

Democratic Republic of Congo Development Food Security Activities (DFSAs)

Resilience Analysis Brief

Introduction

The United States Agency for International Development (USAID) Office of Food for Peace (FFP) awarded funding for three Development Food Security Activities (DFSAs) in the Democratic Republic of Congo (DRC) for 2016-2020. In a context of conflict and internal displacement, the DFSAs have a shared goal of enhancing resilience to shocks and improving food security and nutrition for vulnerable rural households. The DFSAs implemented by Catholic Relief Services (CRS), Food for the Hungry (FH), and Mercy Corps (MC) are described more in the background section at the end.

This brief presents findings from a study of resilience in the DRC using data from the DFSA baseline evaluation¹ to examine what elements help households mitigate, adapt to, and recover from shocks and stresses in ways that reduce chronic vulnerability and facilitate inclusive growth.² This brief presents evidence that:

- The main shock, rising food prices, affected almost all program participants.
- Absorptive and adaptive resilience capacity index scores are quite low; transformative capacity is slightly higher.
- Resilience capacities are associated with well-being outcomes (expenditures, poverty, dietary diversity, recovery). Absorptive capacity has the strongest relationship with perceived recovery.
- Households with more resilience capacity are less likely to migrate and more likely to purchase livestock when crops are threatened or to sell or slaughter livestock to cope with shocks.



¹ USAID. 2018. Baseline Population-Based Survey of the Food for Peace Development Food Security Activities in the Democratic Republic of Congo. Report by Mendez England & Associates under the Evaluation and Learning Mechanism (EVELYN) Task Order.

² Description based on USAID definition: USAID. 2013. The resilience agenda: Measuring resilience in USAID. Washington, DC: USAID. https://www.usaid.gov/sites/default/files/documents/1866/Technical%20Note_Measuring%20Resilience%20in%20USAID_June%202013.pdf

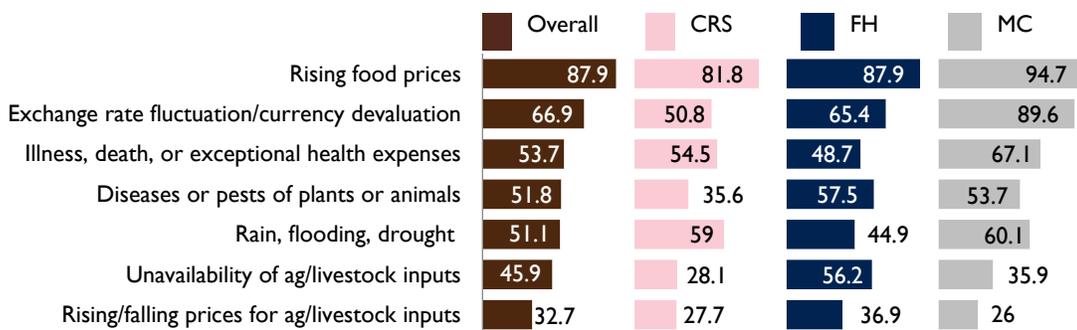
Key Findings

SHOCKS

The most common among all types of shocks were increased food prices and exchange rate fluctuation/currency devaluation, with especially high prevalence in Mercy Corps areas (see figure below). At least half of all households surveyed reported illness/death of a household member, diseases, or pests of plants or animals, and rain/flooding/drought. Nearly half indicated that agricultural or livestock inputs are not available. On average, households from the overall sample experienced five shocks in the 12 months prior to the survey.

The most common strategy to cope with these shocks, used by more than a quarter of all households, is to participate in a Food for Work/Cash for Work program. Other important coping strategies are reducing food consumption, finding daily wage labor, and selling livestock. Almost one quarter of CRS households sold household items to cope with shocks, compared to a maximum of 8 percent in other areas. Migration of the whole family is most pronounced among households that experienced conflict; between 10-20 percent of households in Food for the Hungry and CRS areas migrated with their families, but this rare in the Mercy Corps area.

Figure: Shocks reported by survey respondents, by program area



a/ Only includes households (HHs) experiencing a shock in previous 12 months and shocks reported by 26% or more of HHs in any program area. Source: Food for Peace DRC DFSA baseline data, 2018

HOUSEHOLD WELL-BEING OUTCOMES

The study uses four indicators to measure household well-being. Variation across the three project areas for these indicators is minimal. Mean values for the overall sample are:

- Per capita expenditures, a proxy for income, is \$1.41
- Prevalence of **poverty**,³ is high, at 79 percent of the sample
- Household **dietary diversity** is low: households consumed < 4 of 12 food groups
- The **recovery** index value is mid-range,⁴ at 1.9 out of 4

RESILIENCE CAPACITIES

This study measures three resilience capacities. Absorptive capacity refers to households' ability to minimize exposure to shocks through preventive measures and appropriate coping strategies. Adaptive

³ Based on \$1.90 daily per capita income threshold

⁴ The recovery index measures a household's ability to meet food needs following shock exposure in the previous 12 months and the extent to which a household believes it will be able to meet food needs in the next year.

capacity measures households' ability to make proactive and informed choices about alternative livelihood strategies based on an understanding of changing conditions. Transformative capacity reflects governance mechanisms, policies, infrastructure, community networks, and formal and informal social protections that enable systemic change. Each capacity is expressed as an index of household- and community-level indicators and ranging from 0 (lowest capacity) to 100 (highest).

The overall sample's mean index scores are quite low for absorptive and adaptive capacities (14.6 and 17.8, respectively), and slightly higher for transformative capacity (32.1). Comparison of the three project areas shows minimal differences in resilience capacities: the largest is a 12-point difference in index values for transformative capacity: 28.2 for Food for the Hungry households and 40.3 for Mercy Corps households.

WHICH RESILIENCE CAPACITIES ARE ASSOCIATED WITH POSITIVE WELL-BEING OUTCOMES, INCLUDING EXPENDITURES, POVERTY, DIETARY DIVERSITY, AND RECOVERY FROM SHOCK?

All three resilience capacities are significantly associated with all four well-being outcomes in the anticipated direction, even when controlling for different degrees of shock exposure. Adaptive capacity has the strongest influence (i.e., greatest percent change) over expenditures, poverty, and dietary diversity relative to the other two capacities, whereas absorptive capacity has the strongest influence on perceived recovery. Households with higher levels of absorptive capacity have a more than 20 percent higher likelihood of recovery compared to those with low levels.

Relationship between resilience capacity & well-being outcomes

Outcome	Absorptive		Adaptive		Transformative	
	Coef.	% change	Coef.	% change	Coef.	% change
Expenditure	0.048***	49.7	0.053***	58.3	0.019***	31.7
Poverty	-0.052***	-16.8	-0.064***	-20.3	-0.019***	-12.4
HDDS >= 4	0.035***	39.8	0.040***	47.8	0.015***	28.7
Recovery	0.028***	23.1	0.013***	10.5	0.010***	14.0

Note: Asterisks represent statistical significance at the 0.01 (***), 0.05 (**), and 0.10 (*) levels.
 % change represents the change from the lowest to highest quartile (25th to 75th percentile) of the sample for indicators measured as continuous variables. For binary variables, the change is defined as the difference between 0 and 1.

WHICH RESILIENCE CAPACITY INDICATORS DRIVE POSITIVE WELL-BEING OUTCOMES?

Results from regression analysis to assess relationships between resilience capacity components and well-being outcomes provide evidence that all four well-being outcomes can be improved through the components that comprise the resilience capacity indices. The analysis examined high- versus low-range values for each component indicator.

- Households with high levels of access to cash savings, durable goods asset holdings, and access to agricultural insurance or remittances are more likely to have at least a 10 percent increase in per capita expenditures compared to households with lower levels of those components.
- High levels of access to cash savings, durable goods asset holdings, and education reduce poverty by 5-13 percent. Households with greater access to formal safety nets are more likely to be poor by almost 30 percent, but this most likely reflects appropriate beneficiary targeting.
- Households are more likely to consume at least four food types if formal safety nets are available and if they have high levels of cash savings, durable assets, shock preparedness and mitigation, social



networking, education, and livelihood diversity. A lack of humanitarian assistance, on the other hand, is likely to result in lower dietary diversity.

- Households' likelihood of recovery is improved by 12 to 37 percent with higher levels of shock preparation and mitigation, social networking, humanitarian assistance, and local government responsiveness. The following household characteristics limit the likelihood of recovery by 8 to 35 percent: lower bonding social capital, fewer livelihoods, less education, less collective action, or lack of access to agricultural insurance.

DOES RESILIENCE CAPACITY DETERMINE THE COPING STRATEGIES HOUSEHOLDS ARE LIKELY TO ADOPT?

Next, we looked at whether some coping strategies are more likely to be adopted based on household level of resilience capacity. The analysis tests the assumption that households with high levels of resilience are less likely to engage in negative coping mechanisms than those with low resilience capacities. The results mostly validate the assumption, but there are some exceptions.

Households with greater absorptive, adaptive, or transformative capacity are more likely to buy livestock when crop production is at risk or sell/slaughter livestock, and less likely to migrate.

Households with higher absorptive or adaptive capacity are more likely to receive money or food from within or outside community. Compared to households with lower absorptive capacity, households with greater absorptive capacity are more likely to take a loan from friends/family within their community. Households with higher adaptive capacity are more likely to take a loan from friends/family outside the community. Higher levels of transformative capacity are associated with a reduced likelihood of receiving formal assistance (-5.0 percent).

Surprisingly, households with greater absorptive or adaptive are more likely to reduce child-related expenses, and households with higher absorptive capacity are more likely to limit food consumption, often considered negative coping mechanisms.

PROGRAMMING IMPLICATIONS

The results from the analysis of resilience and household outcomes recovery point to some important conclusions regarding programming to enhance resilience. First, traditional economic development interventions to improve household income also enhance household and community resilience capacities. These include those that increase agricultural/livestock productivity, diversify livelihoods, provide education/training, and invest in value chains or infrastructure.

There is some evidence to support the idea that promotion of livelihood diversification can enhance household income (measured by per-capita expenditures) and food access (HDDS). Access to savings is associated with household economic status and dietary diversity, suggesting the importance of support to savings and loans groups and mechanisms to promote savings by individuals and other organizations. In addition, investments to support shock preparedness and mitigation plans are positively associated with both food security (dietary diversity) and household ability to recover from shocks.

Background

The DFSAs span four provinces and are implemented by three partners. The **Budikadidi Project** is implemented by CRS and partners in Kasai Oriental Province (Tshilundu and Miabi territories). The **Tuendelee Pamoja Project** is implemented by Food for the Hungry and partners in Tanganyika Province



(Kalemie, Moba, Nyunzu, Kabalo territories) and South Kivu Province (Walung territories). The **South Kivu Food Security Project** is implemented by Mercy Corps and partners in South Kivu Province (Kalehe and Kabare).

SURVEYS AND ANALYSIS

This study uses data collected from the baseline survey conducted July 8 to August 25, 2017, during the agricultural harvest season in most survey areas.⁵ The population-based survey had a sample size of 3,960 households (1,320 per project) and used a multi-stage clustered sampling design. The baseline was designed to provide information on food insecurity and food access; expenditures and assets; water, sanitation, and hygiene practices; agriculture; women's and children's health and nutrition; gender differences in decision-making for cash earners and parents of children under 2 years of age; and resilience.

⁵ Local subcontractor Forcier Consulting, LLC performed data collection.