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Midterm Performance Assessment of USAID's "Resilience in the Sahel Enhanced" (RISE) Initiative in Burkina Faso and Niger

Phase I: Resilience Strategy Review

February 2017

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List of Acronyms

APHIA: Aids, Population, and Health Integrated Assistance (Kenya)

AHADI: Agile Harmonized Assistance for Developed Institutions (Kenya)

ASAL: Arid and Semi-Arid Lands

CBNRM: Community-Based Natural Resource Management

CAHW: Community Animal Health Workers

CCT: Conditional Cash Transfer

CDAP: Community Development and Action Plans (Kenya)

CFW: Cash for Work

CLP: Chars Livelihoods Program (Bangladesh)

CRS: Catholic Relief Services

DCA: Development Credit Authority

DFID: Department for International Development (United Kingdom)

DRR: Disaster Risk Reduction

ECHO: European Civil Protection and Humanitarian Aid Operations

EDE: Ending Drought Emergencies (Kenya)

ENGINE: Empowering New Generations to Improve Nutrition and Economic Opportunities

GID: Gesellschaft für Internationale Zusammenarbeit (Germany)

GFDRR: Global Facility for Disaster Reduction and Recovery

GoE: Government of Ethiopia

GoK: Government of Kenya

GRAD: Graduation with Resilience to Achieve Sustainable Development (Ethiopia)

GRP: Global Resilience Partnership

GTZ: Gesellschaft für Technische Zusammenarbeit (Germany)

HKI: Hellen Keller International

IDT: Inpres Des Tertinggal (Indonesia)

IMARSHA: Integrated Marginal Arid Regions Innovative Socialized Health Approach

KAVES: Kenya Agriculture Value Chain Enterprises

LEAP: Linking Financial & Social Capital to Enhance Resilience of Agropastoral Communities

LEARN: Localized Emergency Assistance Response in Niger

MNCH: Maternal, Newborn, and Child Health program (Kenya)

NDMA: National Drought Management Authority (Kenya)

NRT: Northern Rangelands Trust

PLI: Pastoralist Livelihoods Initiative (Ethiopia)

PSNP: Productive Safety Net Program (Ethiopia)

PREG: Partnership for Resilience and Economic Growth Program

PRIME: The Pastoralist Areas Resilience Improvement and Market Expansion (Ethiopia)

REGAL-AG: Resilience and Economic Growth in Arid Lands – Accelerated Growth (Kenya)

REGAL-ER: Resilience and Economic Growth in Arid Lands – Improving Resilience (Kenya)

RFM: Risk Financing Mechanism

RISE: Resilience in the Sahel Enhanced

TMG: The Mitchell Group

TUP: Targeting the Ultra-Poor (Bangladesh)

USAID: United States Agency for International Development

WASH: Water, Sanitation, and Hygiene

Executive Summary

In November 2016, USAID commissioned The Mitchell Group, Inc. (TMG), to conduct an academic literature review on the state-of-the-art in resilience enhancement and to relate those findings to the interventions of RISE partners, taking into consideration the particularities of the Sahel context. This review constitutes one phase of the midterm performance assessment of the Resilience in the Sahel Enhanced (RISE) initiative underway in Burkina Faso and Niger. The RISE initiative aims to improve the resilience of households and communities in vulnerable areas of Burkina Faso and Niger. The purpose of Phase I of the assessment is to draw attention to the key findings and current trends in the academic literature related to resilience enhancement. It sets a foundation, along with the field component, for answering the following questions:

1. Can RISE interventions be altered to address gaps and capitalize on lessons from resilience programs implemented in other contexts?
2. To what extent is the RISE technical theory of change valid?
3. To what extent is the RISE operational theory of change valid?
4. What activities have RISE partners focused on to balance the different levels of vulnerability, and to ensure complementary improvements?
5. To what extent is RISE making progress toward its performance goals?
6. To what extent are the changes promoted by RISE sustainable?

To create a basis for the fieldwork component of the study and to serve as a useful resource for scholars and practitioners of resilience enhancement, this review includes three key components:

- First, the review examines the state of the literature on resilience. It describes a union of ecological and social factors, as well as the importance of absorptive, adaptive, and transformative capacities. However, it also highlights complexities and disagreements in the conceptualization of resilience. This section underscores the importance of governments and institutions in addressing resilience, and the particular challenges to resilience in the Sahel.
- Second, the review covers a number of resilience-related programs, including the RISE program and associated DFAPs, related resilience programs in Ethiopia and Kenya, and resilience enhancing programs elsewhere. This section notes the programs that excel or face shortcomings in addressing the key capacities of absorbing, adapting, and transforming; and it draws attention to the importance of sociocultural differences.
- Third, the review outlines a set of ten ideas for consideration. These ideas build on trends in the literature and in resilience programming; they are intended to encourage experimentation in resilience programming. Ideas for consideration include the following:

- 1) add emphasis to transformative capacities; 2) expand and build new resource-sharing norms into social protection programming; 3) target shocks and stresses in distinct, tailored ways; 4) engage formally with multiple levels of government; 5) use resilience to complement other effective programs; 6) facilitate access to natural resources, being mindful of cultural norms; 7) capitalize formally on migratory networks; 8) generate explicit links between skills and opportunities for youth; 9) consider targeting precise socioeconomic strata; and 10) work formally with religious and cultural leaders.

I. Introduction

Resilience in the face of crisis, shocks, and stresses has long been recognized as a critical aspect of overcoming extreme poverty. The World Bank, for example, called resilience a “high priority” over 30 years ago (World Bank 1985), and development economists noted the importance of poor households cultivating resilience against setbacks even earlier (see Saeed 1982). Farmers’ “responsiveness to drought” and “adjustments to risk” were common themes among scholars in the 1970s (see Hankins 1974; Jodha 1978). Today, attention to resilience in the poorest parts of the world has only increased, as threats from conflict, climate change, and resource shortfalls frequently put vulnerable people at risk of backsliding below adequate levels of subsistence.

This review addresses the current state of the literature on resilience. It is a part of the midterm performance assessment of the Resilience in the Sahel Enhanced (RISE) initiative, a USAID-funded initiative aiming to improve the resilience of households and communities in vulnerable areas of Burkina Faso and Niger. Resilience is a complex, multi-faceted concept that implicates numerous fields of study and development priorities; for its part, USAID defines resilience as “the capacity of affected 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.” In reviewing and drawing insights from the academic literature, we aim to distill some of the central lessons regarding this complex concept, such that USAID and other aid organizations might maintain an updated and diverse portfolio of information that will ultimately help in devising the most appropriate programs to aid the chronically vulnerable.

The review includes three key components. First, we conducted a broad review of available literature on the state-of-the-art of resilience activities from around the world, paying special attention to the literature available on the Sahel. We consider the foundations of resilience and the diverse set of approaches to improving resilience from across academic disciplines, building on the foundation currently employed by USAID that emphasizes the importance of addressing the absorptive, adaptive, and transformative capacities of vulnerable people. We consider how resilience is defined and addressed by various international development institutions, and we take note of the features of the Sahel that may impact resilience programming in that particular region. We end the section with a consideration of the value added from resilience enhancement initiatives.

Second, we conducted a comparative summary of resilience-related programs from around Africa and the world. Doing so provides insight into resilience programs and strategies that could potentially be adopted in the Sahel; it also helps to illustrate how contextual factors might facilitate some approaches and undermine others. We begin with an overview of the RISE-associated programs, of which this assessment constitutes a part. We then outline details

related to similar USAID-funded initiatives in Ethiopia and Kenya. We complete the section by considering resilience-related programs undertaken in different parts of the world. At each step, we emphasize the objectives and the outcomes based on evaluations and reviews.

Third, we provide a set of ideas for consideration stemming from the literature. We note areas of work that could be reinforced, factors that regularly arise as important in the scholarship on resilience, and ideas that could lead to new intervention opportunities in the study region. Some may be more appropriate than others for any given context, and some may be suitable for introduction into existing initiatives, while others may be best suited for subsequent resilience-related programming. We encourage readers to view the considerations not as necessities for effective resilience enhancement, but rather as possibilities for creating new value added.

Structured as such, this assessment along with the complementary field study should provide guidance for addressing questions about resilience improvement generally and about the RISE initiative's ongoing work more specifically. In particular, the two phases of the performance assessment will contribute answers to the following questions.

On Resilience Strategy:

1. In comparing the types of interventions of RISE partners with those found in a review of other resilience programs and of the literature on resilience, are there potential gaps in the RISE interventions, either in terms of the shocks and stresses they are designed to address, interventions being pursued, or the types of resilience capacity they are designed to build? Which of these potential gaps, when contextualized to the Sahel, might the RISE partners consider addressing with new or revised interventions?
2. To what extent is the RISE technical theory of change, as embodied in its results framework, valid?
3. What was the basis for setting targets, and have they been adjusted based on performance?
4. Is the link between project interventions (that involve the application of one or several integrated resilience best practices) and desired results clear?
5. Is the linkage clear between project results (e.g. livelihoods, NRM, health outcomes) and strengthened resilience capacity?
6. What adjustments to the TOC might be required?
7. To what extent is the RISE operational theory of change valid?
8. What evidence exists that sequencing, layering and integration of humanitarian and development assistance can improve resilience outcomes and reduce overall cost of aid?
9. Are RISE project interventions sequenced, layered, and integrated in an effective way?

10. What adjustments might be required to the approach?

On Project Efficacy:

1. What types of outcomes have the RISE partner interventions focused on in terms of their efforts to increase resilience to shocks or stresses at community levels, or household levels, or both?
 - a. Increases in absorptive capacity;
 - b. Increases in adaptive capacity; and/or
 - c. Increases in transformative capacity?
 - d. Have those choices been planned, strategic, practical, or necessary? Why?
 - e. To what extent have RISE partners addressed gender gaps successfully in the Sahel?
2. To what extent is RISE making progress toward its performance goals?
 - a. In what areas is it excelling and where is it struggling? Why?
 - b. What could be changed or adjusted to enhance current successes and rectify weaknesses in implementation?
 - c. Are the RISE activities generally timely and effective in the employment of resources?
 - d. Do they seem to be reaching targeted beneficiaries to an acceptable degree?
 - e. To what extent has collaboration among stakeholders improved results and interventions?
 - f. How could collaboration be enhanced while not imposing undue burdens on partners and USAID staff?
3. To what extent is there evidence that changes promoted by RISE - both at the community and system levels – are likely to be sustained beyond the life of direct program support?

This review, as the first phase of the assessment, constitutes an effort to step back from ongoing USAID-funded resilience projects and to recognize key findings and current trends in the academic literature related to resilience. It should serve as a guide for tightening theories of change and better connecting interventions to outcomes. It also offers an opportunity to consider new ideas in addressing resilience concerns. The review constitutes a reference document on various topics, so readers might focus on the sections most relevant to their own interests. We also urge readers to weigh the themes addressed here but also to contemplate new and different ways in which the literature might suggest improved approaches to resilience enhancement.

2. State of the Literature on Resilience

This section provides an overview of the academic literature on resilience. We draw from across disciplines and aim to complement the advances that USAID has already made in constructing a rigorous and testable conceptualization of resilience as a development initiative. The section begins by outlining the conceptual foundations of resilience. We then explore related concepts from across disciplines. Resilience enhancement may, in a broad sense, be addressed in a variety of ways, sometimes using different language or from angles not typically associated with resilience; by exploring these related concepts, we might bring new ideas to the evolution of initiatives like RISE. The third component of this section considers resilience in practice, as implemented by international development institutions, to understand how the concept is treated by different organizations, how it is defined in the course of development initiatives, and how distinct priorities might be woven into a resilience enhancement approach. Fourth, insofar as the RISE initiative is based in the Sahel, we review some common themes from the literature regarding the key features of the Sahel region, some fairly unique and several posing critical challenges for resilience enhancement work. Finally, this section outlines the value added by incorporating resilience-related concerns into development work, as outlined in the literature.

2.1. Conceptual Foundations

Resilience as a scientific concept has been applied broadly in both the natural and social sciences, as well as in their integration. A starting point in physics can help to elucidate contemporary efforts to enhance resilience among vulnerable people. In that discipline, resilience refers to “the capacity of a material to absorb energy when it is deformed elastically and then, upon unloading, to have this energy recovered” (Callister and Rethwisch 2012: 216, cited in Béné et al. 2016). A common example would be the expected capacity of a bridge, after experiencing some physical shock or stress, to return quickly to its normal, equilibrium state.

Usage of resilience as a concept in physics was extended by ecologists in the 1960s and 1970s to applications regarding ecological systems. Holling (1973: 17) provides perhaps the most widely used definition of resilience in this literature, defining the concept as “a measure of the ability of these [eco] systems to absorb changes of state variables, driving variables, and parameters, and to still persist.” Note that in this conceptualization, it is not the return to an individual equilibrium state that is crucial. Instead, the system must be able to withstand a shock or stress and to maintain its given *function* (Martin-Breen and Anderies 2011).

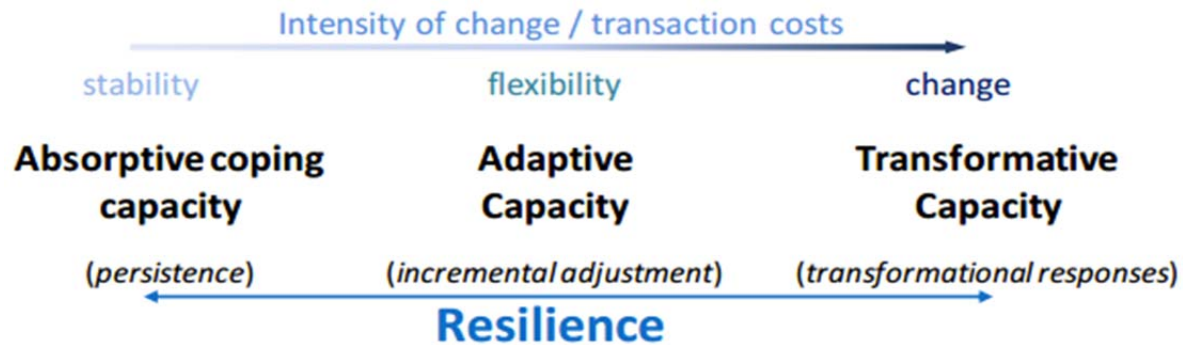
Resilience can be extended further to include the interaction between ecological and social systems, in a manner that addresses the challenges facing vulnerable populations. This more complex conceptualization – referred to as *social-ecological resilience* or *resilience in complex adaptive systems* – may be defined as “the ability to withstand, recover from, and reorganize in

response to crises” while retaining function, if not the original system structure (Martin-Breen and Anderies 2011: 7). The key, then, is the addition of *adaptation* and *transformation*.

Conceptualized in this manner, resilience is an ‘emergent property’ that arises as a function of three different capacities. First, *absorptive capacity* of a system refers to the “various coping strategies by which its members [units] moderate or buffer the impacts of shocks on their livelihoods and basic needs” (Bene et al. 2015). For example, in the context of a household, this may mean consumption smoothing of grain stocks in response to a severe drought (e.g. Kazianga and Udry 2004). In essence, then, absorptive capacity can be thought of as the ability to ensure adequate assets and strategies to stave off harm from minor or transitory shocks and stresses. In addition to consumption smoothing, this could involve the selling off of assets, changing spending patterns, temporary migration, utilizing social networks, or withdrawing children from school in order to reduce costs or increase farm-based revenue. A variety of interventions, ranging from institutional capacity building (e.g. Olsson et al., 2004) to early warning systems (Baudoin 2014) to direct cash transfers (Tumusiime, 2015) have been shown to enhance the absorptive capacities of poor households. These changes are considered a short-term shift rather than a loss or a gain; when mapped onto the framework in Figure 1 below, absorptive capacity results in *persistence*, given a relatively low intensity shock or stress.

Second, *adaptive capacity* – or “the various adjustments (incremental changes) that people undergo in order to continue functioning without major qualitative changes in function or structural identity” (Béné 2014: 601) – allows for *incremental adjustment* and *flexibility* in response to a moderately intense shock or stress. Adaptability refers here to the ability of a unit to learn and adjust its response to shocks and stresses. For example, a household may adopt new farming techniques or diversify its livelihood activities (Headey et al. 2014); take out loans and expand its social network (Fafchamps and Lund 2003); or engage in other changes in behavior meant to help offset the shock or stress they are currently experiencing. Adaptive measures typically have positive consequences, though some – such as relying on patronage networks – may impose costs in the short-term. Further, some of these adaptations take place through the independent volition of the units themselves, but those efforts are greatly facilitated when institutions and structures are in place that can incentivize and encourage adaptive processes. For example, an extensive literature attempts to unravel the multi-causal nature of technological adoption by farmers (e.g. Knowler and Bradshaw 2007; McCauley 2003), much of it noting that human capital and institutions such as agricultural extension services play a key facilitative role (Rahm and Huffman 1984; Adesina et al., 2000, Zbinden and Lee 2005; World Bank 2007).

Figure 1: Resilience Capacities



Note: Adapted from Béné et al. (2012).

Finally, *transformative capacity* refers to the ability of units or individuals to “create a fundamentally new system when ecological, economic, or social structures make the existing structure untenable” (Walker et al. 2003: 5). This final capacity results in *transformational responses* in the context of highly intense shocks and stresses. The responses are typically aimed at permanently altering the system and its structure in a way that ensures the survival of the unit(s). For example, severe drought or conflict might push people from pastoralism into sedentary agriculture, or may escalate migration to urban centers (e.g. Lybbbert et al. 2004). Another way to think about transformability is the “capacity to cross thresholds into new development trajectories” (Folke et al. 2010). As with adaptive capacity, important institutional and human capital requirements typically must be met in order for transformation to take place. These requirements speak to the importance of viewing resilience as more than just adequate food supplies; they implicate community governance, instructional and literacy gains, and a number of other potential intervention areas. Transformative capacity-building may also include systemic reform such as policy adjustments.

At least two important complications must be addressed when employing the simple framework for resilience outlined in Figure 1. First, as USAID’s definition of resilience implies, each capacity is relevant at multiple levels – including individuals, households, communities, regions, and systems – as well as across different temporal and spatial scales (Béné et al. 2012). Second, although absorptive, adaptive, and transformative capacities appear to fall linearly on a continuum according to shock intensity, it is critical to keep in mind that vulnerable areas are often hit with multiple shocks and stresses simultaneously, and often at varying intensities. As Béné et al. (2012: 23) note, “this linear interpretation is... pragmatically too simplistic, as it does not recognize the multi-stressor nature of vulnerability – that is, the fact that many different shocks and stresses combine and occur together.”

Even setting aside those complications, the conceptual evolution of resilience described above is not without dissent. Brand and Jax (2007) argue that resilience has become a *boundary object* that spans across a number of disciplines in too vague a manner; they conclude by suggesting

that resilience as applied in ecological systems must be clearly differentiated from resilience as applied elsewhere. Others argue similarly that when applied to social problems, the ‘natural science roots’ of resilience become too strong, thereby missing key social dynamics like power relations (Cannaon and Muller-Mahn 2010; Lidskog 2001). Critically, sociocultural and socioeconomic contexts can vary in important ways—in terms of the priority placed on families and communities versus individuals, for example—and to recraft livelihood patterns without careful consideration of those contextual factors strikes some scholars as inappropriate and self-defeating (see Meyer 1988).

In response to these critiques, four alternative conceptualizations of resilience as a development goal have emerged. First, Keck and Sakdapolrak (2014) attempt to clarify *social resilience* as used in the literature. Summarized in Table I below, they describe a typology that is closely in keeping with the framework in Figure 1, but with an emphasis on *coping capacity* in the place of *absorptive capacity*. In addition, however, they also explicitly integrate “insights from the social sciences...and address questions of human agency, social practices, power relations, institutions, and discourses – facets that have been widely ignored in studies of ecological resilience” (Keck and Sakdapolrak 2014: 11). In doing so, they emphasize three key factors of social resilience: 1) social relations and network structures; 2) institutions and power relations; and 3) knowledge and discourses.

Table I: Social Resilience Capacities

	Coping capacities	Adaptive capacities	Transformative capacities
Response to risk	Ex-post	Ex-ante	Ex-ante
Temporal scope	Short-term	Long-term	Long-term
Degree of change	Low, status quo	Medium, incremental change	High, radical change
Outcome	Restoration of present level of well-being	Security of future well-being	Enhancement of present and future well-being

Note: Adapted from Keck and Sakdapolrak (2014)

Regarding these three key factors of social resilience, the first – an emphasis on social network structures – highlights a tendency in the literature to view social capital as a key element in the building and maintenance of resilience (e.g. Adger 2000; Adger et al. 2002; Pelling and High 2005; Wolf et al. 2010; Scheffran et al. 2012). While social capital is a somewhat elastic concept (see Adler and Kwon 2002), it is typically understood as a potentially valuable resource that individuals can draw upon during times of stress or shock. The basic intuition is that the ability of social units to draw on the goodwill (and assets) of their friends, families, and social networks can be an important source of resilience. Furthermore, social capital that extends beyond immediate family or friends – e.g. bridging capital and linking capital – is thought to

increase aggregate economic growth (Knack and Keefer (1997) and has been linked to increases in communities' overall resilience to shocks and stresses (e.g. Aldrich 2011, 2012). Nevertheless, social networks can at times also hinder resilience if they negatively impact the ability of the units to learn, adapt, and plan for future events (Bohle 2005).

The second key factor in social resilience indicates that scholars should pay close attention to how institutions and power relations affect access to resources among the units. For example, Langridge et al (2006) attributed variation in communities' responses to water scarcity as a function of the historical development of institutions that control access. Thus, these scholars emphasize that vulnerability is often not equally distributed across communities (e.g. Cannon 2008). This indicates that programming meant to enhance resilience will likely have a differential impact on individuals based in part on how extant institutions distribute power in a given community. Building resilience may thus create winners and losers, and building resilience in one area may reduce it in others (Walker and Salt 2012).

The third key factor in social resilience emphasizes that the ability of social units to cope with shocks and stresses is impacted by the underlying beliefs and level of knowledge in the social system (Furedi 2007; Schwarz et al 2011). Several studies show that for units to be resilient they must perceive of themselves as resilient (Voss 2008; Marshall and Marshall 2007). Empirically, studies show that individuals who perceive of themselves as resilient are more likely to adopt new technologies (Marshall 2010). Furthermore, individuals' perceptions of larger social institutions can affect resilience. One study found that farmers in NGO development projects in Benin use different coping strategies, like the adoption of advanced seeds, relative to other farmers who are inhibited by a lack of trust in local institutions (Baudoin et al. 2014). Overall, this emphasis helps to enhance social resilience thinking through a focus on how the concept of resilience gets constructed within the community (Olwig 2012; Olwig and Gough 2013). This suggests that practitioners should think about how to effectively communicate goals and strategies to targeted communities, while also emphasizing for whom and for what purpose resilience is built.

A key value added of the social resilience literature is the emphasis on important social factors ignored by other approaches, like ecology. In particular, scholars with a focus on social resilience typically ask important questions like "resilience to what?" and "for whom will enhancing resilience be beneficial?". Programmatically, this means that development agencies should be careful, both in planning and in monitoring and evaluation, to understand the interplay between social structures and the agency of the units (see Bohle et al. 2009). Implementing partners must be careful to assess the conditions under which activities might enhance or detract from various aspects of resilience simultaneously, and whether some activities can have a positive effect on one aspect of resilience but a negative one elsewhere.

Second, *development resilience* has emerged as an alternative conceptualization of resilience that places emphasis on the human capacity for life satisfaction. As defined by Barrett and Constan

(2014: 14626), development resilience is “the capacity over time of a person, household or other aggregate unit to avoid poverty in the face of various stresses and in the wake of myriad shocks. If and only if that capacity is and remains high over time, then the unit is resilient.” This definition aims to move the focus away from the social-ecological-systems approach by focusing more coherently on human well-being. To do that, Barrett and Constan integrate Sen’s “capabilities approach” (1981), which relies on indicators like income and life satisfaction as *state variables*, building on the concept of stochastic poverty traps from economics (Barrett and Constan: 14626). The key insight from this model of resilience is its clear differentiation between stability and resilience, resilience being a means to the end of concrete improvements in well-being. For example, a household in poverty may experience a shock, but avoid falling into humanitarian emergency status, therefore, remaining stable. However, given that the household remains stably in poverty, it is not yet resilient.

Third, a conceptualization of *practical resilience* emphasizes key elements that should appear in a resilient system. In what may constitute ideas for future programming, the Red Cross suggests that resilience should be thought of as a process that incorporates multiple activities, interactions, and relationships. Blended effectively, a resilient community would be one that:

- Is knowledgeable and healthy. It has the ability to assess, manage and monitor its risks. It can learn new skills and build on past experiences
- Is organized. It has the capacity to identify problems, establish priorities and act.
- Is connected. It has relationships with external actors who provide a wider supportive environment, and supply goods and services when needed.
- Has infrastructure and services. It has strong housing, transport, power, water and sanitation systems. It has the ability to maintain, repair and renovate them.
- Has economic opportunities. It has a diverse range of employment opportunities, income and financial services. It is flexible, resourceful and has the capacity to accept uncertainty and respond (proactively) to change.
- Can manage its natural assets. It recognizes their value and has the ability to protect, enhance and maintain them. (See International Federation of the Red Cross 2011).

Finally, *ecosystem-social resilience* draws from both the ecological and social conceptualizations of resilience to offer concrete steps for improving resilience. Its key elements, outlined by Walker et al. (2002) and influenced heavily by the work of Holling (1973), include the following:

- The ability to withstand change and retain the same level of well-being.
- The capacity of the system to self-organize in the face of shocks and stresses.
- The ability to build and increase the capacity for learning and adapting.

Scholars writing from this perspective indicate that aid efforts to fortify resilience often concentrate on the capacity of vulnerable populations to “bounce back” and then to adapt. Often receiving less attention, however, is the important element of self-organization: how are

local communities and households re-organizing their livelihood patterns to avoid repeated setbacks from ongoing stresses or potentially repeating shocks? From this perspective, developing organizational goals and planning strategies for change at the household and community levels can be as critical as adopting new livelihood techniques. One important difference that separates this view from purely ecological conceptions of resilience is the recognition that humans have the ability to imagine a future and to plan forward. This capacity for anticipatory behavior, sometimes overlooked among poor and vulnerable populations, can be a catalyst for linking resilience efforts to long-term improvements in well-being.

These conceptual foundations for resilience as a development concept suggest a number of factors to consider in constructing contemporary assistance initiatives. A primary consideration is the balance that initiatives must strike between directly tackling ecological challenges, such as droughts, soil erosion, deforestation, or crop and animal disease, and cultivating institutional and human capital strengths that enable communities to combat those ecological challenges socially and indirectly. A second consideration is the impact of shocks and stresses of varying magnitudes and types, affecting vulnerable populations in unpredictable combinations at unpredictable times. As a result of these complexities, the tendency has been to treat resilience enhancement holistically and to target improvements in all three capacities simultaneously. Yet, as Keck and Sakdapolrak imply, there may also be reasons to work toward incremental change before radical change, or to actively strengthen ex-ante capacities, while preparing protocols and plans for eventually addressing risks ex-post. A third consideration that emerges from the foundational literature on resilience is how resilience is framed, and what the implications of that choice are for the programs that development agencies implement. Using Sen's work as a guide, the objective of resilience programs should be to ensure well-being and life satisfaction by cultivating not just stability, but stability at a sufficiently high level of income, skill, and happiness. The objective would be to enable vulnerable populations who face shocks and stresses to quickly return to their steady state with minimal disruption, while incorporating strategies for also improving that steady state.

We must note that the relationship between resilience, poverty, and poverty reduction is particularly complex. Bene et al. (2014, p. 615) describe the challenge succinctly:

In fact, we would argue that the chronic poor are (by definition) very resilient – to be able to survive, a homeless person in the streets of Kolkata or Lagos *has* to be resilient. But clearly what these chronic poor need is not more resilience, but less poverty and less marginalization. Therefore the whole discourse about how it is important to build resilience as a tool for poverty reduction is flawed: there is no direct and obvious way out of poverty through resilience.

It is important to keep in mind, therefore, that resilience programming alone does not constitute an escape from poverty. For one thing, resilience per se is not evaluative, i.e. either good or bad a priori; its value depends on the status of the current steady-state (Desjardins

2015). Further, resilience may actually be detrimental to poverty reduction and long-term wellbeing if it simply allows vulnerable populations to continuously withstand dire conditions. As Sen notes (1999: 62), the poor are particularly good at “...adjusting their desires and expectations to what they unambitiously see as feasible.” Thus, in response to a shock, individuals may *adapt their own preferences* in order to survive. For example, a household which previously prioritized education may pull its children out of school in the aftermath of a shock, thereby invoking an *adaptive* strategy. That adaptation would not be aimed at increasing wellbeing, but instead would take place because the household’s “expectations and aspirations” about what is feasible would have changed (Bene et al. 2014: 607). This would be an example of a household that is highly resilient, perhaps at the expense of long-term poverty reduction.

Consistent with that perspective, research from the Institute of Development Studies rejects the notion that resilience helps people to escape poverty: “...there is no relation between poverty alleviation and resilience building. Resilience is poor-neutral; nothing in it makes it specifically linked to the poor (except perhaps that the poor are often assumed to be more vulnerable, or less resilient, than others). But contrary to what people seem to believe, households can be very poor and very resilient. In fact, many empirical social and anthropological studies suggest that to be poor and to survive you almost certainly have to be resilient” (IDS 2012: 48).

The complexity of shifting aspirations and resilience among the poor does not imply that resilience programming is unimportant for poverty reduction. Instead, we stress—as the literature does—that resilience should be seen as a “means rather than an end” (Bene et al. 2015). That is, resilience is an intermediate step in the process out of poverty and toward improved wellbeing, but not the goal itself. Olsson et al. (2015: 6) recognize this when they argue that resilience programming should not be considered a replacement for poverty reduction efforts. The emerging consensus is thus that aid programming should prioritize enhanced resilience only in explicit combination with concrete, longer-term poverty-reduction and development activities (distinct from resilience activities themselves). Resilience provides a base for vulnerable populations to escape from poverty, but it is not an escape from poverty itself.

2.2. Related Concepts from Across Disciplines

Due to its cross-disciplinary nature, resilience in the context of international development relates to a number of other concepts and frameworks. Importantly, these concepts are not necessarily at odds with the resilience framework. To take just one example, conditional cash transfers are commonly viewed as a *social protection* mechanism, yet they also serve to increase *absorptive* and *adaptive capacity* in the context of resilience: the transfers help families to absorb losses, while the conditions, often including school attendance and health visits, bolster the capacity of the family to adapt to new circumstances. Similarly, access to credit markets stands in the economics literature as a key *consumption smoothing* mechanism, which itself is integrally

related to the *adaptive capacity* that can result from investment diversification. We outline a number of concepts closely related to resilience below (and summarize them in the annex); in doing so, we hope to suggest additional areas where scholars and practitioners of resilience might look to develop complementary approaches to resilience.

First, resilience is linked to the concept of *social protection* from the scholarship in development economics and sociology. In those fields, social protection refers to initiatives that transfer income or assets to the poor, and that protect the vulnerable against livelihood shocks (see Davies et al. 2009). In addition, social protection efforts aim to enhance the social status and rights of the marginalized, thus incorporating a measure of self-worth into otherwise purely resource-based conceptions of subsistence. Some examples of social protection measures include programs that provide social insurance (either formally through the government or informally through local networks) and employment protection initiatives. In the context of the Sahel, where employment frequently consists of subsistence agriculture, livestock raising, or temporary labor migration, employment protection is not often seen as a viable option, but creative initiatives may nevertheless protect individuals in those sectors from volatility in their domains. Conditional food and cash transfer programs – in which households that meet some minimum standard of effort and engagement, e.g., regarding schooling, receive regular allotments of either foodstuffs or income – also constitute a key form of social protection. Such programs can vary the conditions or can apply no conditions for the receipt of transfers; they are increasingly common in South and Central America. Key citations on social protection as a concept related to resilience include Barrientos and Hulme (2009) and Davies et al. (2009).

Disaster Risk Reduction (DRR), already a central component in many USAID-funded food security initiatives, is itself a concept closely tied to resilience. Prominent as a concern in the international development literature, DRR is conceptualized as the systematic development and application of policies, strategies, and practices to minimize vulnerabilities, hazards, and the unfolding of disaster impacts, in the broad context of sustainable development (see Mercer 2010). Important elements of the DRR literature include efforts to combat environmental hazards – for example, by constructing erosion-mitigation barriers - as well as strategies to address social and political threats, such as ethnic group tensions or bureaucratic capture. The scholarship on DRR also implicitly notes a distinction between shocks and stresses; while the two often overlap and exacerbate one another, Sensier et al. (2016) note that “it is only when a shock has occurred that it is possible to ascertain whether, and to what extent, the ongoing evolutionary adaptation of the region's economy has imbued it with resilience.” Additional key citations in the DRR literature include Davies (2009) and Mercer (2010).

A third concept closely related to resilience is *climate change adaptation*. Climate change adaptation emerged as a topic of study in the field of environmental sciences; it describes efforts to mitigate the risk posed by climate change to people's lives and livelihoods. Key examples of activities undertaken specifically in the service of climate change adaptation include studies with local residents of climate vulnerability (i.e. tracking local rainfall; measuring local

deforestation; recording temperatures systematically in micro-locations), as well as efforts to complement standard climate change mitigation tactics (for example, by cultivating new local industries). Dupuis and Briesbroek (2013) and Swart et al. (2014) both provide useful foundations for the study of climate change adaptation. The emerging consensus coming out of this literature is that certain populations, particularly in the global south, are acutely vulnerable to the natural hazards associated with climate change (e.g. Hellmuth et al., 2007; Leary et al., 2013; Guha-Sapir 2013). This is especially true of households in sub-Saharan Africa (IPCC 2007). Resilience informed programming can thus help bridge the gap between climate change initiatives and development work by explicitly incorporating early warning systems, climate forecasting, and community-based resource management systems. These can enhance the ability of poor households, especially farmers, to react to the hazards associated with a changing global climate and better manage their vulnerability to crisis (e.g. Baudoin et al., 2014; Hansen et al., 2011).

Poverty traps is a concept from development economics that also links closely with resilience. Made popular by Paul Collier's widely-read (2007) book on *The Bottom Billion* and by Jeffrey Sachs's (2005) book on the *End of Poverty*, poverty traps reference the inefficient and self-reinforcing equilibria that cause persistent poverty. In short, the same things that make vulnerable populations extremely poor and susceptible to shocks and stresses also make it exceedingly difficult for those people and households to get out of poverty or to stay out in the event that they enjoy any positive change. Some key elements of the poverty traps literature include savings and investment gaps, in which units lack the initial capital required for the investment (even at a very small scale) that is required for growth and improvement; "big push" models that advocate a surge in resources to local areas in order to combat multiple, practical threats to well-being; and nutrition traps that keep units from obtaining the nourishment necessary for the productive work that could foster resilience. We note that some resilience strategies, such as removing children from school, can contribute to poverty traps. In addition to Collier and Sach's work, studies on poverty traps include Azariadis (2005) and Kraay and MacKenzie (2014).

Finally, *consumption smoothing* – noted in examples above – is a concept from economics that relates closely to resilience. Typically, consumption smoothing is defined as an effort, mechanism, or strategy taken by households subject to risk in order to maintain consumption levels given some negative income shock. Otherwise stated, it describes the choices that households undertake to ensure that they can get by in the worst of times, often by cutting back, drawing down surpluses, borrowing, or sharing. Elements of consumption smoothing frequently cited in the economics literature include local risk sharing initiatives, asset storage programs (i.e. grain or livestock holdings), and credit or insurance markets. Useful studies on consumption smoothing include Kazianga and Udry (2006) and Jappelli and Pistaferri (2010). Somewhat related to consumption smoothing in economics is the anthropological concept of *safety first*, originally applied to the context of Southeast Asia by James Scott (1978), and later

adapted to the African context. Safety first suggests that vulnerable populations forego opportunities for greater returns and instead opt for strategies that ensure a basic level of livelihood in the worst of times; a standard example is the choice to cultivate less nutritious but heartier crops such as sorghum, since having access to some crop even in a difficult season is more important than having access to a more nutritious crop that may be wiped out in a difficult season. The difference between consumption smoothing and safety first is that the former implies updating behaviors, while the latter implies a fixed preference for more conservative behaviors.

These related concepts are in some cases already incorporated into resilience enhancement initiatives. In other cases, they suggest ways in which resilience-related efforts might take on complementary activities or adopt new angles in order to improve resilience in appropriate ways.

Finally, we should note that, in addition to resilience-related work from a variety of academic disciplines, scholarship on resilience from different regions and in different languages has expanded as resilience enhancement spreads through development agencies in different countries. Taking the example of French research on resilience, numerous studies approach the topic in ways consistent with the ecological-social union prominent in the English language literature. Some of the most cited Francophone work on resilience, particularly in the context of the Sahel, includes Sylvie Brunel's (2004) *L'Afrique: un continent en réserve de développement*, Fauquet and Morel's "Résilience des communautés rurales face à la crise écologique et foncière du Sahel," and Ariori and Ozer's (2005) "Evolution des ressources forestières en Afrique de l'ouest soudano-sahélienne au cours des 50 dernières années." Each of these studies links deforestation and drought patterns with livelihood challenges that necessitate diversification at the household level. Our own sense is that contemporary researchers and development practitioners in other language contexts have built on longstanding work broadly related to resilience, and have followed the lead of USAID and American researchers in adopting the language of resilience to explain modern development efforts to stave off hardship in the event of shocks and stresses.

2.3. Resilience Defined in Practice

Resilience programs have now been adopted fairly widely by international development institutions. Both as a function of shared learning across institutions and greater priority placed on the consequences of conflict and climate change, numerous international organizations and state-level aid agencies now include resilience as a centerpiece of their development efforts. Here, we outline the resilience frameworks employed by several leading development institutions: USAID; the Global Facility for Disaster Reduction and Recovery (GFDRR, managed by the World Bank); the United Kingdom's Department for International Development (DFID); Germany's Gesellschaft für Internationale Zusammenarbeit (GIZ, which includes the traditional aid arm GTZ); the European Civil Protection and Humanitarian Aid Operations (ECHO); and

the Global Resilience Partnership (GRP). We then summarize the commonalities across these organizations' approaches to resilience, and we note some key differences.

USAID: As noted at the outset (and summarized in Table 2 below), 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” (USAID 2012). The contemporary framework employed by USAID builds largely on the work of Tim Frankenberger and his colleagues at TANGO International, a key USAID implementing partner in resilience enhancement (see Frankenberger et al. 2012; Frankenberger et al. 2014; Frankenberger and Nelson 2013). That research pushes the notion that, while traditional development initiatives have done much to save lives in areas of extreme poverty, they have not increased the capacity of local populations to withstand setbacks. To avoid the downward spirals that often follow, resilience initiatives can intervene not just to provide direct assistance, but also to facilitate change by improving the key capacities of absorbing, adapting, and transforming. We note that Frankenberger and TANGO at times rely on a slightly different definition of resilience that emphasizes explicit “hazardous occurrences” (i.e., natural disasters, economic instability, and conflict) as opposed to more general shocks and stresses (see, for example, Frankenberger et al. 2012: 1). The move to more general language allows USAID to address the effects of those hazardous occurrences, but it also recognizes that shocks and stresses may emerge from more idiosyncratic sources with equal consequence. Countries in which USAID has engaged in resilience enhancement activities include Burkina Faso, Ethiopia, Kenya, Mali, Nepal, Niger, Somalia, and Uganda (USAID 2015). Typically, resilience enhancement activities include a set of measurable indicators – some that replicate global measures employed by the World Health Organization and other international organizations, and others tailored to the local context – that allow for the tracking of resilience enhancement over time.

GFDRR: The Global Facility for Disaster Reduction and Recovery, an association of the World Bank, emphasizes slightly different elements within a similar framework. Resilience is defined by GFDRR as “the ability of a system and its component parts to anticipate, absorb, accommodate, and recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions” (see IPCC 2012). In collaboration with the International Monetary Fund, GFDRR has launched a resilience dialogue series that aims to monitor and report on resilience enhancement progress across contexts; those efforts have focused on issues such as protracted and forced displacement, gender divides, and natural hazards (GFDRR 2016).

GFDRR's framework centers on five *action pillars*. The first pillar, *risk identification*, refers to a set of products and services which aim to increase “access to information about disaster and climate risks, and greater capacity to create, manage, and use this information” (GFDRR 2016: 27). This includes funding for services like hazard mappings, risk assessments, and data platforms. For example, a project in Tanzania provides technical assistance regarding the

collection and management of hazard and exposure data, which will be used to advise resilience investment at subnational levels. The second pillar, *risk reduction*, focuses primarily on providing technical assistance and planning advice to vulnerable countries. In Ghana, GFDRR is partnering with universities to provide training and collaboration programs related to climate disasters for relevant professionals. *Preparedness*, the third action pillar, highlights early warning systems and mobilization strategies for quick response in the event of a disaster. In Nicaragua and Honduras, a GFDRR project is investing \$1.0 million toward building national-level institutional capacity that will aid in forecasting climate-related disasters like hurricanes, tropical storms, floods, and landslides which have previously devastated both countries. The fourth pillar, *financial protection*, seeks to address post-disaster financial responses and insurance markets (GFDRR 2016: 43). Common programs related to this pillar include improving access to catastrophe and weather insurance. The fifth and final pillar, *resilient recovery*, aims to increase the quality and speed of post-disaster recovery efforts via improved post-disaster assessment and recovery planning. Programs under this pillar are triggered only as a response to a given disaster.

DFID: The United Kingdom's aid and international development arm relies on a conceptualization of resilience that is in close keeping with the framework employed by USAID. It defines resilience as “the ability of countries, communities, and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses – such as earthquakes, drought, or violent conflict – without compromising their long-term prospects” (DFID 2011). That framework is fairly general, though it should be noted that in practice, much of DFID's resilience work is framed as “disaster resilience,” which places an emphasis on shocks over ongoing stresses that vulnerable populations face. DFID resilience programs typically include five components: social/human, financial, environmental, political, and technological. They operate in some of the same countries that host USAID resilience activities, as well as Pakistan, Burma, and South Sudan.

DFID's flagship resilience program is referred to as Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED). DFID has funded 15 BRACED projects (3-year grants) in countries across the Sahel, East Africa, Nepal, and Myanmar. For example, the Decentralising Climate Funds in Mali and Senegal (DCF) project implements *local climate adaptation funds* which allows local communities to identify and prioritize resilience investments. To do so, evidence is generated locally with an emphasis on the participation of women and youth. This evidence is then disseminated to the national and international levels (see project description at <http://www.braced.org/about/about-the-projects/project/?id=fadb8fd0-55a3-4715-8632-c19901bbda4c>). Also part of BRACED, PRESENCES (Projet de la Résilience face aux Chocs Environnementaux et Sociaux au Niger) in the Tillabéry region of Niger brings resilience expertise to local communities in order to transmit information regarding issues like sustainable agricultural practices and community-based adaptation.

GIZ: Germany's development institution similarly defines resilience as “the ability of people and institutions – be they individuals, households, communities or nations – to deal with acute

shocks or chronic burdens (stress) caused by fragility, crises, violent conflicts and extreme natural events, adapting and recovering quickly without jeopardizing their medium- and long-term future” (FMECD 2016). In practice, GIZ emphasizes programs related to the reconstruction of basic infrastructure, disaster risk reduction, (re)integration of refugees, and food security. Some key elements include “building back better” in the event of infrastructure deterioration and promoting social cohesion through income opportunities for refugees and repatriated populations.

Two GIZ projects demonstrate how the organization is addressing resilience. First, the Food and Nutrition Security, Enhanced Resilience operates in 11 African and Asian countries, including Burkina Faso and Mali. The project’s primary goal is to increase resilience to malnutrition and undernutrition by providing local communities with information that integrates agricultural, health, education, social protection, and WASH (water, sanitation, and hygiene) practices. Thus, participants are exposed in an integrated fashion to the spectrum of factors that collectively enhance nutritional outcomes. For example, improved agricultural yields are only beneficial if stored properly, so the program couples agricultural training with storage opportunities. Second, the Global Programme on Risk Assessment and Management for Adaptation to Climate Change shifts the focus of climate-related damage from shocks like flooding to the more slow-moving stresses that cause incremental damage. These gradual changes are more difficult to observe, making cost determinations and long-term policy decisions more complicated. This program attempts to ease this difficulty through 1) a classification and assessment system tailored to gradual stresses, and 2) long-term risk management measures. Some of these measures are being piloted in India, the Pacific Community, Central America, and Tanzania (see project description at <https://www.giz.de/en/worldwide/32322.html>).

ECHO: European Civil Protection and Humanitarian Aid Operations is the humanitarian aid institution associated with the European Commission. ECHO’s approach to resilience recognizes the fact that addressing short-term setbacks can have adverse effects on long-term development, if not managed in tandem. It defines resilience as “the ability of an individual, household, community, country, or a region to withstand, cope, adapt, and quickly recover from stresses and shocks such as violence, conflict, drought, and other natural disasters without compromising long-term development” (EU Factsheet 2016). A central focus of ECHO’s resilience work has been the areas affected by the El Niño weather patterns in Africa, Central America, and the Caribbean, with particular attention to preemptive action and preparedness. ECHO has compiled and now relies on a “resilience compendium” – a set of 29 practical resilience activities undertaken both by ECHO and other organizations – as a guide and resource for emerging resilience projects (see EC 2016).

Perhaps ECHO's most unique resilience-related activity is the *resilience marker*, a tool included in all ECHO humanitarian programming plans (EC 2014). In brief, partners submitting humanitarian proposals must self-evaluate by answering the following questions:

1. Does the proposal include an adequate analysis of shocks, stresses, and vulnerabilities?
2. Is the project risk informed? Does the project include adequate measures to ensure it does not aggravate risks or undermine capacities?
3. Does the project include measures to build local capacities (of beneficiaries as well as local institutions)?
4. Does the project take opportunities to support long-term strategies to reduce humanitarian needs, underlying vulnerability, and risks? (EC, 2014: 4)

Each proposal is then scored regarding the number of criteria met. The resilience marker not only ensures that all proposals consider resilience, but it also acts as a tool for comparing resilience in practice across contexts.

GRP: The Global Resilience Partnership is an initiative undertaken by USAID, the Swedish International Development Cooperation Agency, and the Rockefeller Foundation. Its conceptualization of resilience is consistent with USAID's; the difference is its operational focus on public/private partnership to address resilience enhancement. Focusing on the Sahel, the Horn of Africa, South Asia, and Southeast Asia, the partnership places a priority on developing new models for tracking resilience improvement, creating tools for scaling up promising resilience activities, and promoting effective integration of development and humanitarian resources into local contexts (see USAID 2015).

GRP offers a series of Challenges (competitions) in order to facilitate innovative programming strategies. Of the ten winning teams from round I, two explicitly address problems in the Sahel. The first, Linking Social and Financial Capital to Enhance Resilience of Agro-Pastoral Communities (LEAP), targets agro-pastoralists in Mali and Niger and is detailed in Section 3 below. The second, Resilient Rural Livelihoods in Ecologically Fragile Drylands of the Sahel (also referred to as Agroecology Plus Six (AE+6)) operates in Senegal, Mali, and Burkina Faso with the goal of encouraging small-scale farmers to innovative agro-ecological techniques (see AE+6 Solution Plan 2015 for details). Notably, AE+6 relies on Self-Evaluation and Holistic Assessment of Climate Resilience of Farmers and Pastoralists (SHARP) as its primary methodological tool. SHARP assessments are translated into local languages and conducted directly by farmers and pastoralists with as little input from experts as possible. These self-evaluations focus on 13 resilience indicators including diversity, increased livelihood options, improving biological processes, improving production and nutrition levels, reversing soil and water degradation, strengthened adaptive capacity at the household and community levels, levels of self-organization, and redundancy in the social Agro-ecological system (AE+6 Solution Plan 2015; Choptiany et al. 2015). SHARP thus offers a distinctly participatory tool for assessing resilience.

Table 2: Resilience Definitions in Practice

Institution	Definition of Resilience
<i>United States Agency for International Development (USAID)</i>	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.
<i>Global Facility for Disaster Reduction and Recovery (GFDRR, World Bank)</i>	The ability of a system and its component parts to anticipate, absorb, accommodate, and recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions.
<i>UK Department for International Development (DFID)</i>	The ability of countries, communities, and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses – such as earthquakes, drought, or violent conflict – without compromising their long-term prospects.
<i>Gesellschaft für Internationale Zusammenarbeit (GIZ, which includes GTZ)</i>	The ability of people and institutions – be they individuals, households, communities or nations – to deal with acute shocks or chronic burdens (stress) caused by fragility, crises, conflicts and extreme natural events, adapting and recovering quickly without jeopardizing their medium- and long-term future.
<i>European Civil Protection and Humanitarian Aid Operations (ECHO)</i>	The ability of an individual, household, community, country, or a region to withstand, cope, adapt, and quickly recover from stresses and shocks such as violence, conflict, drought, and other natural disasters without compromising long-term development.
<i>Global Resilience Partnership (GRP)</i>	The ability of people, households,

	<p>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.</p>
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Across this selection of organizations working to enhance resilience among vulnerable populations, a number of commonalities stand out. First, all of the resilience frameworks outlined here include a focus on responding to shocks and stresses or hazards of some sort. That is, they all conceptualize resilience as a response, rather than simply a state of being. Second, most of the definitions explicitly emphasize multiple levels, including individuals, households, communities, countries, and systems. This is a reminder of the complexities that arise in building resilience, and perhaps of the need to incorporate complementary activities across levels. Third, all of these organizations highlight the importance of coping, adaptation, and transformation in some way, though the semantics differ.

Two differences are also notable. First, only DFID and ECHO (and to some extent GIZ) explicitly invoke the language of “long-term development.” While this is clearly a greater objective of aid and development organizations, incorporating the concept of long-term development into conceptions of resilience serves as a means to recognize the challenge of balancing short-term responses with long-term interests. Ideal resilience enhancement addresses both, but without sensitivity to the issue, one could imagine short-term responses to shocks and stresses that undermine, rather than foster, long-term development. Second, only USAID includes in its resilience framework reference to “inclusive growth” as a priority. This language, also used by the World Bank in other contexts, suggests a priority on including multiple players such as smallholder farmers, women, and youth in resilience enhancement activities. For a review of inclusive growth in the context of African agricultural activities, see Kanu et al. (2014).

2.4. The Sahelian Context

The RISE initiative that inspired this review is underway in northern Burkina Faso and in Niger, squarely in the Sahel region of Africa. Just below the Sahara desert, the Sahel – whose name derives from the Arabic “coast” in reference to the edge of the desert – is a semiarid ecoclimatic region that spans several countries from Senegal to Sudan. Socioeconomically, the region is one of the poorest in the world; coupled with climatic vulnerability and threats associated with ethnic and religious conflict and violent extremism, populations in the Sahel region are in particular need of resilience enhancement. Here, we consider some of the key features of the Sahel as outlined in the literature. Scholars and practitioners of resilience enhancement might consider the impact of these contextual factors on the implementation of resilience-related activities in the region, and those working on resilience in other regions of

the world might consider where similarities and differences in contextual factors affect the resilience outcomes they pursue. The features we highlight here include the region's climatic vulnerability, its social structures and youth populations, its population pressures, its patterns of migration, and the rise of violent extremism.

First, setting the Sahel apart from many other parts of the world is its particular brand of climatic vulnerability. Scholars note the recurrence of severe droughts in the region (Tschakert 2007). Though rainfall in the 2000s has at times been adequate and has far surpassed the driest periods from the 1960s to 1980s (Nicholson 2005), the impact of severe drought on family livelihoods and nutrition can extend for generations. For example, Akresh et al. (2016) find in a study of northern Burkina Faso that children born under drought conditions have systemically poorer intellectual aptitude compared to their own siblings born during non-drought periods; the consequence can be reduced productivity and opportunities that extend through adult life and that affect the well-being of children in subsequent generations. Another factor in the climatic vulnerability of the Sahel is the heavy reliance on subsistence agriculture and livestock. One common response is for local farmers to rely on drought-resistant crops varieties and micro-irrigation (Nyong 2005), although, as the "safety first" logic of James Scott (1978) suggests, those crops are often neither as nutrient-rich nor as profitable as other, less hearty crops. Pastoralists, for their part, must often move in search of water and food for their animals, posing additional challenges for household and community stability that require creative solutions (see Galvin 2009). An additional aspect of the region's climatic vulnerability is soil erosion and tree loss. In a seminal 2001 article in *Nature*, Scheffer et al. (2001) describe the Sahel region as suffering from catastrophic shifts in soil preservation and tree coverage, and shifts between dry and wet states. These patterns can undermine livelihoods in a way that more gradual shifts in ecosystems do not. Finally, average temperatures in the Sahel are expected to increase by as much as three to five degrees Celsius by 2050 (Population Reference Bureau 2015), a pattern which is expected to systematically decrease agricultural production.

Despite these vulnerabilities, however, scholars have suggested that the consequences are far from permanent. Studying the eastern region of Niger, Sendzimir and Magnuszewski (2011) note the reforestation of over five million hectares as a result of multiple actors, working at multiple levels, times, and scales over the past two decades. Critical, they argue, were reforms of government institutions that in turn provided stability to livelihoods. When that happened, improvements in the biophysical environment emerged, turning vicious environmental cycles into virtuous ones. Note, however, that not all researchers are convinced about the "greening of the Sahel" (see, for example, Ariori and Ozer 2005).

A second contextual aspect of the Sahel that can affect resilience enhancement is the region's social structure and its abundant youth population. In fact, the social structure is intimately entwined with the region's ecological vulnerability: ethnic groups such as the Tuareg and Fulani developed pastoralist norms, but the recurrence of droughts over time has forced members of those groups to adopt "suboptimal livelihood choices" such as jewelry making, which do not

provide the same level of resources to the household (Bovin 2016). In turn, those activities have increased the sedentarization of groups otherwise adept at semi-nomadic cattle raising, thereby introducing local tensions and marginalization in areas where they attempt to settle. Religion also impacts the social structure in the region: Islam spread peacefully through the region in the 10th and 11th Centuries as Muslim traders moved as far south as their camels could survive (McCauley 2017). Self-proclaimed jihads later in the 19th Century countered the encroachment of colonial administrators in some cases and led to overlap between religious identity and predominant ethnicities across the Sahel. Today, some view Islam as playing an informal political role in an otherwise difficult to govern region and providing an important social opportunity for Islamic clergy (Turner 1993), though it is important to note that each country's domestic political context shapes the social role of religion in unique ways (see Dowd and Raleigh 2013).

The youth population plays a key role in the social structures of the Sahel. The region is one of the youngest in the world: approximately half of all residents are under 18 years of age, and teenage marriages and pregnancy remain common (Agbiboa 2015); further, it is expected that the youth population (under 20-years-old) will double in absolute numbers in the Sahel by 2050 (Population Reference Bureau 2015). Complicating that picture, youthhood in the region is often defined informally according to social expectations and responsibilities, typically regarding the ability to sustain a marriage (Abdullah 1998). Of particular concern, given widespread unemployment and poverty, is that young people without opportunity are statistically more likely to be involved in conflict and illicit activities (Machel 1996). With few opportunities in an environment of poverty and vulnerability, youth – and young men in particular – face a dilemma: either marry and enter adulthood with few prospects for improved livelihood, or seek opportunities for improved livelihood but risk “indefinitely prolonged” youth status (Cruise O'Brien 1996: 58). Youth in the region can also be dynamic, tactical agents of peace and development in the region, however, so long as their energies are harnessed in productive ways (Agbiboa 2015). That means providing clear opportunities for youth to contribute to local projects, and tangible benefits from additional education and skills training.

Third, in addition to the youth of the Sahelian population, population growth more generally is creating pressures regarding livelihoods, services, and the environment. Over the past two decades, commendable improvements have occurred in terms of infant and child mortality in the Sahel, yet decreases in fertility have lagged: in Burkina Faso, for example, births per woman remain at 5.9, whereas the fertility rate in Niger surpasses 7.5 births per woman (Population Reference Bureau 2015). The consequence is a population in the Sahel that has increased by approximately four percent annually, and that, by the year 2050 will have increased 150 percent compared to its current level (Population Reference Bureau 2015). One important consequence of the population explosion comes in terms of livelihood hardships, as many more people rely on the same supply of land and food stock. In particular, sedentary families and communities face hereditary claims to land from growing extended families (Oucho 2000). Not all claimants can gain access to an adequate land supply, so their opportunities for improved

livelihoods dissipate just as the likelihood of local tensions increases. A second impact of the population explosion is the environmental cost. Scholars note that population pressures in the region lead to the degradation of arable lands and the acceleration of deforestation (largely through the more rapid removal of remaining brush and trees for cooking), such that yields per hectare declined by up to 20 percent through the 1970s and 1980s (Camp 1992) and the desert has expanded southward at a rate of up to 48 kilometers annually (Enser 2016). This, in turn, has meant that households increasingly take shortcuts in food preparation, often relying on less nutritive foods to compensate for fuel shortages (Denton 2002). A third consequence of the rapid increase in population growth in the Sahel is the inability of governments and local communities to provide adequate services. Sanitary threats increase with larger populations (Vörösmarty et al. 2010), so the supply of safe, potable water is placed at risk even as more people need it, and greater pressure mounts on governments to provide new wells and pumps. Infectious disease threats similarly rise (Dye 2014). Further, as per capita output declines due to land degradation and population expansion in the parts of the country least likely to provide tax revenues, public funds available for critical health and education services have been limited (World Bank 2016).

Several potential strategies might mitigate the adverse effects of sharp population growth in the Sahel. One is to encourage the incorporation of technological innovations, even at the very micro level, that increase output per worker. Drip irrigation is often cited as one such innovation (Burney et al. 2010), though simple technologies that improve household sanitation (such as designated handwashing stations) or productivity (such as new jewelry or sewing techniques for use during the dry season) serve a similar purpose (see Mortimore 1993). A second is to encourage a transition of household members from agriculture or livestock raising into activities that rely less on access to land (Mortimore 1993). Finally, bundling health, education, and other household services – by providing access to several at the same time and place) can help to overcome costs, improve economies of scale, and overcome social stigmas against the discrete pursuit of any one service (such as family planning) (World Bank 2016).

A fourth aspect of the Sahelian context that we consider here is the prominence of migration. It is important to note, first of all, that migratory patterns differ across countries in the Sahel. To take one comparative example, some individuals from the central Mossi Plateau in Burkina Faso are known to migrate south to Côte d'Ivoire for opportunities in the commercial agricultural sectors that can lead to extended stays or permanent displacement (Cordell et al. 1996). Conversely, migration from the groundnut basin of central Niger tends to be more common but of shorter duration: residents may migrate during the dry parts of the year in search of additional income and return for cultivation season (Reynaud 2001). In fact, in the data collected for the RISE baseline study, approximately one-quarter of respondents in Niger reported household members earning significant income from temporary migration, while the figure was less than five percent in Burkina Faso (RISE Baseline Report 2016). It is further worth noting that ethnic groups often have distinct migratory patterns. Even within one ethnicity, such

as the Fulani, patterns in migration can differ starkly based on the balance in agro-pastoralism that sub-units develop (Hampshire and Randall 1999).

Relatedly, it is critical to understand migration patterns as closely linked to the climatic vulnerabilities in the region, and not simply as individuals pushed out by technological change. David Rain (1999) describes the migration patterns in the Sahel as circular: men and women – *masu cin rani* in the Hausa language, or "those who eat the dry season" – leave their villages after the rainy season to work in informal economies elsewhere in West Africa, only to return for the rainy season having earned additional income and conserved household supplies in their absence. Perspectives differ, however, on whether these patterns in migration are a function of poverty-induced desperation or income-generating opportunity. Maliki et al. (1984), for example, find that only the poorest and most destitute of Niger's households send out seasonal labor migration, but Ruthven and Koné (1995) suggest no clear link between economic status and seasonal out-migration, indicating that migration may serve as an opportunity for greater stability for families that are already comfortably above subsistence levels. On a positive note, Scheffran et al. (2012) argue that labor migration can result in important transfers of knowledge and social networks that help to build resilience and flexibility in the face of ongoing climatic change and other stresses. Further, remittances tend to increase in response to shocks, thus serving as an important reinforcement to absorptive capacity.

Finally, some scholars consider the Sahel region to be the new epicenter of violent, religious-based extremism (see Alexander 2016). In the aftermath of the collapse of government in Libya, arms spread quickly to insurgent extremist groups operating in Mali, such as Ansar Dine and Al Qaeda in the Islamic Maghreb, and then into neighboring countries such as Burkina Faso and Niger. In addition, pressures and opportunities led Boko Haram to extend its activities beyond northeast Nigeria into nearby countries, especially impacting eastern Niger. The consequence has been a spike in terrorist activity in the region, from a variety of sources, beginning approximately in 2013. Furthermore, despite little widespread, overt support for violent extremism, residents of the region face a number of pressures that give ongoing life to extremist movements: the need for local protection, communal violence that undermines trust in neighbors and government, a youth population with few opportunity costs, and the desire for individual-level belonging. Scholars suggest that these factors contribute to the local toleration of extremist groups, and in some cases the emergence of homegrown groups in Sahelian countries, even amid the widespread repudiation of their practices (see, for example, Aldrich 2014; Finkel et al. 2017). Just as the RISE initiative was getting underway, violent extremism has introduced a new and critical threat to food security in the region.

In view of the climatic vulnerabilities, the young social structure and exploding population, the fairly unique patterns in migration, and the rise of violent extremism, the Sahel constitutes a particularly challenging context in which to build resilience. It is also a critical one in which to continue seeking novel strategies for families and communities to overcome shocks and stresses.

2.5. The Institutional Context in Burkina Faso and Niger

Part of the power of resilience programming lies in its focus on addressing problems at multiple levels – from individual-level interventions to programs at the country-level. National initiatives as a complement to resilience programming from aid agencies are only effective, however, to the extent that the central government has the institutional capacity and strength to manage those initiatives. Thus, the institutional context in Burkina Faso and Niger may partially dictate which levels are most appropriate as focal points for resilience programming.

The World Bank's Country and Policy Institutional Assessment (CPIA) provides a proxy for government capacity that is comparable across time and place (World Bank 2016). The assessment includes 16 indicators grouped into four clusters: economic management, structural policies, policies for social inclusion and equity, and public sector management and institutions. These four clusters aggregate to create the IDA Resource Allocation Index, which ranges from 1 (low) to 6 (high). In 2015, the average sub-Saharan African country eligible for IDA funding scored 3.2. Both Burkina Faso and Niger exhibited higher scores for this time period, at 3.6 and 3.5, respectively, which may suggest that the institutional context is appropriate for RISE programs that target the national-level and that capitalize on regular collaboration with central governments. It is also worth noting, however, that Burkina Faso's CPIA score declined over each of the last two years, and Niger's decreased in 2014 before returning to its 2013 level in 2015. Furthermore, Burkina Faso's lowest scoring clusters include *public sector management and institutions* and *structural policies*. Niger's poorest performing clusters include *public sector management and institutions* and *policies for social inclusion and equity*. Nevertheless, both countries' worst categories remain above the average in the region, so the challenges related to weak institutions in Burkina Faso and Niger are likely no worse than those experienced elsewhere in the region and should not preclude leveraging central institutions. It is simply worth gauging the trends in institutional capacity; should the central government's ability to partner effectively on resilience programming decline persistently, resilience efforts may need to shift to a focus on the individual- or community-level, at least for a period of time.

Previous programming highlights the extent to which government capacity can affect the success of national-level resilience programming. In 2010, for example, Niger partnered with the World Bank and UNICEF to implement the Action Plan for Social Safety Nets, which targeted 70,000 households, 40,000 of which received cash transfers and information regarding key family practices (KFP; related to health, sanitation, etc.) (Niang et al. 2014). The remaining 30,000 households participated in a cash-for-work scheme but were not exposed to the KFPs. After only 10 months of the KFP + cash transfers, health and sanitation behavior across several measures approached levels similar to those observed after more than four years of government-run KFP interventions alone. In short, government capacity had not been sufficient to ensure behavioral changes through the KFP interventions in prior interventions, and the key influx of cash transfers required external assistance. An additional program, termed 3N for

Nigériens Nourissent les Nigériens (Nigeriens Feeding Nigeriens), was launched by President Mahamadou Issoufou after the 2011 election. Totaling \$2 billion between 2012 and 2015, 3N was viewed by some to represent an indication of the governments ‘political will’ to take on food security issues (“Niger seeks...” 2013). However, program details and effectiveness remain unclear given a lack of publicly available information, one critical component of effective institutional capacity and management.

2.6. Value Added from Resilience Enhancement Initiatives

One of the central pillars of resilience enhancement efforts is their potential to break down barriers between the natural and social sciences and to inform new development interventions that take into account the dynamic processes of change – both physical and social – that affect the developing world. For this reason, the organizations cited above and many others now systematically apply resilience principles to their development programming, often with the goal of creating synergies between short-term relief and long-term development.

In this sense, resilience has become an important “mobilizing metaphor” around which development agencies organize their development programming. We view it as important in this context to consult the literature to determine some precise ways in which adopting such an approach adds clear value. Doing so should help scholars and practitioners of resilience enhancement to keep in mind how resilience-based programming might affect resource decisions, project evaluation, and activity programming.

Numerous scholars have noted the significant analytic and programmatic value of resilience initiatives, particularly in terms of improving efficacy of development aid (see Bene et al. 2015; Kazianga and Udry 2004). Analytically, resilience has significant value-added due to its emphasis on system level thinking, the importance it places on dynamic change, and its conceptual flexibility as an organizing principle. Programmatically, resilience thinking encourages joint planning and cooperation and allows practitioners to build upon extant competencies while folding in local knowledge, current programming, and past lessons. We address each of these in turn.

2.6.1. System Level Thinking

The first major analytic benefit of resilience efforts is that it promotes *system level thinking* in the development context. Early theorizing on resilience was substantially influenced by work in ecology, which emphasized thinking about systems holistically and the myriad interconnections between the units that comprise a given system (e.g. Holling 1973). More recently, scholars studying the intersection of human and community development have noted the critical importance of approaching shocks and threats from a system-wide perspective, in order to prepare societies to help support the individuals and families therein (see Masten and

Obradovic 2008). A focus on resilience after the droughts in the Horn of Africa and the Sahel in 2011 has encouraged recognition of the nexus between poverty and crisis in areas where large-scale humanitarian interventions are common. Thinking systematically about the intersection of poverty and crisis means that aid practitioners can focus on designing humanitarian and development programs with spatial and temporal variations in mind, thus moving beyond the “relief and development” dichotomy that was common for many years.

2.6.2. Dynamic Change Over Time

A second and related benefit of resilience enhancement activities is that they focus attention on *dynamic change over time*. In particular, this forces a consideration of how programming will affect the target area in the short-term and long-term, and in particular how the programming will respect the principle to “do no harm.” An important related advantage is the recognition that resilience programs can decrease the need for large-scale humanitarian aid programs in the future by increasing capacities at the household level and by building in crisis-modifiers (such as emergency distributions of resources) that react flexibly to changing conditions. In practice, this means not only explicitly recognizing temporal interconnections, but also expanding the time-horizons of projects. Community engagement is especially important to maintain these benefits (Abramovitz et al. 2001). Further, Tompkins and Adger (2004) describe the adaptive management processes, which rely on iterative learning and revisions and which are frequently a feature of resilience programming, as an ideal approach to shocks and stresses (particularly due to climate change) that may require changes over time.

The emphasis in resilience enhancement on the dynamic nature of change over time also allows development actors to weigh the tradeoffs and overlaps in interventions across multiple sectors, and to consider how interventions may affect other outcomes downstream or in different sectors. An intervention that seems effective for one sector may have harmful effects when viewed through a broader resilience framework. For example, increasing milk yields through the introduction of new breeding stock may place stress on fodder supplies during times of drought. When viewed through a resilience framework, these potential negative consequences can be identified and mitigated in the program design phase.

2.6.3. Conceptual Flexibility

A third benefit related to the resilience framework lies in its *conceptual flexibility*. In particular, the concept can be linked to critical related concepts like sustainability in ways that improve program design and delivery. As Anderies et al. (2013) note, drawing insights from other domains allows practitioners of resilience enhancement to develop responses to highly uncertain systems in ways that are sustainable in the long-term. In particular, combining insights from sustainability and resilience improves the capacity of actors to leverage the research on complex systems and to apply that research in practical ways to enhance the capacities of individuals, households, and institutions in the affected societies.

2.6.4. Joint Planning and Cooperation

A fourth, programmatic benefit of resilience thinking is that it encourages *joint planning and cooperation*. This can help development organizations to build on their core competencies while leveraging the expertise and experience of partners at the global and local levels. In particular, Martin-Breen and Anderies stress that resilience thinking can “decrease the rigidities of disciplinary and institutional structure” and bring people with different backgrounds and incentives together (see Martin-Breen and Anderies 2011). By allowing organizations to concentrate on their comparative advantage in a cooperative way, resilience enhancement initiatives can increase the scope for productive synergies in combatting common problems. Already, we know that bridging the divide between traditional humanitarian and development programs can create important synergies for helping vulnerable populations (see FAO 2013). Furthermore, bringing stake-holders at the local level into the initiatives – as resilience programs typically do – can allow programs to build upon existing local knowledge and practices that contribute to resilience.

Each of these benefits dovetails with priorities cited in the literature and suggests real value added from resilience programming. It is critical as the programming evolves that actors maintain a vigorous pursuit of the most appropriate and practical applications of resilience enhancement, lest the mobilizing metaphor become stilted and the resilience enhancement initiatives lose their practical relevance. Overall, we agree with Barrett and Constan (2014), who argue that resilience thinking “compels a coherent, multidisciplinary, and rigorous explanation of the interrelated dynamics of risk exposure, multi-scalar human standards of living, and broader ecological processes.” Acting on that explanation requires efforts both systematic (in order to compare) and creative (in order to adapt).

3. Resilience Program Summaries

To complement the broader literature review, we also reviewed evaluations and reports from a number of resilience-related initiatives, both in the Sahel and elsewhere. Here, we present brief summaries of a number of those programs, with the intention of highlighting successful programs and activities as well as the shortcomings and gaps that persist in addressing resilience capacities. We begin by summarizing the activities related to the RISE initiative in Burkina Faso and Niger. We then outline initiatives comparable to RISE already completed in Kenya and Ethiopia. We continue by drawing from evaluations on a number of other initiatives not explicitly related to RISE but focused on resilience building in their own right. Reviewing this selection of programs may spark ideas for additions or revisions to the ongoing RISE initiative or for other future resilience-related programs. We do not categorize specific activities according to the capacity they address since programs often aim to target multiple capacities simultaneously. We do note, however, instances in which a particular capacity is emphasized or overlooked.

3.1. Resilience in the Sahel Enhanced (RISE) Programming (Burkina Faso and Niger)

The RISE initiative is comprised of the REGIS-ER, REGIS-AG, and SAREL projects as well as five Food for Peace Development Food Assistance Programs (DFAPs) implemented in Niger and Burkina Faso by Catholic Relief Services (Pasam-Tai and FASO), ADCI/VOCA (ViM), Mercy Corps (Sawki), and Save the Children (LAHIA). The broader RISE includes all USAID projects that are being implemented in the Sahel Resilience Strategy intervention zones that jointly contribute to the transition from aid programs to integrated humanitarian and development assistance (HA/DA) in order to help countries in the Sahel deal with the food crises and various recurrent shocks that create or exacerbate chronic vulnerability of their populations. RISE includes projects managed out of the regional USAID/Senegal office, regional projects managed out of USAID/West Africa, and regional projects managed out of USAID/Washington. These projects include FFP Humanitarian Assistance, OFDA Humanitarian Assistance, PDEV, SPRING, WAWASH, AGIR-FP and MSI Family Planning, and Development Credit Authority (DCA) projects managed out of Dakar.

The areas in which RISE operates are highly shock-prone and, as such, represent an appropriate setting for incorporating resilience programming into aid interventions. The principal form of shock in the region is drought, which has myriad downstream impacts including food price increases, animal disease, and conflict. According to the baseline survey, 76.4% of households were food insecure and the “majority of households that experience a shock were not able to recover from it” (Feed the Future 2016: xiii). The most common strategies households adopted to cope with shocks were selling of livestock, reduction of food consumption, borrowing money from friends and relatives, migration, drawing down savings, and consuming seed stocks (ibid: xiii). Below we consider the impact of two RISE components, REGIS-ER and REGIS-AG.

3.1.1. Resilience and Economic Growth in the Sahel – Enhanced Resilience (REGIS-ER)

The REGIS-ER program aims to increase resilience in Niger and Burkina Faso using a “360 degree” approach that focuses on three activity areas:

1. Sustainable livelihoods: diversifying economic opportunities and developing a system of local service providers; intensifying agricultural and animal production and marketing; facilitating access to credit and savings institutions.
2. Strengthened governance: managing natural resources through legally recognized land use plans; planning for resiliency in the face of climate change and related disasters; improving mechanisms for preventing conflict over resources; building capacity in commune government structures.
3. Improved health and nutrition: providing access to potable water; developing the capacity of community health workers and group leaders to guide behavior related to health, sanitation, and nutrition; promoting key health and nutrition actions.

Project component 1 seems to focus primarily on enhancing short- to medium-term absorptive and adaptive capacity by increasing productivity and diversifying households' economic activities. The primary avenue through which this is accomplished is the sharing of innovative techniques and new technologies across a variety of different agricultural or pastoralist activities. Component 2 focuses more on medium-term resilience building in the context of enhancing adaptive and potentially transformative capacities, which should also increase preparedness regarding future shocks. Component 3 complements the objectives of components 1 and 2 in addressing health, nutrition, and WASH activities. These are meant to enhance absorptive and adaptive capacities and can also have longer-term effects if they result in increases in human capital and the strengthening of institutions. The project also has a built in crisis modifier that can help to enhance absorptive capacity in times of crisis and may help to prevent backsliding of project beneficiaries.

Several concerns with current programming stand out. First, component 1 has a wide variety of seemingly unconnected activities across a multitude of agricultural activities. As noted, many of these hinge on demonstrating new techniques or technology. Whether these new techniques will be adopted widely during and after the project, however, does not seem clear. What incentives are in place for these new innovations to be adopted, and are other institutional support structures in place to promote ongoing adoption after the project cycle? Second, it is unclear what project components have the potential to increase transformative capacities. This could be addressed by making more explicit connections to the value chain activities in the REGIS-AG project, or to the institution-building efforts of other projects. Third, and relatedly, what is the purpose of increasing productivity in low value-added staple crops? It is not clear whether this is meant to be a short-term fix, an effort to ensure "safety first" for a wider population, or if it should help producers in the long-term. One possibility would be to increase the number of "push activities" to get producers into the production of higher value-added goods with larger national or international markets. Increased productivity of staple crops can release land to be used for purposes that will have longer-term transformative benefits for producers. Finally, households in the intervention zones engage in relatively few livelihood activities, but any new push activities should be weighed in terms of their sustainability and impact on resilience. Implementing partners may find that it is more efficient to increase productivity in one or two activities than to expand into multiple activities that do not add much to overall resilience.

3.1.2. Resilience and Economic Growth in the Sahel – Accelerated Growth (REGIS-AG)

REGIS-AG began in 2015 and is expected to run through 2020. The project focuses on strengthening value chains in agro-pastoralist parts of Niger and Burkina Faso in the areas of cowpea production, small ruminants, and poultry. The objective is to enhance incomes and diversify livelihoods in these areas, thereby improving resilience against shocks like drought and

conflict. It is part of the larger RISE initiative, and its emphasis on pull activities – linking smallholders to markets through the development of value chains – is intended to complement the push approach of the REGIS-ER and DFAP projects, which place relative emphasis on pushing households from subsistence to food security through enhanced productivity. The project contains five principle activities: 1) identifying opportunities through value chain and end-market analysis; 2) strengthening vertical and horizontal value chain linkages and relationships; 3) strengthening input supply and other supporting services to improve smallholder and agro-pastoralist access to these interconnected markets; 4) increasing access to finance, innovation and private sector investment; and 5) improving the enabling environment for local and regional private sector investment.

Activities for this project seem to focus more on medium- to longer-term adaptive and transformative capacities. Overall, the project design seems to be attempting to put in place larger market and institutional structures that will allow individuals and households to increase their incomes and potentially expand into new areas of production. Component 2, for example, seeks to scale up farmer associations, improve processing capacity, and generate links to markets. These activities should increase incomes for participants near to these value chains. Component 3 seeks to increase the quantity and quality of market inputs, which should further enhance adaptive and transformative capacities in the medium- to longer-term. Components 4 and 5 are the most long-term aspects of the project, as they seek to increase access to finance and to improve the overall business environment to encourage private investment.

One potential weakness with the current project design is that, according to the baseline survey, there is a paucity of markets to link to, which suggests a need to build and scale-up end-market facilities before they can be linked to more intermediate enterprises (see Feed the Future 2016: 65-66). Furthermore, it is unclear whether the project intends to work with government or other donor efforts to scale up agricultural extension services or simply to focus on enabling private business actors. It is also unclear whether proper policy mechanisms are in place to ensure that agro-dealer inputs, like seeds, are certified or standardized across the target areas so that producers have confidence in the products being sold. There is also a notable lack of short-term mechanisms, such as crisis-modifiers, to help individuals and households mitigate the effects of a severe shock during the project period. The baseline survey indicates that almost 80% of the target population is food insecure and do not currently have diversified livelihood streams to fall back on. Finally, the program does not seem to overtly highlight new potential revenue streams in the value chains, and it is not clear to what extent REGIS-AG creates a framework for developing health and safety practices and policies that can help producers take advantage of national and international markets.

3.1.3. RISE-Related Development Food Assistance Programs (DFAPs)

In addition to REGIS-AG, REGIS-ER, and SAREL evaluation activities, RISE includes five Food For Peace Development Food Assistance Programs, implemented by a variety of partners in

Niger and Burkina Faso. They include: Pasam-Tai and FASO, both implemented by Catholic Relief Services; ViM, implemented by ADCI/VOCA; Sawki, implemented by Mercy Corps; and LAHIA, implemented by Save the Children. In what follows, we summarize key strengths and shortcomings of each as outlined in the reports, evaluations, and documentation available through USAID.

Pasam-Tai: Pasam-Tai, or *Programme d'Appui à la Sécurité Alimentaire des Ménages* – Tanadin Abinci Iyali (Support Program for the Food Security of Households) was launched in 2012 with funding from USAID's Food For Peace program, principally with the aim of reducing malnutrition in the Maradi and Zinder regions of Niger. The strategy for doing so is to boost literacy among women with children, on the grounds that literacy constitutes a basic skill that allows households to develop better nutritional practices, and which can be layered with other food security activities. Practically, Pasam-Tai provides literacy training in four forms: classic teaching, telephone follow-up, mobile phone instruction, and text messages.

The program reports major improvements in literacy among beneficiary women – on the order of a 50 to 75 percent increase –as well as boosts in female leadership roles. Further, the improvements were still notable six months after the implementation of the literacy trainings. Some challenges remain, however, according to the literature. First, given the sociocultural context, continuing to strengthen the skill set of women without alienating local men proved difficult. Further, the trainings were not integrated into normal community activities, which could be a strategy for further improving sustainability. Finally, the link between literacy improvement and nutrition is assumed but not tested as a part of the activity. A longer-term evaluation may thus be necessary to determine the extent to which the activity contributes to its ultimate goal.

FASO: FASO, or *Families Achieving Sustainable Outcomes*, is a program implemented in 2010 by Catholic Relief Services to improve food security among vulnerable populations in the north of Burkina Faso. FASO activities touch on a variety of critical RISE areas, including local governance, health, and nutrition. One of the key aspects of the FASO program is the warrantage system established to give farmers post-harvest credit in exchange for storing their grains (which serve as collateral for their loans). This system is meant to overcome that debt trap that farmers often face, in which they are forced to sell their crops immediately post-harvest when prices are at their lowest but then to buy those same grains back later when the prices are at their highest.

Working primarily with groups of women farmers, FASO reached a stage of annual grain storage of approximately 140,000 tonnes. Other benefits include leadership skills, organizational skills and improved seasonal planning. Some challenges noted in annual reports include shortcomings in group governance practices and in the infrastructure for grain storage.

Investments in these areas in the near-term could constitute layering skills that help to build adaptive and transformative capacities in the longer-term.

ViM: ViM, or *Victory over Malnutrition*, was implemented by ACDI/VOCA in 2011 in order to combat food insecurity among vulnerable populations in northern Burkina Faso. Targeting 199 villages in the Sanmatenga province, the program takes a multi-sectoral approach that includes improvements in cereal production, vegetable gardening, and small ruminant raising. In addition, the program works closely with mothers of small children on nutritional practices. Mothers are trained in best practices, and Mother Leaders are incentivized to provide ongoing assistance to other young mothers in the fight against malnutrition. Finally, farmer schools help to draw links between the agricultural and nutrition aspects of the program.

ViM reports significant advances in terms of access to credit (through warrantage and micro-finance), widespread construction of latrines, and the spread of best practices particularly through Mother Leaders. A shortcoming in the success of ViM has come in terms of the lack of literacy and local governing skills. In short, some of the non-agricultural skills that RISE programs promote in other contexts could be layered effectively with the agricultural focus on ViM to reinforce the program's benefits (see USAID ViM 2016).

Sawki: Sawki, which means "improvement" in the local Hausa language, is a program implemented by Mercy Corps, in collaboration with other non-governmental organizations and the Government of Niger, to improve food security in the Maradi and Zinder regions. Its principal focuses are twofold: to reduce malnutrition among pregnant mothers and young children, and to increase access to nutritional diversity by improving agricultural production, household incomes, and resistance to shocks. In addition, the program targets adolescent girls between the ages of 10 and 18 as a strategy to improve food security by decreasing child marriage and early pregnancy. The hope is that doing so will help combat high maternal and child mortality. The program began in 2012.

Sawki uses a Safe Spaces model to deliver key lessons, and it couples those lessons with agricultural opportunities for girls and women to learn livestock management, gardening, and savings skills. Reports indicate that the focus on females has been successful, although the threat of sociocultural appropriation of benefits by male household members always looms large. In addition, Sawki includes a comprehensive randomized control trial to substantiate the findings from its first phase of work. This initiative is valuable from the standpoint of better understanding how activities can be sequenced and layered to achieve maximum improvements, but it also places a premium on careful design and on restraint to ensure that different aspects of the program can be added in systematic fashion (see Mercy Corps 2015).

LAHIA: LAHIA, or Livelihoods, Agriculture, and Health Interventions in Action, is a program implemented by Save the Children, beginning in 2012, with the goal of reducing food insecurity in the Maradi region of Niger. The key strategic objectives include improving the nutritional

status of women and children, improving access to food among vulnerable households, reducing vulnerability to shocks, and improving the status of women. To meet these objectives, LAHIA relies on activities such as theater groups and local radio stations that transmit nutritional information, social behavior change trainings, husbands' schools on health and family planning, breastfeeding trainings, the construction of water points, adult literacy centers, and animal husbandry trainings.

Important impacts of the program have come in terms of helping adolescent girls to stay in school and in providing improved health and nutrition information to families. Like other DFAPs, a number of challenges arise. One comes in terms of managing the numerous activities and ensuring benefit from those activities as other actors provide similar services in the region. Another challenge comes in the need to provide refreshers on a regular basis after initial trainings; doing so is critical for establishing sustainability but can often be overlooked in the effort to provide services to a greater number of beneficiaries. Finally, managing food commodities earmarked for the program requires regular attention, as pests and other threats can undermine the success of those food commodity-based activities (see Save the Children 2015).

3.1.4. Identification of Key Themes and Tendencies

Several themes stand out in the RISE-associated programs above.

The broader institutional underpinnings of agricultural value chains constitute a key aspect of RISE program success.

There is recognition, especially in the REGIS-AG project, of the need to strengthen agricultural value chains. It is thus critical that all activities in the agricultural value chain continue to be linked explicitly to one another. This is a critical step for improving transformative capacity. For example, are mechanisms in place to ensure the quality and reliability of agricultural inputs at the national or regional level? This is especially important in seed markets, but can also be important for livestock and other markets. Second, how is the project enhancing government institutions or public-private partnerships in the area of agricultural extension services? In areas where a robust agricultural extension service is not present, adoption of innovations are likely to be transitory and unsustainable. Third, is the project prepared to facilitate the creation of new market structures from scratch, especially in the context of livestock and other higher-value added goods?

The initiative could place greater emphasis on Veterinary Services

It stands out that special emphasis is needed regarding veterinary services. The baseline survey indicates that only 27% of households have access to veterinary services. This can be improved with greater direct emphasis through project activities and also by seeking synergies with other efforts. In particular, it may be possible to incorporate assistance from a number of sources,

including community-based animal health workers, government funded extensions workers, and mobile vets that can serve pastoralist areas. Additionally, along with increased veterinary services comes the potential to increase the use of genetics and advanced breeding, if desired in the longer-term.

The initiative could place greater emphasis on transformative capacity and project sustainability.

Both programs could give greater attention to helping beneficiaries make long-term positive transformations in their livelihood choices. Increasing agricultural productivity is an important goal in its own right, but it can also be a fundamental part of the process of positive transformation: households can shift into more profitable agricultural activities, and land can be exploited in better ways. A vision should thus be in place regarding the types of land uses and livelihoods most beneficial in the long term, even if they are not practical now. This likely entails a greater emphasis on higher value added crops and the adoption of agricultural innovations from other regions or contexts, taking care to balance innovations and higher risk crops with those proven to be less susceptible to shocks or stresses. Designing projects with sustainable exit strategies will remain critical as such innovations take place.

3.2. Ethiopia Resilience Programming

3.2.1. Ethiopia PRIME

The Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) project in Ethiopia has three stated goals: 1) increase household incomes; 2) enhance resilience; and 3) increase adaptive capacity among pastoralists, agro-pastoralists, and those transitioning out of pastoralism in Ethiopia (Smith et al. 2015). Beginning in October 2012, PRIME was implanted in 23 *woredas*. The theory of change in this program draws heavily on a "push-pull" model that aims to: a) build capacity of pastoralists to increase production and participate in markets (the "push") and, b) develop markets and improve value chains to generate demand for livestock products (the "pull").

Prior to project initiation, PRIME partners assessed similar programs in order to develop a set of hypotheses regarding constraints to absorptive, adaptive, and transformative capacities (Frankenberger et al. 2014). PRIME's causal model recognizes that individuals may move between livelihoods in a dynamic process. Therefore, interventions that support additional skills in sequence, such as literacy and numeracy learning, provide a link between major programming efforts for both pastoral and alternative livelihoods (Smith et al. 2015).

PRIME aims to increase absorptive capacity by “developing early warning criteria and indicators, piloting fodder insurance during times of stress, and supporting national institutions to improve pastoralist early warning systems” (Frankenberger et al. 2014: 12). The initiative aims to improve adaptive capacity by facilitating transitions to alternative (non-pastoral) livelihood

strategies, through the provision of technical/business skills training and financial literacy, among others.

An impact evaluation of PRIME using survey data collected in 2013 from two of the treated *woredas* indicated a few key results (Smith et al. 2014). First, shock exposure is closely linked to greater food insecurity. In this case, shock exposure is operationalized via the stated experiences of surveyed individuals and includes climate, conflict, and economic shocks. Second, households scoring higher on experiential measures of resilience are more likely to be food secure. For example, those who less frequently express that within the past four weeks there was no food to eat in the household due to lack of resources achieve greater food security (see Smith et al. 2014: 49). Moreover, this positive effect appears to be due primarily to transformative capacity, with adaptive capacity and absorptive capacities each having a weaker impact. The focus on providing credit and enhancing the business environment as a way for pastoralists and ex-pastoralists to develop alternative livelihoods dovetails appropriately with the project objectives and has met clear success. This design element recognizes the importance of moving some pastoralist and ex-pastoralists into livelihoods that are sustainable over the long term. Finally, the educational attainment of parents – particularly mothers - and the sex of the child both have a significant impact on child nutritional levels and the presence of acute child malnutrition (with higher levels of parental education and the male sex among children correlating with greater nutrition), while shock exposure, resilience, and wealth are all found to be unimportant in terms of their impact on child nutrition.

3.2.2. Productive Safety Net Program (PSNP)

The government of Ethiopia, with support of a variety of development partners, launched the PSNP in 2005. The main goals of the program are to support the rural transformation process, prevent the long-term consequences of short-term food inaccessibility, encourage households to engage in production and investment, and promote market development. The primary mechanism of PSNP is to increase household purchasing power through regular predictable transfers of cash and food and by providing temporary employment through public works. PSNP provides multi-annual transfers of cash and food to about 8 million households in 318 food insecure districts around Ethiopia. In addition to the regular assistance provided to households there is also a PSNP contingency budget and Risk Financing Mechanism (RFM) that are designed to ramp up in the face of an extreme shock like a large-scale drought. Critically, the program aims to provide “... transfers to the food insecure population in chronically insecure *woredas* in a way that prevents asset depletion at the household level and creates assets at the community level” in Ethiopia (GFDRE 2009, 2010). According to Sabates-Wheeler and Lind (2013: 1) PSNP Plus was the first social protection program available to an entire population of pastoralists within a sub-Saharan country.

By all accounts, the PSNP program has been both successful and influential for resilience programming in Ethiopia and beyond. In addition to the net positive effects the PSNP program

has had combating hunger and poverty, there is literature that supports the proposition that social transfers promote micro-level growth and asset accumulation among the poor (Barrientos 2012) and economic growth at the country level (see Alderman and Yemstov, 2013). Furthermore, Hoddinott et al. (2012) show that support from PSNP, combined with other transfers from the Household Asset Building Program (HABP) and others programs, leads to long term improvements in agricultural productivity of households. And PSNP has positive short-term nutritional benefits for children ages 5 and younger (Debela et al. 2014). Additionally, other analyses support the conclusion that the contingency budget and risk financing mechanism have performed well at reducing the extent to which households have to engage in destructive coping strategies in the face of large-scale shocks (Hobson and Campbell 2012).

One shortcoming concerns the tracking of beneficiaries according to their asset development. Evidence suggests that this type of targeting and tracking in the pastoral-Ethiopian context is complicated by the informal authority structures regarding resource access and the presence of sharing and mutual support networks (Sabates-Wheller and Lind 2013).

The PSNP program works in tandem with other programs run by the Government of Ethiopia and individual donor projects to enhance resilience in multiple ways. First, the PSNP program itself immediately enhances the absorptive capacity of households through cash transfers and work opportunities. Second, these interventions allow households to avoid using destructive coping strategies that erode their capacity to respond to future shocks. Third, the presence of the PNSP lets individual donors plan activities that leverage their expertise in designing interventions that further enhance resilience and promote economic development. As of 2011, the PSNP Plus program transitioned to the Graduation with Resilience to Achieve Sustainable Development (GRAD) program, though the approach and goals remained similar.

3.2.3. Pastoralist Livelihoods Initiative (PLI) Phase I and II

The two PLI initiatives were early attempts to increase sustainable development and resilience among pastoralists in Ethiopia. The projects combined community-based natural resource management, development of income generation activities, early warning assistance, and nutrition and health based interventions. In particular, the projects had a variety of built-in crisis modifiers that provided supplemental feeding of livestock, direct food assistance, and destocking of highly stressed livestock. They also promoted Community Animal Health Workers (CAHW) to support project goals.

Project evaluations indicate the crisis modifier elements were particularly valuable in protecting “development gains”, but that response time was sometimes slow due to the regional government approval process. The CAHW and participatory natural resource management were also successful.

Overall, these projects provide a nice bridge between the enhancement of shorter-term and medium-term resilience capacities. They have also improved understanding of the fact that pastoralists often move fluidly between “pastoralist”, “agro-pastoralist” and “ex-pastoralist” depending on household needs, indicating that many households will be amendable to longer-term livelihood transformations if the institutional and market environments allow for such.

3.2.4. Graduation with Resilience to Achieve Sustainable Development (GRAD)

This project aims to increase the success of the PNSP program by diversifying and increasing households’ incomes and asset bases. The project has several components: 1) support climate change adaptation activities; 2) support viable on farm and off-farm income generation; 3) facilitate access to financial services; 4) improve input and output marketing; and 5) target women for literacy and numeracy training.

The program focuses primarily on building resilience in the context of increasing household adaptive capacity, which will then increase vulnerable households’ absorptive capacity in the face of future shocks. This project also has in place elements such as access to financial services and the promotion of human capital that will allow households to transform by branching into new income generation activities. Along with PRIME, GRAD also has a built-in crisis modifier that helps further enhance absorptive capacity in the short term.

3.2.5. Empowering New Generations to Improve Nutrition and Economic Opportunities (ENGINE)

The Engine project was designed to strengthen the Government of Ethiopia (GoE)’s nutrition policies and goals to address the underlying causes of maternal and children malnutrition. Project activities included: 1) strengthening existing nutrition multi-sector coordination and supporting development and revision of nutrition policies, guidelines, and standards; 2) integrating nutrition into pre-service education of health and agriculture and building the capacity of academic institutions to address nutrition and food security; 3) building the capacity of health staff and frontline health and agriculture workers to provide high quality nutrition services, especially during first 1000 days; 4) promoting optimal maternal and infant young child feeding practices and dietary diversity through dynamic communication channels and cooking demonstration; 5) promoting nutrition-sensitive agriculture techniques and livestock management to increase production and consumption of diverse foods; 6) supporting vulnerable households with nutrition sensitive livelihoods including poultry training, small livestock and homestead gardening, savings groups); and 7) WASH activities for households and children.

Overall, this initiative provides important institutional underpinning for addressing resilience in the target areas that should affect medium to long-term adaptive and transformative capacities. There are also important human capital interventions that are likely to be long-term, so long as the GoE supports continued implementation. Particularly interesting were the activities

designed to diversify household incomes, like poultry training and kitchen gardens, which should help absorptive and adaptive capacities in the short term.

Other projects in Ethiopia build upon the success of the PSNP program and specifically adopt a resilience frame towards development. However, there appears to be more scope for joint planning and additional synergies. In particular, projects like the Feed the Future Farm Service Center Project could be incorporated successfully alongside activities that focus on extension services, credit expansion, business development, alternative livelihoods development, and community based animal health workers. Nonetheless, projects in Ethiopia show the potential of resilience based programs to work with country-led efforts and coordinate the efforts of multiple donors.

3.3. KENYA Resilience Programming

USAID supports a number of programs across several sectors in Kenya, many of which have begun to incorporate a resilience frame. In particular, the Partnership for Resilience and Economic Growth Program (PREG) programs are designed to complement the government of Kenya (GoK)'s own efforts through their Ending Drought Emergencies (EDE) program and the establishment of a National Drought Management Authority (NDMA). PREG targets the nine counties that comprise the arid and semi-arid lands (ASALS) of northern Kenya which face regular stress from climate change and extreme poverty linked to drought. Below is a breakdown of several PREG program activities and the resilience capacities that each addresses. We then consider other Kenya programs that incorporate resilience influenced thinking or are relevant for resilience programming.

3.3.1. Resilience and Economic Growth in Arid Lands – Improving Resilience (REGAL-IR)

This activity was explicitly designed with a resilience frame in order to address households' and communities' capacity to cope with and recover from shocks related to droughts. Activities include: 1) improved grazing land management; 2) improved diets through behavioral change; 3) creation of community level drought contingency plans; 4) community conflict mediation; 5) creation of Sidai franchises and super-centers to expand coverage of veterinary services and products; 6) creation of Community Development and Action Plans (CDAP); 7) advancing credit through grant programs and creation of self-help groups; 8) livestock value-chain inclusiveness; and 9) promotion of fuel-efficient cook stoves.

The Sidai component seems particularly worth monitoring as it offers a novel franchise-based approach to expanding veterinary services and products to remote pastoralist regions.

Beyond the Sidai component, the initiative has a built in-crisis modifier that is meant to respond in the case of acute need. This serves as a principal form of absorptive capacity. Additionally, activities 1, 6, 7, and 8 contain substantial elements of adaptive capacity. In particular,

community development plans, if sustainable, coupled with increased availability of credit have the potential to help individuals and households adapt to changing circumstances and increase their resilience over the medium to longer term. The sustainability of these interventions in particular will determine whether the project enhances transformative capacity.

3.3.2. Resilience and Economic Growth in Arid Lands – Accelerated Growth (REGAL-AG)

This project aims to increase economic growth in select pastoralist communities of northern Kenya. Primary project activities include: 1) strengthening the business enabling environment (BEE) in the livestock sector; 2) expanding livestock markets and commercial investments in livestock; 3) improving livestock productivity through pasture management and veterinary services; and 4) promoting inclusiveness of women, youth, and community actors.

Several project achievements are notable. First, the construction of livestock markets and other associated market infrastructures, such as smaller stall and holding pens and processing and distribution centers, have been broadly successful. Second, the project has distributed livestock market and animal health best practice guides. Third, the project has undertaken several activities to increase the productivity of the livestock sector, including pasture reseeding, rangeland rehabilitation, and the scaling up of agro-vet activities in target zones.

Overall, this initiative seems to focus more on medium-term absorptive and adaptive capacities. As such, there appears to be a lack of short-term activities to address purely absorptive capacities, and a lack of longer-term activities that will dramatically enhance transformative capacity. Nonetheless, project interventions appear well-suited to enhance incomes and resilience in the livestock sector in target areas, and we suspect that the focus on particular improvements will pay clear dividends. In particular, an expansion of veterinary services, construction of livestock markets, and an encouragement of agro-business may help push individuals and households into more productive livelihood strategies.

3.3.3. Aids, Population, and Health Integrated Assistance (APHIA) plus Integrated Marginal Arid Regions Innovative Socialized Health Approach (IMARSHA)

This is the third iteration of the USAID's flagship health project in Kenya. The goal of the project is sustainable improvement in the health of communities in the Northern Arid Lands of Kenya through integrated health services and household and community economic strengthening activities. This project was specifically designed to “increase the use of quality health services, products and information” and to address the “social determinants of health” per USAID Kenya's implementation framework. Principal activities include: 1) technical assistance to improve health service delivery; 2) testing and counseling services for HIV; 3) improved uptake of maternal, newborn, and child healthcare interventions; and, 4) enhancing income generation, nutrition, food security, and access to water and sanitation.

Evaluations show that the project has been successful at increasing HIV care and treatment and has increased maternal, newborn, and child health outcomes (MNCH) and family planning interventions. Further, evaluations show that the household economic strengthening activities were largely successful, especially at linking vulnerable populations to support mechanisms (Espeut 2015).

Overall the initiative provides a suite of activities that have the effect of increasing the absorptive capacities of households and individuals through improved health and nutrition outcomes. There are also elements of adaptive and transformative capacities in the medium to longer term, in the sense that enhancing the capacities of healthcare providers should have many positive multiplier effects across the larger communities in which they are embedded. Additionally, the link between health-based interventions and the economic/nutrition strengthening activities provides an interesting opportunity that spans sectors and provides complementarities among resilience capacities.

3.3.4. Northern Rangelands Trust (NRT)

The Northern Rangelands Trust establishes community-managed conservancies along the lines of Community-Based Natural Resource Management (CBNRM). Starting with just five conservancies in 1995, there are now over 33 conservancies encompassing over 2 million hectares of land across northern Kenya. The model is to transfer land rights from the state to local communities who then create a set of formal and customary institutions to manage and police the land. These institutions range from more modern governance structures based on research on common pool resources to the enhancement of traditional forms of governance. There are also formal institutions for conflict resolution. The community manages policing with help from various Kenyan authorities.

By all accounts these conservancies continue to be very successful. Research indicates that they increase access to resources, strengthen social safety nets, reduce inter-ethnic conflict, and help increase grass growth for wildlife and livestock (see Glew et al. 2010; Northern Rangelands Trust 2015). They also have been shown to dramatically decrease livestock theft, banditry, and have led to large decreases in poaching within the conservancies (Wilkie et al. 2016). Kenya has recently experienced a dramatic reduction in their current account deficit in large part due to increases in tourism. It seems possible that the success of these conservancies has played a role here.

This form of CBNRM addresses all three aspects of resilience. Households see an increase in their absorptive capacity through an expansion of incomes, increased access to resources, and a reduction in conflict. Additionally, adaptive capacity increases due to improved management practices and the ability of individuals and households to diversify and expand their current economic activities in the short to medium term. Finally, the potential for transformative capacities seems high as individuals, households, and communities are well-positioned to take

advantage of new opportunities in the hospitality and tourism sectors, which in the long run can transform the economy and the basis for livelihoods among many community members.

3.3.5. Agile Harmonized Assistance for Developed Institutions (AHADI) program

Kenya adopted a new constitution in 2010 that includes devolution of power to 47 county governments. The AHADI project is supporting this devolution through institutional capacity building and other means of institutional support. The institutional underpinnings of resilience are particularly important in areas where governance is often at the root of the nexus between poverty and crisis. Activities like this have the potential to complement more targeted resilience interventions in order to foster medium- and longer-term adaptive and transformative capacities.

3.3.6. Water, Sanitation, and Hygiene (WASH)

USAID has incorporated wash activities in a variety of Kenya projects, including KAVES (details below), AHADI, APHIA-plus and through the Development Credit Authority (DCA). These interventions have reached more than 2 million Kenyans. Adding WASH activities to resilience enhancement seems to create useful synergies among program activities and helps increase resilience, especially through increasing individual and household absorptive capacity. However, beneficiaries seem to profit most when the introduction of new information and activities is spaced and manageable.

3.3.7. Kenya Agriculture Value Chain Enterprises (KAVES)

This project addresses agricultural value chains across multiple levels, particularly in the dairy, maize, and horticulture sectors. The initiative is comprised of six key activities: 1) raising productivity and production in the dairy value chain; 2) increasing maize and other staple crops productivity to meet household food needs; 3) increased horticulture productivity; 4) promotion of nutrition-sensitive agricultural production and techniques and providing education; 5) WASH activities; and 6) capacity building of farmer groups and other local organizations.

This initiative helps small-holder producers to adopt new technologies and management practices in the production of staple crops. Additionally, the project has been successful at promoting dairy and horticulture as an alternative to staple crop production, increasing compliance with market standards for national and international consumption, and increasing nutrition and health outcomes.

KAVES, more so than other initiatives, focuses on the idea of increasing medium- to longer-term adaptive and transformative capacities, which will then impact overall resilience. In particular, the main development hypothesis of the project revolves around the idea that

increasing productivity of staple crop production will “release” land to be put to better use in the production of higher value-added production, such as in dairy or horticulture or by transitioning individuals to agro-business. This development hypothesis seems promising to adopt and apply to pastoralist regions, as indefinite increases in herd sizes are unsustainable and may actually hinder long-term development goals. Additionally, project results show that important investments in time and resources can help producers to adopt beneficial new technologies to increase productivity, and that additional resources need to be devoted to discourage production gluts and the depression of prices around harvest time. These lessons are likely portable to other agriculture sectors and regions.

3.4. Resilience Programming in Other Country Contexts

3.4.1. Senegal

Stemming from the HARITA project in Ethiopia beginning in 2009, Oxfam America and the UN World Food Programme’s *R4 Resilience Initiative (R4)* focuses on agriculturalists vulnerable to climate-related shocks (Oxfam America 2012). The program integrates risk reduction through resource management and asset creation, risk transfer through insurance access, prudent risk taking through microcredit, and risk reserves through savings programs. R4 now operates in Ethiopia, Senegal, Malawi and Zambia.

A preliminary impact evaluation on a sample of households from the Tambacounda and Kolda regions in Senegal indicates strong results (Oxfam America 2015). Between 2013 and 2015, both participants and non-participants experienced a reduction in food consumption rates, due largely to poor weather conditions and lower agricultural output. However, beneficiaries’ consumption rates fell by only around 8 percent, while others experienced a drop of over 49 percent. Participants also dramatically increased their production of rice relative to the control group, and household solidarity surrounding risk reduction efforts like water and soil conservation and savings groups appears strong. Organizational capacity at the community level, however, remains the most significant obstacle towards building resilience.

3.4.2. Niger

Localized Emergency Assistance Response in Niger (LEARN), implemented by MercyCorps in the Tillaberi region of Niger, ran between August and October 2010. The program’s goal was to mitigate chronic and cyclical food insecurity, mass human displacement, and malnutrition in weak and unstable communities. The project was evaluated as broadly successful in terms of short-term emergency relief (Perry 2010). However, in order to address chronic issues, the evaluation called for a comprehensive package including health and nutrition training for women and children; early warning groups linked to governmental institutions and NGOs; sustainable development programs, such as microcredit and microfinance, community insurance programs, etc.; and capacity-building support for governmental and community disaster risk reduction.

3.4.3. Mali

'*Duwute*' – meaning self-help – was an emergency food security project funded by USAID and implemented by Catholic Relief Services (CRS) with local partners in Mali from September 2010 to April 2014. The project targeted households in 50 villages to enhance resilience to shocks affecting the food security of farmers and pastoralists. The program had three specific goals: 1) increase household level food access in the short term through Cash For Work (CFW); 2) household training in nutrition/food consumption and agriculture; and 3) improved community capacity to recognize and respond to shocks.

A final impact evaluation (Kara-Consult 2014) indicated that nearly all beneficiaries viewed CFW as an appropriate tool for increasing household resilience to food shocks. The results of the training sessions were more mixed. Regarding agro-ecology training, a large portion (39 percent) of potential beneficiaries did not participate, particularly in the commune of Dogofry. Adoption rates of agro-ecology techniques varied by commune, ranging from around 45 percent to 88 percent. Over 60 percent of beneficiaries adopted nutrition techniques from the training sessions. Participants viewed improvements to mother/child health and increased understanding of nutritional values as the most important part of the training.

Almost all beneficiaries were aware of early warning groups. Participants viewed these groups as important for the diffusion of timely information, identification of zones with food security risks, and management of food stocks. The program suffered due to its brevity, unclear selection criteria, incomplete infrastructure works, and lack of payments for participants.

The Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) in Mali is funded by USAID and implemented by Helen Keller International (HKI); the program began in December 2014 and targets over 165,000 community members in 20 communes in the Mopti Region (SPRING 2016). SPRING-Mali has three primary objectives. The first – increasing access to diverse and quality foods – relied on farmer field schools to increase vegetable crop production and income generation via existing community gardening groups and practices. This objective primarily targeted pregnant and lactating women, as well as women with children under two. The second objective – increasing access to quality nutrition services – employed facility and community level trainings regarding nutrition. The third and final objective – increasing demand for key agriculture, nutrition, and water, sanitation and hygiene (WASH) techniques – utilized educational trainings on hygiene practices.

Approximately 500 leaders and 5,000 farmers were trained in nutrition-sensitive agriculture techniques. Further, 375 providers and volunteers were trained in nutrition and hygiene practices, and nearly 5,000 hand washing stations were installed across over 50 villages, with 20 villages certifying as open defecation free (ODF). As of FY16, SPRING-Mali will not be funded further.

3.4.4. Mali and Niger

Linking Financial and Social Capital to Enhance Resilience of Agro-Pastoral Communities (LEAP) focuses primarily on *financial coping mechanisms (FCM)* in Niger and Mali, which allow agro-pastoralists to secure financial capital, diversity investment, and improve risk management capacities (MercyCorps 2015). Beginning in 2015, the original 2-year time frame aimed to link the implementing partner with private sector actors including mobile money operators, microfinance institutions, and insurance brokers. The goal is to target approximately 50,000 agro-pastoralists. A potential extension to a 5-year project cycle would expand access to around 200,000 beneficiaries, 60 percent of whom would be women.

Though no impact evaluations are yet available, proposed products include financial and entrepreneurial education, group savings and credit via mobile phone, commitment savings accounts via mobile phone, warehouse credit, and index based micro-insurance. LEAP's theoretical framework is derived from the social-ecological resilience paradigm with a focus on absorptive, adaptive, and transformative capacities.

3.4.5. Bangladesh

The Chars Livelihoods Program (CLP) targets households in northwest Bangladesh. The first phase ran from 2004 to 2010, and the second followed from 2010 to 2016. The program focuses on supporting extremely poor households vulnerable to both natural hazards (flooding and drought) and economic shocks, i.e., food insecurity and price fluctuations. (Controy et al. 2010).

Participating households were granted access to a package consisting of four elements: 1) an asset transfer project providing inputs for livelihood diversification and consumption smoothing; 2) an infrastructure project providing employment and protection from flooding; 3) increased access to markets and services, including livelihood training, homestead gardening, and primarily health care and education; and 4) social capital development through the formation of village savings and loan groups, along with other group-building practices, and the promotion of capacity building in civil rights and other community initiatives (World Bank 2013).

CLP's causal model is derived from the *adaptive social protection* paradigm (3P+T). Davies et al. (2013) argue that CLP's approach is both an integrated one and also one that places emphasis on transformative activities by employing the wide variety of activities described above.

The *Targeting the Ultra-Poor (TUP)* program, initiated by the NGO BRAC (Building Resources Across Countries), began in 2002, covering 100,000 ultra-poor households in the 15 poorest districts in Bangladesh. The program provided grants for specific physical assets in addition to enterprise-specific training regarding livestock and poultry rearing, operation of tree nurseries, and village pushcart vending (Emran et al. 2014). Microfinance opportunities followed, allowing for the continued maintenance and growth of these microenterprises. Human capital was

targeted through increased access to literacy and health programs, including direct services like immunization and pregnancy care, among others (Emran et al. 2014).

Phase I of TUP was not implemented with an eye toward randomized control trials. Using non-experimental household-level panel data (over two periods), Emran et al. (2014) find that the program significantly impacted food security, cash savings, and livestock holdings of ultra-poor households. However, health outcomes, women's empowerment, and some productive assets (fishing nets, big trees, rickshaw vans, bicycles) were unaffected. Importantly, the estimated effects are heterogeneous: the 'poorest-of-the-poor' within the ultra-poor community experience greater gains than the average participant in terms of per capita income and investment in productive assets, though not in terms of the consumption of luxury goods like radios and TVs. Thus, the evidence suggests that sensitive targeting even *within* strata may be crucial.

3.4.6. Indonesia

Skoufias et al. (2012) estimate the effects of rainfall shocks on household welfare in Indonesia. Their econometric analysis utilizing survey data from 1999 and 2000 indicates that late monsoon onset and/or low levels of rainfall strongly impact household welfare. Importantly, the authors were able to estimate heterogeneous effects across a number of social protection programs. Three programs produced consistent results across models.

First, households with access to the Inpres Poor Villages Program – which granted household access to credit – undertook expenditures that were 15.7 percent higher than those without access. Second, a similar effect was found regarding households with access to the Inpres Program for Under-Developed Villages (Inpres Des Tertinggal, IDT). IDT provided block grants for infrastructure improvement in poor villages, which seem to have reduced the impact of rainfall shocks via public works employment as well as the actual infrastructural improvements. Finally, households with access to the Kampung Improvement Program (Program Perbaikan Kampung) spent nearly 25 percent more than those without access. This program utilized community-based organizations to provide housing and infrastructure upgrades.

3.4.7. Mexico

Oportunidades – initially Progresas – was a conditional cash transfer (CCT) program in Mexico beginning in 1997. Families were targeted based upon poverty levels, vulnerability, and the school grade of children. In order to receive the transfer, participants needed to attend family planning events, educational classes on nutrition and parenting, and school, in addition to meeting certain standards regarding the nutritional supplements (Bene et al. 2012).

The goals of Oportunidades may be classified using the language of *social adaptation* (Bene et al. 2012: 34). The cash transfers increased financial security in the context of potential shocks, thereby acting as a *protective* (coping) strategy. The nutritional elements, on the other hand, were *preventative* in that they reduced the likelihood of health issues in the future. Since mothers were the primary recipients, the transfers were potentially *transformative* in that they increased the standing of women in the household.

Evaluations of the impact of Oportunidades have been overwhelmingly favorable. Regarding *absorptive capacity*, beneficiaries of cash transfers were found to buy more and even better food (Hoddinott and Skoufias 2004) and children were less susceptible to malnutrition given price shocks (Gitter, Manley, and Barham 2011). Further, participants were more likely to keep children in school when facing unemployment or illness (de Janvry et al. 2004). The cash transfers were found to increase *adaptive capacity* via increased investment in micro-enterprises and agriculture (Gertler, Martínez and Rubio 2005). Finally, Escobar Latapí and González (2004) find that gender inequality issues improve, with young girls more likely to attend school and mothers holding more power within the household, therefore increasing *transformative capacity*. However, Molyneux (2006) points out that women may in fact become dependent on the transfers, essentially entrenching them in their roles as CCT beneficiaries.

4. Ideas for Consideration

Building on the broader literature review on resilience enhancement, and the overview of different resilience-related initiatives undertaken in recent years, we propose a number of ideas for consideration. Because contextual factors can play an important role in how any particular resilience enhancement initiative is conducted, and because the body of resilience-related development initiatives is comprised almost entirely of ongoing or recently completed programs, we suggest that readers view this list as a set of possibilities rather than a series of “dos and don’ts.” The hope is that these considerations spark ideas for potential improvement to ongoing programs or encourage experimentation with activities not yet undertaken by USAID in the Sahel.

We disaggregate the proposed ideas that follow into two broad categories, Program Conceptualization and Action & Relationships. Ideas that fall under program conceptualization might be explored and debated during the early stages of development for future program activities, while the ideas falling under action and relationships would need to be given consideration at the early activity design phase but also as a regular aspect of program implementation. Together, these ideas might help to target the greatest needs over the longest period and in the most appropriate ways, though again, we stress that they are ideas which might be entertained discretely or to varying degrees.

In addition to these ideas for consideration, we point readers to a number of more specific lessons drawn from the experience of RISE and other programs, which we have noted at various points throughout the review. These we list after the broader ideas for consideration.

Program Conceptualization Ideas:

1. **Extend programs to add emphasis to transformative capacities.** Resilience-related initiatives can sometimes lack a clear conceptualization of what transformative capacity is and what it should look like in respective intervention zones. Furthermore, more programming attention needs to explicitly address transformative capacities, which may take longer than a five-year program allows. We note an inherent bias against transformation in the measurement and evaluation of resilience programs, again likely due to the time frame of the initiatives. It can be difficult to track whether someone has made a gradual livelihood change, for example, whereas it is easy to measure whether a household adopted a new technology. Ultimately, the ability of any given project to enhance transformative capacity depends largely on the sustainability of project interventions after the project life-cycle, as well as on the flexibility granted to local actors to adopt innovations in creative ways.

Given that five-year project cycles constitute a norm that is unlikely to change, resilience programs could benefit from adopting gradual exit mechanisms such that project beneficiaries operate independently for a period of time before the official end of the project. Projects could also consider the medium and long-term benefits that the program aims to see maintained after the project life cycle and could put in place mechanisms to identify weak links in sustainability during project implementation; this would constitute a concrete means of reinforcing USAID visions that extend beyond standard project cycles. Finally, transformative capacities may be enhanced to the extent that exit plans are communicated at early stages to the beneficiary communities.

2. **Strengthen existing and build new resource-sharing norms into social protection schemes.** Community members are long accustomed to sharing resources through informal channels, but it is important to recognize that horizontal sharing tends to take place along well-defined lines. For example, women tend to pool or share resources absent external pressures, whereas mixed-gender groups tend to do so only with incentives (see Fearon 2015). As a result, resilience-building programs should capitalize on existing norms and provide the appropriate incentives to ensure that the benefits of resilience activities cascade to other potential beneficiaries. One is to include women-only groups. Formalizing incentives to work across identity-group lines (gender or otherwise) is another strategy to ensure that social protection schemes are not short-lived or too limited.
3. **Conceptualize shocks and stresses in distinct, tailored ways.** Both the research on resilience and the applications by development institutions tend to conflate shocks and stresses as factors that pose threats to subsistence; as such, the strategies recommended for bolstering resilience remain static across threats. One can easily imagine, however, that a devastating drought in one year or a violent, short-lived conflict – two common examples of shocks in the Sahelian context – might differ starkly in their consequences for households

and communities, compared to the slow and steady stresses they face as a result of climate change and deforestation. Aid agencies might build on the strong foundations they have already established and begin to tease apart the unique setbacks imposed by shocks versus stresses. Doing so could be especially useful in bolstering absorptive capacities in the short-term, but may also help to strengthen adaptive and transformative capacities.

An excellent example of conceptualizing shocks and stresses in distinct ways is the proposed initiative to engage in post-shock recurrent monitoring. The monitoring process would result in systematic data collected over regular, frequent periods of time and would thus allow for an examination of precise pre- and post-shock data. USAID would then be in position to determine how the degree of exposure to a shock affects the ability of households to recover, and how pre-shock resilience levels affect coping strategies after a shock. This initiative implicitly treats shocks as a phenomenon distinct from stressors, as the former occurs suddenly and at unforeseen times whose impact can be captured with pre- and post- data.

Shocks and stressors frequently overlap or exacerbate the likelihood of one another. Programs might thus, as a general rule, seek to account for the effects of both. New and fruitful activities may nevertheless emerge from conceptualizing shocks and stresses as distinct phenomena, whose impacts can be addressed in distinct ways.

4. **Treat resilience as an opportunity to complement effective programs.** The concept of resilience is an opportunity to improve aid, development, and environment programming. However, it should not, as a popular trend, displace otherwise high performing activities. Programmatically, this means that USAID should seek joint planning and should aim to integrate extant programs systematically under the heading of resilience, but it should also minimize the extent to which this spawns totally new approaches. Seek out synergies, improve existing programs, allow for local flexibility, and fill gaps in systematic and carefully sequenced ways to complement effective existing programs and avoid inertia. One specific idea is to expand conditional transfer programs in the region, in ways that complement ongoing activities and local norms.

5. **Consider the benefits of program activities to precise socioeconomic strata.** The system-wide approach of resilience programming recognizes the interdependencies of families and communities, particularly in the Sahel. The importance of targeting, however, is also well-known. For example, conditional cash transfers in Honduras increased school attendance and decreased the likelihood of children entering the workforce only in the two poorest socioeconomic strata, with no effect among the higher three strata (see Galiani and McEwan 2013). Other activities – perhaps those requiring more human capital – might generate improvements in resilience only among relatively better off households. Furthermore, it is important to note the potential for heterogeneous effects *within* targeted

strata. (Emran et al. 2014) find that the “poorest-of-the-poor”, even within the ultra-poor group in a Targeting the Ultra-Poor (TUP) program in Bangladesh, saw greater gains than their counterparts. This suggests that improvements in both efficiency and efficacy may be realized by designating specific activities to different socioeconomic strata in the course of resilience initiatives.

Ideas for Action & Relationships:

6. **Engage systematically with multiple levels of government.** Sustaining the gains from resilience programs often requires ongoing support from the host government, both at the national and local levels. Irrespective of any ongoing financing requirements, governments must support resilience initiatives with community- and association-friendly policies, steady streams of information, and ongoing administrative support. By establishing regular training, meetings, and interventions with government agencies and representatives, and linking those actors to beneficiaries in systematic ways, a number of benefits might follow. The priorities of donors, implementing partners, government actors, and local communities can be harmonized. Local needs can be expressed to a more consistent audience. Communities can develop more appropriate and organized shock prevention and response systems, knowing that the administrative and infrastructural hurdles they face can be addressed in a manner consistent with the government’s own goals. Importantly, engaging across multiple levels of government can help fortify the inter-dependence between system components that is critical for resilience (see Institute for Development Studies 2012).
7. **Facilitate access to and negotiations over natural resources.** Reforestation programs constitute an important aspect of resilience programming already. In addition, water resources have proven critical for micro-irrigation projects and small-scale experimentation with crop varieties. The next step in resilience enhancement will include balancing the competing interests of individuals, households, and groups who may wish to preserve and expand those resources against those who wish to exploit them as sources of livelihood improvement. Both paths provide benefits and, if reforestation and other planting initiatives are successful in the short-term, both will hopefully be possible. Communities must, in those circumstances, have plans for managing timber, water and other resources, especially in areas of diverse livelihood activities that overlap with ethnic identities. Post-hoc management plans are unlikely to provide the sustainable advantages that planned access and negotiations can. Further, the literature makes abundantly clear the fact that local sociocultural norms must be taken into account when determining how resources will be used, assigned, and shared. As Tidball (2010: 593) notes, “though people do not have the ability to decide what is destroyed by a disaster, they do have the ability to decide what is reconstructed”.

8. **Capitalize on migratory networks.** Migration is frequently viewed as a necessity in the face of destitution, or at best an alternative income stream during the dry seasons. Over time, however, migratory patterns create informal social networks with positive externalities: individuals find support away from home, the opportunity to send remittances improves productivity in the sending location, and households develop strategies for coping in the periodic absence of a member. Resilience enhancement programs might work with households and communities to reinforce the positive externalities from migration while minimizing the challenges that such migration imposes. Migratory networks can be built more explicitly into resilience planning. Education initiatives should also be made flexible and creative enough to best meet the needs of populations who regularly migrate.
9. **Generate explicit links between skills and opportunities for youth.** This will require partnership with local, and perhaps national governments in targeted areas. Human capital initiatives as part of resilience enhancement are critical in a broader, long-term sense, but often lack payoffs in the shorter term. As a consequence, participation may attenuate once the first wave of excitement and incentives vanish. If the accumulation of skills through training in literacy, health care, sanitation, etc., could lead explicitly to opportunities within a reasonable time frame, the payoffs would be amplified: not only would skill levels increase, but participation and completion of training programs would expand. An ideal scenario would involve job opportunities, similar to the increasingly outdated guarantees of civil service jobs for the university educated. Perhaps more realistic would be opportunities to take exams for access to a limited number of community-level jobs, part-time or short-term practicums, or tasks paid in-kind. Coupled with a formalization of migratory networks, this plan could turn the rising youth population into a benefit rather than a threat. To achieve sustainability, such programs may need to operate through a formal adult education program.
10. **Formalize relationships with clergy and other cultural and non-governmental actors.** Informal local institutions, including ethnic groups and associations, religious groups, and volunteer organizations, constitute some of the key actors in places where formal government institutions lack the capacity to respond consistently to livelihood challenges. Meanwhile, the strength of religious attachments has increased rather than dissipated in the Sahel, and youth in particular are increasingly exposed to recruitment pressures from violent extremist groups. The presence of clergy in the region – primarily Muslim imams – represents an opportunity to enhance resilience in creative ways; recall Turner’s (1993) analysis of their role in the Sahel cited above. The choice to do so would have nothing to do with their religiosity per se, but would instead recognize their central role as organizers, advisors, and mobilizers in the complex and multi-faceted process of building resilience against shocks and stresses. Clergy can ensure and prolong participation in resilience-building measures; they can promote resilience-enhancing behaviors, and they can serve as firsthand witnesses to the concrete benefits of resilience activities.

Additional Lessons and Strategies Noted in the Assessment:

Here we summarize some additional lessons and strategies for consideration that emerged through the review of RISE and other resilience programs. Future programs could realize additional gains by:

- Emphasizing veterinary services.
- Providing measurement goals for transformative capacities well beyond the life of the program.
- Partnering with universities to provide training and collaboration programs related to climate change.
- Supporting hazard mapping and risk assessments as a local, collective enterprise.
- Allowing local communities to prioritize resilience investments, with particular input from women and youth.
- Developing resilience-marker tools that allow implementing partners to self-evaluate on a fixed set of questions in a standardized manner.
- Encouraging innovation among farmers by bringing in experts from other regions for periodic continuing education and by supporting higher-risk, higher-return crops alongside stable ones.
- Experimenting with cash transfer programs in combination with different provisions of services, information, and conditions.
- Exploring franchise arrangements with beneficiaries along the value chain.
- Overseeing transfers of land and the establishment of novel institutions to manage land use rights.

5. Conclusion

This review has drawn broadly from academic literature and from extant aid programs to develop an overview of resilience as a programming objective. From the literature review, we highlighted a number of patterns that bear restating. First is the trend to treat resilience as a union of ecological and social factors, though it is also important to bear in mind conceptualizations that place added emphasis on governmental and institutional roles. Second, the literature has come to a general consensus that absorptive, adaptive, and transformative capacities are all central to resilience, and that the latter two require medium- and longer-term vision. We also noted a number of concepts from across academic disciplines that are closely related to resilience and that may offer ideas for extending resilience programming, including social protection, disaster risk reduction, climate change adaptation, poverty traps, and consumption smoothing. We noted the relatively consistent manner in which aid organizations view resilience as the ability to manage and overcome shocks and stresses at multiple levels, though we also showed that organizations place differential emphasis on long-term development and on inclusive growth.

Because the RISE program is based in the Sahel, and because the Sahelian region is particularly susceptible to shocks and stresses, we outlined some of the features that researchers and practitioners in the region must confront: climatic vulnerability, complex social structures with a large youth population, general population pressures, and cyclical migratory patterns. These may pose challenges, but they can also be viewed as opportunities. Finally, we described a number of ways in which resilience programming adds value, in particular by approaching problems from diverse angles, incorporating flexibility, and linking actors to confront common problems.

In reviewing extant resilience-related programs – including RISE programs, RISE-related programs in Ethiopia and Kenya, and a number from other countries – we noted the success of such programs, as well as some shortcomings, largely in terms of explicit plans for sustainability, tracking, and linking different activities in a cohesive manner.

The ideas for consideration that we propose should not be taken as an indication of program inadequacy; indeed, we view resilience-related initiatives as important and generally successful in their objectives. The ideas are instead presented as options to consider. In the right context and with the right partners and design, some may pay additional dividends in resilience-building.

At the outset, we posed a set of questions that this review and the subsequent field component will potentially help to answer. Here, we consider how this report serves as a foundation for addressing each of the first three questions, regarding resilience strategy:

1. In comparing the types of interventions of RISE partners with those found in a review of other resilience programs and of the literature on resilience, are there potential gaps in the RISE interventions, either in terms of the shocks and stresses they are designed to address, interventions being pursued, or the types of resilience capacity they are designed to build? Which of these potential gaps, when contextualized to the Sahel context, might be valid interventions for RISE partners to consider addressing?

Based on this review, the field component will want to examine explicit strategies for linking push factors to pull factors, the mechanisms in place for implementing partners to work with governments and other partners to ensure sustainability, and the degree to which transformative capacities emerge as the absorptive and adaptive capacities are developed. New ideas may come from the strategies employed in Central and South America, Indonesia, Bangladesh, and elsewhere, but perhaps the best innovations will come from working in systematic ways with the youth population and the migratory system that is relatively unique to the Sahel.

2. To what extent is the RISE technical theory of change, as embodied in its results framework, valid? Are the right targets selected and interventions developed in order to achieve the desired results?

The RISE theory of change incorporates numerous interventions to address the central outcomes of resilience. The literature review suggests that technical theories of change may benefit from treating each of the three key capacities with greater intention, and finding ways to develop long-term, visionary approaches to transformative capacity while strengthening the ability of individuals and households to absorb shocks and stresses in the shorter-term. The field team can additionally explore the extent to which shocks and stresses have different impacts in the RISE context, since their intensity and duration may have distinct impacts on the ability of vulnerable populations to cope.

3. To what extent is the RISE operational theory of change valid? Are RISE project interventions sequenced, layered, and integrated in an effective way? Do approaches to resilience in other contexts suggest different ways to operationalize the theory of change?

This review suggests that it is common across resilience initiatives that many activities are rolled out simultaneously among the same population of beneficiaries. The field component of this assessment can explore the sequencing and layering of RISE activities; they may find that a randomized roll-out of those activities could both improve the capacity of beneficiaries to internalize new norms and also allow USAID to determine the impacts of each activity with greater precision. We recognize the practical constraints (principally regarding time frames), however, that make it difficult to do this while also treating absorptive, adaptive, and transformative capacities with greater focus.

Resilience can and should remain a centerpiece of development programming in the Sahel. Current programs have demonstrated that a multi-pronged, flexible approach that focuses not just on food shortages or crisis response but also on developing the capacity to withstand new shocks and stresses puts vulnerable populations in the best position to overcome extreme poverty. We hope this literature review inspires the kind of forward thinking necessary to build on existing programs so that, a generation from now, resilience will be a common feature among populations in the Sahel.

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ANNEX

Annex: Concepts from Academic Literatures Related to Resilience

Concept	Field(s)	Definition	Important Elements	Key Citations
<i>Social Protection</i>	Social Development; Development Economics	All initiatives that transfer income or assets to the poor, protect the vulnerable against livelihood risks, and enhance the social status and rights of the marginalised. ^a	Social insurance; cash/food transfers; employment protection.	Barrientos and Hulme (2009); Davies et al. (2009) ^a
<i>Disaster Risk Reduction</i>	International Development	The systematic development and application of policies, strategies and practices to minimise vulnerabilities, hazards and the unfolding of disaster impacts throughout a society, in the broad context of sustainable development. ^b	Environmental hazards; hazards in social/political context.	Mercer (2010) ^b ; Davies et al. (2009)
<i>Climate Change Adaptation</i>	Environmental Sciences	Reducing the risks posed by climate change to people's lives and livelihoods. ^a	Climate vulnerability; alternative or complement to climate change mitigation.	Swart et al. (2014); Dupuis Biesbroek (2013)
<i>Poverty Traps</i>	Development Economics	Inefficient and self-reinforcing equilibria that cause persistent poverty. ^c	Savings/investment gaps; 'Big push models'; nutrition traps.	Azariadis (2005) ^c ; Kraay and McKenzie (2014)
<i>Consumption Smoothing</i>	Economics	Mechanisms or strategies taken by households subject to risk in order to maintain consumption levels given some negative income shock.	Risk sharing; asset storage (e.g. grain or livestock holdings); credit and insurance markets.	Jappelli and Pistaferri (2010); Kazianga and Udry (2006)