, along with gender norms that limit women's control of decisions related to her reproductive life and time use further increase fertility rates. Lack of education, especially for girls, contributes to early marriage and lack of decision-making power. Evidence shows not only a strong link between women's education and fertility, but child stunting and use of skilled birth attendants. Conversely, higher education levels helps women to use information and services and diversify livelihoods beyond subsistence agriculture. Educated women who possess the education, skills and acumen to pursue new and resilient livelihood opportunities are a valuable human resource at the community level.

The challenge of building human capital is compounded by strong cultural preferences for large families, gender norms limiting women's decision making power, weak and fragile systems at the local level to provide education and health services. Uncertain donor funding streams for reproductive health and girls' secondary education also limit progress in strengthening these critical human capital resilience capacities.

PROGRAMMATIC IMPLICATIONS: Multi-sectoral approaches to resilience programming provide scope and opportunity for increasing girls' education, strengthening reproductive health and shaping cultural and gender norms that support resilience. Resilience programing in the areas of water, agriculture/livestock, or natural resource management can be entry points for dealing with sensitive cultural issues (family planning, women's empowerment) and for main-streaming girls' education and reproductive health activities. Multi-sectoral approaches also provide opportunities to engage men and other opinion leaders (older women, religious leaders) that extend beyond traditional family planning communication channels. These channels also provide a chance for engaging youth, for example, through future husband schools, girls' groups and other venues. These types of groups can build social capital and promote behavior change as young people move into adult roles.

In sum, reproductive health and girls education are key long-term transformational resilience capacities. They touch on sensitive cultural and gender issues that require change in norms and behaviors that cannot be addressed by the education or health sectors alone. The multi-sectoral platforms offered by broad based resilience programming provide the opportunity to address some of the underlying issues that compromise human capital development and perpetuate the vulnerability of future generations.

3.6 ASPIRATIONS AND PSYCHOSOCIAL DIMENSIONS OF RESILIENCE

In recent years, a growing number of studies stress t he need to expand our analysis of resilience beyond conventional factors such as assets, financial services, or governance and to consider less tangible elements, such as risk perception, self-efficacy, or aspirations. Emerging evidence from empirical studies in different parts of the world suggest that in order to understand the determinants of resilience, better insights are needed not only into the institutional and economic mechanisms that influence people's decision in relation to shocks and stressors, but also around the social, perceptions, subjective motivations and cognitive elements of individuals, households, and communities. While many resilience capacity measures are based on objective, observable factors, emerging work on measuring subjective resilience offers insights into 1) people's understanding of the factors that contribute to their ability to anticipate, buffer and adapt to disturbance and change and 2) an individual's cognitive and affective self-evaluation of their household's capabilities and capacities in responding to risk (Jones and Tanner, 2017).[35]

SELF-EFFICACY, ASPIRATIONS AND CONFIDENCE TO ADAPT: During the 2014/15 drought in the lowland pastoral and agro pastoral areas of Ethiopia, a survey of PRIME households revealed that people with a higher sense of control over their own life are less likely to engage in negative coping strategies such as pulling out children from school, getting into debt, selling off productive assets and reducing consumption. The level of *self-efficacy* (belief in one's ability to succeed in a specific situation or complete a task) had a positive and statistically significant relation with an index of recovery, which shows that people's perception of control over their own life is positively correlated with their actual ability to recover from shocks/stressors. *Aspirations* (hopes, desires, ambitions, and wishes to attain or accomplish a particular goal) *and the confidence to adapt* (belief in one's ability to

32 Smith, L., Frankenberger, T., Nelson, S. (2018). Feed the Future Ethiopia Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) Project Impact Evaluation: Report of Recurrent Monitoring Survey 2 (2015/16). Produced by TANGO International and Save the Children as part of the Resilience Evaluation, Analysis and Learning (REAL) Associate Award.

33 CARE Bangladesh. 2017. SHOUHARDO III Fostering Learning and Adaptation in Resilience building (FLAIRb) Baseline Report. Report by TANGO International. November 2017. Available at: http://www.carebangladesh.org/shouhardoIII/wp-content/uploads/2017/11/CARE_SHOUHARDO_III_FLAIRb_Baseline_Report.pdf.

34 USAID/Feed the Future. 2016. Resilience in the Sahel-Enhanced (RISE) Project Impact Evaluation Volume I Baseline Survey Resilience Analysis. Report by TANGO International. February 2016. Available at http://www.fsnnetwork.org/sites/default/files/rise_ie_baseline_resilience_2016.pdf.

35 Jones, Lindsey and Thomas Tanner (2017). *Subjective resilience using perceptions to quantify household resilience to climate extremes and disasters.* Regional Environmental Change. Jan. Volume 17, Issue 1, pp. 229–243.

change or adapt to new situations) also boosted households' resilience to the drought, by helping them to avoid selling or slaughtering their livestock and consuming seed stock and encouraging them to seek out formal assistance—food aid and food/cash-for-work.[36] (Smith et al., 2015). Beyond Ethiopia, the data from the agro pastoral and marginal agriculture and livelihood zones in the Sahel show that households' aspirations and confidence to adapt had a positive association with their food security and ability to recover following multiple shocks (drought, erratic rainfall, and insect and bird invasions).[37]

PERCEPTIONS OF WELL-BEING AND SOCIAL INCLUSION: An ongoing Food and Agriculture Organization (FAO) study on the psychological aspects of resilience is looking at how subjective well-being and social inclusion in decision making and local service provision shape resilience. Results from 1,600 households in Mauritania and 410 households in Senegal found correlation between perceived social inclusion and resilience. However, the study did not find a relationship between subjective perceptions of well-being and resilience. Future research will focus on how subjective perceptions of resilience correlate with objective resilience measures.[38]

ASPIRATIONS AND FUTURE ORIENTATION: Previous poverty research shows that people often do not invest in the future, even when the returns are high and that poor people often form beliefs that they are *unable to improve* their economic position. A field study in Ethiopia looked at whether low aspirations could explain low investments.[39] Six months following exposure to a motivational video designed to enhance aspirations, the study found positive changes in *aspirations and expectations*, especially for children's education and internal locus of control (belief in one's ability to influence their life events and outcomes). The study also found significant, positive changes in f*uture-oriented behavior* related to savings and credit, child school enrollment, spending on schooling and agricultural inputs (seeds and fertilizer and land rented). The stock of assets and consumption of durables also increased. The research demonstrates that aspirations are key elements of individual capabilities and thus provide a pathway to promote resilience and development.[40]

PROGRAMMATIC IMPLICATIONS: Many factors converge to shape aspirations, perceptions, and choices—ranging from structures, policies, politics, power, and inclusion/exclusion to social norms, history, culture, and individual circumstances and opportunities. More work is needed to better understand these dynamics, improving the measurement of these psychosocial factors and identifying opportunities to expand the "aspiration window" of target populations and provide the structures and resources for individuals to act on the aspirations they do have. Some practical interventions for reinforcing positive psychosocial factors include mentoring/coaching, videos showing positive role models, and exchange visits across villages for people to see firsthand what others are doing to improve their lives.

3.7 GENDER EQUALITY AND SOCIAL INCLUSION

Gender based inequality and social exclusion influence women's and men's vulnerability, resilience capacities, and well-being outcomes. Growing evidence on the differences between men and women in their exposure to shocks and access to resources to manage shocks underlines the importance of gender equality and women's empowerment for resilience.

GENDER AND VULNERABILITY: Men and women face different risks. From a biological standpoint, women and girls can face life cycle vulnerabilities related to pregnancy and childbearing affecting nutrition and health. From a social standpoint, the stress for women in combining domestic and productive work often creates intra household tensions and the risk of domestic violence. Men and boys also face gender specific vulnerabilities, for example risks related to migration, exposure to violence, drugs, or recruitment into violent extremist cells.

Gender based differences between men and women in their mobility, time use, and ownership and control

of income, assets and other resources affect how hey cope with a particular shock or stress. For example, women are more likely than men to adjust consumption patterns following a shock or stress—by eating less preferred foods and/or cutting back on quantities consumed which can have adverse long-term consequence for maternal and child nutrition. Women often are more reticent than men to use the few assets they have to manage shocks and stresses, for fear of falling into chronic poverty. Increasing labor supply can have negative consequences by increasing women's time burdens, reducing childcare activities, or expanding the workloads of adolescent girls at the expense of education. Lower earnings compared to men and higher risks of sexual and physical abuse in paid work reduce incentives for women to increase their labor supply in times of stress. Access to informal and formal financial services remains an important coping mechanism but gender differences in needs, preferences, and opportunities are often overlooked in product design. For example, despite evidence on the potential benefits of life, health and agricultural insurance products for women, very few countries are investing in developing such products. The influence of gender on agency, self-efficacy, confidence level, aspirations and decision-making power further drive differences between men and women in their capacities to manage risk.

WOMEN'S EMPOWERMENT AS A RESILIENCE CAPACITY: A growing body of evidence shows the importance of women's empowerment as a resilience capacity. Following exposure to flooding in 2014, Bangladeshi women with high empowerment maintained household food security for a longer period compared to women with low empowerment scores (Figure 3.6). Women's participation in groups strengthens their role as a source of resilience. Collaboration, solidarity, and conflict resolution all increase in groups where women are present (Westerman, et al). Norms of reciprocity are more likely to operate in women's and mixed groups. Capacity for self-sustaining collective action increases with women's presence and is significantly higher in women's groups. Social capital is stronger in networks where women participate. A study in Bangladesh found women's empowerment strongly associated with absorptive and adaptive capacities; further, households in which women have higher levels of decision-making power have higher levels of bonding and bridging social capital, which contribute to resilience.[41] Women's empowerment has also been found to help households in Bangladesh sustainably escaped poverty.[42] A study in Somalia found that women's empowerment was significantly and positively associated with the use of proactive coping strategies. The higher a woman's level of empowerment, the less likely she is to apply negative coping strategies. Women's personal and relational empowerment had a direct and positive association with food security.[43]

THE VALUE OF GENDER EQUALITY AND SOCIAL INCLUSION: Analysis by the ILO showing the relationship between social inclusion and livelihoods estimates that closing the employment gap between men and women would increase world gross domestic product (GDP) by 3.9 percent in 2025, or $5.8 trillion. The greatest benefits would occur in regions with today's largest gender gaps, including Northern Africa, the Arab States and Southern Asia. Similar analysis

36 PRIME studies include: https://agrilinks.org/sites/default/files/resource/files/EthiopiaPRIMEVol1final.pdf https://www.fsnnetwork.org/sites/default/files/Ethiopia%20PRIME%20IMS%202014-2015%20Full%20Report.pdfhttps://www.fsnnetwork.org/pastoralist-areas-resilience-improvement-and-market-expansion-prime-recurrent-monitoring-survey-2014.

37 Frankenberger, Tim (2017). Effect of households' psycho-social capacities on their resilience to shocks and shock coping strategies TANGO International. [PDF Slide deck] Retrieved from https://www.fsnnetwork.org/sites/default/files/Effect%20of%20households%E2%80%99%20psycho-social%20capacities.pdf.

38 D'Errico, Marco (2017). Psychosocial Dimension of Resilience Evidence from 13 datasets and 1 idea. RIMA ESA Division – FAO. [PDF Slide deck] Retrieved from https://www.fsnnetwork.org/sites/default/files/20171002_dc_Marco_psycho.pdf.

39 In this study, Dernard et al define aspirations as forward looking goals or targets, or choice sets which people consider relevant and motivate their actions.

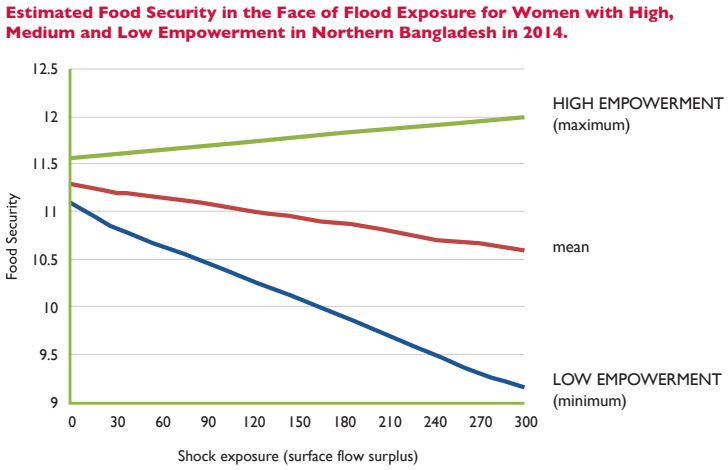
40 Dernard, Tanguay, Stefan Dercon, Kate Orkin, Alemayehu Seyoum Taffesse (2017) The Future in Mind: Long-run Impact of an Aspirations Intervention in Rural Ethiopia. [PDF Slide deck] Retrieved from https://www.fsnnetwork.org/sites/default/files/The%20Future%20in%20Mind%20%28Resilience%20Forum%2C%20October%202-3%2C%202017%29%20l.pdf.

41 CARE Bangladesh. 2017. SHOUHARDO III Fostering Learning and Adaptation in Resilience building (FLAIRb) Baseline Report. Report by TANGO International. November 2017. Available at: http://www.carebangladesh.org/shouhardoIII/wp-content/uploads/2017/11/CARE_SHOUHARDO_III_FLAIRb_Baseline_Report.pdf.

42 USAID. 2016. Ensuring Escapes From Poverty Are Sustained In Rural Bangladesh. Leveraging Economic Opportunities (LEO) Report #32. Report by Lucy Scott and Vidya Diwakar, Overseas Development Institute. Available at: https://www.marketlinks.org/sites/marketlinks.org/files/resource/files/Report20No.203220-Ensuring20Sustained20Poverty20Escapes_Rural20Bangladesh.pdf.

43 Lisa C. Smith and Timothy R. Frankenberger, Does Resilience Capacity Reduce the Negative Impact of Shocks on Household Food Security? Evidence from the 2014 Floods in Northern Bangladesh.

FIGURE 3.6 Women's empowerment and food security in Bangladesh[44]



shows that higher rates of employment and economic participation by people with disabilities could increase annual global GDP by an estimated $2 trillion and low- and middle-income country GDP by approximately $286.5 billion. A landmark 2014 study of 39 developing and emerging economies indicates that countries with more articulated LGBTI legal rights have higher GDP per capita as well as higher levels of well-being as measured in the Human Development Index (HDI).[45]

PROGRAMMATIC IMPLICATIONS: Improved measures are needed to drive efforts to build resilience capacities across gender and social groups. For example, individual level data is important for assessing intra-household inequities and dynamics that affect exposure to and response to shocks and stresses. Many partners capture this data but it is seldom woven into resilience analysis or programming. Qualitative research can capture how the quality of assets contributes to differences in the ability of women, men, socially excluded groups to use their capacities. Power dynamics across groups are at the root of social exclusion, not just related to gender, but also to ethnicity, religion, caste, class, sexual orientation, and other factors associated with marginalization. Social impact assessments—incorporating issues such as gender, labor, human rights, health and safety, and land, property and resource rights—can help to ensure that negative social impacts are identified, avoided, and mitigated and help to strengthen results from development activities.

3.8. SUSTAINABLE AGRICULTURE AND NATURAL RESOURCES

Agriculture and natural resources are essential for livelihoods, especially for the poorest and most vulnerable in communities. However, these resources are threatened by increasing population, climate variability, and poor management. Recognizing the complexity of natural resource environments, new approaches are needed to address them in the context of a broader systems approach. A systems approach expands the focus beyond agricultural production to the resilience of broader natural resource, social, economic, and institutional systems and integrated resource management. This approach requires investments in essential natural capital, especially in healthy soils, as well as in human and institutional capacities to effectively manage these systems.

Work in the Sahel provides an example of a systems approach that recognizes the importance of investments in *soil* and *soil health* as a fundamental resource and resilience capacity. Soil health is perhaps the biggest factor affecting productivity across sub Saharan Africa and addressing the issues of erosion, declines in soil organic matter, and nutrient mining (off take of critical elements with harvesting) can have a huge effect on productivity and the sustainability of agriculture. While these issues are also enormously challenging, farmers can directly impact many aspects of soil themselves, for example, through improved tillage practices. Moreover, modeling can pinpoint what interventions and targeting can result in the greatest probability of success over time and where procrastination penalties may be greatest. For example, in some places, storing enough water to get a crop through an additional three days can prevent total crop failure. In other places, preparing for heavy rainfall can help to prevent erosion and maintain soil health thresholds (organic matter in the soil) that

would otherwise take 10 years to recover from. Short-term investments in soil health can give long-term benefits for resilience. Other evidence from the USG's Sahel work highlights the importance of *integrated management* of resources and investments in *non-traditional value chains* such as wild foods and livestock. Both are important not only for economic reasons, but also for nutrition and resilience to climate variability.

In Niger, a locally driven practice introduced in the mid-1980s called "*farmer-managed natural regeneration*" (FMNR) has driven the restoration of 5 million hectares of landscape threatened by severe desertification into productive agroforestry landscapes. Through FMNR, farmers allow native trees and shrubs to regrow from remnant underground root systems and/or plant new ones amid crop fields to create an agro-ecological system that improves conditions—especially soil health—for crop growth. Evaluations show that these practices improve food security, increase and diversify household income, strengthen capacities to cope with drought, reduce burdens on women for fuel wood gathering, and mitigate climate change effects through carbon sequestration. Case study evidence shows that farmers were *motivated* to practice FMNR by the proactive and concerted promotion campaigns of NGOs, and the economic, social, and environmental benefits that they actually realized. Niger's policies that secure farmers' rights to land and trees, and ensure that benefits accrue to both men and women farmers also facilitated restoration. Village and community groups created and enforced rules governing tree pruning and livestock management and provided an institutional structure for peer-to-peer learning of FMNR techniques. These groups also created demarcated livestock corridors, which have protected crops and trees, safeguarded grazing and water access areas for herders, and helped to mitigate conflicts.[46]

Experience in Senegal finds local level *governance* and decision making to be key to managing natural capital and putting communities more in control of their destinies. The Yageende project facilitated partnerships between citizen working groups (CWGs) and local government. The CWGs can address political priorities, such as infrastructure, partnerships, land tenure, transparency of seed distribution, and storage of crops on behalf of individual households. The project's devolved responsibility for managing resources along with multi-sector programming (such as land restoration, land use planning, nutrition Behavior Change Communication and the promotion of wild foods to support local diets). This approach contributed to reduced malnutrition, diversified diets, less hunger and reduced poverty across 800,000 households reached by the project. The integration of natural resource management and local governance had especially strong impacts on women's empowerment.[47]

PROGRAMMATIC IMPLICATIONS: Large-scale investments in climate science, climate mapping and information, vulnerability assessments, and climate smart agriculture in recent years have generated a large body of evidence and experience to inform programming. But much of this knowledge remains unexploited. Strong evidence on the positive impacts of climate smart agriculture, investments in soil health, and greening has not led to wide scale adoption of these approaches. As seen in the Niger case, the behavior changes that are needed require longer-term investments and wider scale efforts beyond three to four year project cycles. Moreover, sustainable agriculture and natural resource management must focus beyond single commodities to consider broader farming and livestock systems as a whole. Overall, there is a need for simplicity and common metrics that people and communities can use to be able to make decisions that affect their own lives. At the same time, building healthy soils and natural resource conservation also requires public sector engagement and focus, especially at the initial stages.

44 Lisa C. Smith and Timothy R. Frankenberger, Does Resilience Capacity Reduce the Negative Impact of Shocks on Household Food Security? Evidence from the 2014 Floods in Northern Bangladesh.

45 Luu, et al Ibid.

46 Buckingham, Kathleen and Craig Hanson. 2015. The Restoration Diagnostic Case Example: Maradi and Zinder Regions, Niger. World Resources Institute.

47 Crosby, Todd (2017). Integrated diffusion of products, services, and knowledge [Power point slide deck]. Retrieved from https://www.fsnnetwork.org/sites/default/files/Resilience%20Panel%20.pdf.

© HEIFER INTERNATIONAL

COLLECTIVE ACTION, COLLECTIVE IMPACT: KENYA'S ENDING DROUGHT EMERGENCIES (EDE)

The Government of Kenya's Ending Drought Emergencies (EDE) initiative is widely recognized as a forward-leaning, country-led model for building resilience to recurrent crisis and managing drought risk. The initiative focuses on counties in Kenya's arid and semi-arid lands (ASALs) that have suffered recurrent drought, human conflict, and a legacy of marginalization by government and international investments. EDE's common programming framework serves as a platform for collective action to which donors and partners align around six pillars: *peace and security* to strengthen and mainstream structures to reduce inter-community conflicts and security risks; *climate proofed infrastructure* to address the deficit of climate resilient infrastructure at the national, county and community levels; *human capital* investments to create a healthy, skilled, innovative, resourceful and motivated human capital base in the ASALs; *sustainable livelihoods* through commercial livestock development and sustainable management of rangeland, water and crops; *drought risk management* to improve systems for early warning and early response; and *institutional development* and *knowledge management* to support EDE management and accountability, advance evidence-based policy reforms, and increase public and stakeholder awareness of and support for EDE.

USAID's Partnership for Resilience and Economic Growth in Kenya (PREG) is nested within the broader EDE initiative.[48] PREG brings together humanitarian and development partners to build resilience among vulnerable pastoralist communities, create economic opportunities, and reduce humanitarian assistance needs to recurrent shocks. Through PREG, USAID programs and implementing partners work together with the GOK National Drought Management

Authority (NDMA) and county governments to link and coordinate resilience and economic growth activities working with the same people in shared geographies. Based on the principles of collective impact, PREG provides backbone support for partners to work toward a common agenda in support of EDE, share learning and measurement, implement mutually reinforcing activities, and engage in continuous communication.[49] Partners share a commitment to tackling the causes of vulnerability and bridging the gap between humanitarian aid and development programming to lay the foundation for long term, sustainable economic growth. Partners implement activities in an intentional and coordinated way that mutually supports the action of others and aligns with EDE's six pillars.

Through collective action, PREG partners focus on *drought preparedness* by working with communities to build water pans, irrigation systems, and promote drought-resistant or high-value traditional crops and other productive assets. PREG promotes *value chain inclusiveness* in the commercial livestock sector through the establishment of state-of the-art livestock service centers across the remote arid regions that improve and expand access to safe, reasonably priced veterinary drugs and training in animal health husbandry practices. Also critical is *conflict mitigation* to reduce tensions between communities that result from increased competition for resources, such as water and pasture. USAID works with local, national, and regional conflict-management actors to improve their responsiveness to cross-border conflict. For sustainability and scale, PREG partners use a *community-led strategic planning process*, known as participatory learning, planning, and action, that has empowered more than 500,000 people through community development action plans (CDAPs). These plans drive their own community-level development and leverage funding from county governments for priority areas of action. Throughout its work, *PREG proactively engages national and county level government* through its alignment to the National Drought and Management Authority (NDMA). PREG generates political will and local ownership of development programs by aligning with county integrated development plans—which have shifted decision making and financial power for health, agriculture, and emergency response from the national level to county governments.

A 2015 survey shows that the collective impact approach has contributed to a 12 percent reduction in the depth of poverty, a 28 percent increase in women's dietary diversity, positive trends in children's dietary diversity, improved access to water and reduced household hunger. People's own perceptions of their resilience and control over their own future is also changing: 66 percent of households reported that they will now be able to cope with future droughts compared to 53 percent in 2012 and 42 percent of households believe they are in control of and responsible for their own success compared to 19 percent in 2012.

A challenge facing EDE is that it is only one of many strategies that counties align to, which slows the pace of implementation. Maintaining a strategic focus on long-term goals in the face of crisis, emergencies and government transitions and finding workable mechanisms to involve the private sector pose further challenges. Going forward, EDE will track progress towards its longer-term goal by monitoring reductions in the number of people requiring food aid as a result of drought, reductions in stunting, reductions in livestock lost during drought, and reductions in appeals for international emergency assistance.

48 Collins, Greg, Ayan Mahamoud, Jennifer Maurer, James Oduor, Jason Oyugi (2017). Collective Action, Collective Impact: Kenya's Ending Drought Emergencies [Slide presentation] Retrieved from https://www.fsnnetwork.org/sites/default/files/PREG%20PRESENTATION%20-%202ND%20OCTOBER%202017.pdf.

49 Kania, John and Mark Kramer (2011). Collective Impact. Stanford Social Innovation Review, Winter. Retrieved from https://ssir.org/articles/entry/collective_impact.

5. FUTURE DIRECTIONS

© USAID CCRD PROJECT

We end with a brief discussion of two emerging areas for future attention—resilience in urban settings and in fragile contexts—and a summary of key takeaways from the Resilience Evidence Forum.

5.1 RESILIENCE IN URBAN SETTINGS

Up to now, programming has centered largely on strengthening the resilience capacities of individuals, households and communities in rural areas. By contrast, emerging work on resilience in urban settings has placed greater emphasis on strengthening the capacity of systems—including urban infrastructure, political, institutional and governance systems, as well as ecological, economic, social and community systems. These urban systems are complex and interlinked, and shocks and stresses can easily create multiplier 'threat' effects as they reverberate through connected systems. The sheer pace and scale of urbanization, combined with interlinked sub-systems, especially in ecologically vulnerable areas (along flood plains and coast lines) makes the potential severity, if not the frequency, of shocks such as hurricanes, floods, or landslides even greater in urban than in rural areas. In addition, social networks and social capital may not be as strong in urban compared to rural settings, thereby increasing vulnerabilities for individuals and households at the community level. At the same time, interdependencies also exist between urban and rural systems and households, whereby changes in urban demand for labor and capital (affected by urban resilience) can directly affect investments in on-farm agriculture and shift patterns of rural to urban migration and remittance flows.[50]

Evidence on the impact of different approaches to building urban resilience is emerging from The Asian Cities Climate Change Resilience Network (ACCCRN).

Network partners are designing and facilitating a range of approaches and initiatives to build urban resilience (for example, building city teams, developing city strategies, piloting city projects) tied to evidence on measurable impact. For example, a *resilience dashboard* assesses the status and resilience capacity of different urban sub systems in relation to physical, human, economic, social and institutional measures of resilience.[51]

Post event analysis is another approach to measuring the resilience of urban systems. Mercy Corps used this approach following the 2015 floods in Chennai, India to examine how three integrated systems directly and indirectly affect the resilience of medium, small and micro enterprises (MSMEs) to floods. The three systems included the natural environment, the business environment and the institutional environment, which together shape the locational choices and options of small businesses. Post event analysis modeled the possible pathways in which natural shocks, like heavy rainfall, become disasters, like floods, and, how disasters translate into economic impacts for business. Evidence to test the model was gathered through consultations with stakeholders representing a range of metropolitan institutions and in-depth interviews with representative MSME and large enterprise owners. The analysis revealed the complex relationships and cracks in the business environment that led to large losses for small firms. Fragmented institutions and infrastructure create challenges for balancing economic growth with environmental safeguards. It further showed that the impact of the flood disaster on MSME has as much to do with the business and institutional environment, as on the severity of the event. Slow or inaccessible formal financing increases the economic impact of natural hazards on firms.

5.2 RESILIENCE IN FRAGILE CONTEXTS

Ineffective or illegitimate governance, weak institutions, conflict and violent extremism characterize fragile contexts. The most daunting cases of poverty and the famine in the 21st century are in fragile, conflict-affected states. In 2010, a third of the world's extreme poor lived in fragile states—today it is one half and by 2030 it will be two thirds. In recent years protracted 'man-made' humanitarian crises (famine) have increased and, in 2017, this causally intertwined problem set led to unprecedented levels of humanitarian need globally. Today, ten out of 13 food crises in the world are due to conflict. In places like Niger, Mali, Nigeria, Somalia and northeastern Kenya, there is also a notable geographic overlap between areas subject to recurrent and protracted crises and the growth and spread of violent extremism movements. The same lack of economic opportunities and weak governance and institutions that give rise to recurrent crises have created space for violent extremist groups to emerge, and the associated grievances can be exploited by violent extremist organizations (VEOs) for recruitment among local populations.

Questions remain about the application of resilience in fragile contexts. Recent research shows the limitations of conventional resilience approaches in these places.[52] One limitation is that political "shocks" and "stressors" (whether weak/illegitimate governance or outright conflict) are different from natural or environmental hazards. By definition, they are man-made. This can lead to a conceptual problem in that, unlike droughts, they are at least hypothetically solvable. Another challenge is that although there are multiple drivers of vulnerability in most contexts, the resilience community of practice tends to gravitate towards addressing the climatic and environmental drivers and increasingly idiosyncratic shocks such as illness. Less attention has been paid to political drivers of vulnerability—of which conflict, social exclusion, and inequality are the most common. While improving economic and livelihood opportunities, strengthening natural resource and disaster risk management, and improving health and human capital should be part of a comprehensive approach to addressing protracted crises, programs aimed at stabilization, governance, and conflict mitigation and management should remain the core.

50 Petryniak, Olga (2017). Building Resilience in Urban Contexts: Challenges and Progress in Evidence of What Matters. [Power point slide]. Retrieved from https://www.fsnnetwork.org/sites/default/files/USAID%20presentation_Res%20Evidence_urban.pdf.

51 https://www.acccrn.net/.

52 Maxwell, Daniel. *Resilience in Fragile contexts.* [Audio transcript] Retrieved from. https://www.fsnnetwork.org/resilience-evidence-forum-october-3#Fragile.

THIS PAGE: © ERIC ONYIEGO FOR USAID KENYA; **BACK COVER:** ©NANCY MCNALLY / CATHOLIC RELIEF SERVICES