

Ethiopia Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) Project

Impact Evaluation Brief

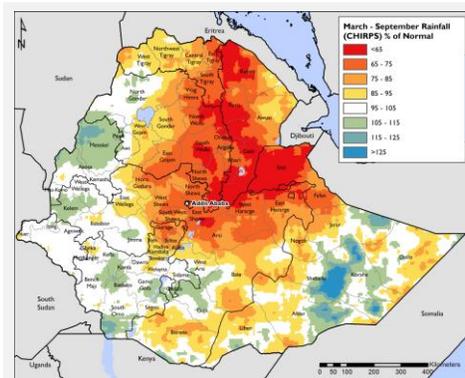
Key Findings and Program Implications

The Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) project was implemented from 2012 to 2017 in one of the most shock-prone areas of the world, the drylands of Ethiopia. The project aimed to enable pastoralist households and those transitioning out of pastoralism to withstand and recover from the recurrent climate-related shocks—mainly drought—to which they are exposed.

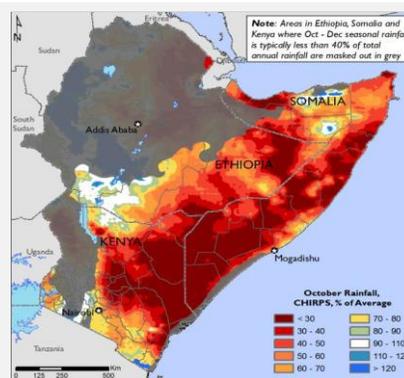
During the PRIME project’s implementation period, households experienced an exceptionally severe climate shock: a cycle of multiple, back-to-back droughts, including the 2015/2016 drought that was considered the worst in more than 50 years. This drought was induced by the El Niño Southern Oscillation and negative Indian Ocean Dipole, weather phenomena made more extreme by global warming. The droughts had numerous downstream impacts, including losses of livestock, crop failures, unemployment, food price inflation, deflation in the prices of livestock and crops, thefts and violence, and illness and malnutrition.



Photo: Sean Sheridan / Mercy Corps



Spread of the El Niño-induced drought, March-September 2015



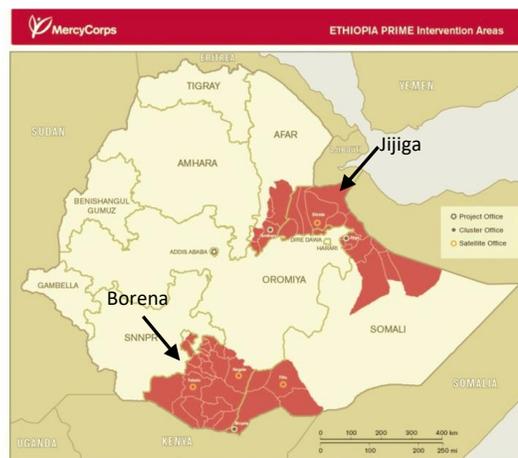
Spread of the Indian Ocean Dipole-induced drought, October 2016

The objective of the PRIME impact evaluation was to determine whether and how the project’s resilience-building interventions enhanced households’ resilience and its underlying determinants, their resilience capacities, in the face of this severe shock. This fact sheet reports the key findings and program implications of the evaluation, summarized here:

- The PRIME project had a positive impact on households’ resilience to drought.
- It did so by strengthening a broad range of households’ absorptive, adaptive and transformative capacities, including social and human capital, psycho-social capabilities, economic capacities, safety nets, disaster risk reduction, and access to markets, services, and infrastructure.
- A greater impact was achieved by implementing multiple interventions simultaneously using an integrative, multi-sectoral approach, and when households actively participated in interventions rather than only being passively exposed to them.
- To leverage optimal impacts in shock contexts, interim monitoring and evaluation to inform adaptive management is needed.

The Impact Evaluation

The PRIME impact evaluation was conducted in two of the three project areas, Borena in the regional state of Oromiya and Jijiga in Somali, for a sample of 2,750 panel households. Following from the operational definition of resilience—the “ability to recover from shocks”—resilience is measured as the change in food security in the face of shocks between the PRIME baseline (December 2013) and endline surveys (December 2017). A subjective measure of resilience, the perceived ability of households to recover from shocks, is also employed. Shock exposure is measured using satellite remote sensing data from the Africa Flood and Drought Monitor and data collected from households on the climate, economic and conflict shocks they experienced. The evaluation was implemented using a rigorous impact evaluation technique, Difference-in-Difference Propensity Score Matching (DID-PSM). All DID-PSM models employed are carefully tested to ensure they meet the criteria for applying this method.

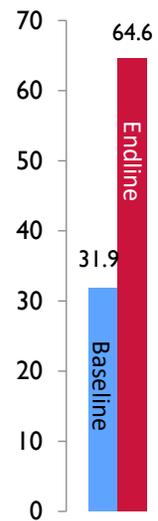


Evaluating the impact of a project requires a treatment and a control group, the latter representing the “counterfactual”, or what would have happened to households if they did not engage in the project’s interventions. PRIME employed an integrated, multi-sectoral approach, termed here “Comprehensive Resilience Programming” (CRP), whereby multiple systems were strengthened simultaneously to better enhance resilience. The main treatment group for the evaluation was thus formed by first grouping the project’s resilience-building interventions into four sets: livestock productivity and competitiveness, Pastoral Natural Resource Management (PNRM), financial services, and Climate Change Adaptation (CCA). CRP was then defined by engagement in at least three of these intervention sets. Most PRIME interventions were implemented at a systems level (e.g., establishing a veterinary clinic). Households could benefit from them through indirect exposure or take advantage of them through active participation (e.g, purchasing medications). For the purposes of this impact evaluation, households’ overall “engagement” in resilience-building interventions was thus measured using separate indicators of their exposure to and participation in CRP and the four intervention sets.

Key Findings

To track the state of resilience in the face of the severe shocks households were facing, the evaluation first documented the changes in households' food security in the two project areas between the baseline and endline surveys. Food security deteriorated substantially in Borena, where drought exposure was the most extreme, falling by 25 percent. The prevalence of severe food insecurity increased dramatically from 31.9 to 64.6 percent between baseline and endline (see figure at right). In contrast, food security held steady in Jijiga, and severe food insecurity declined. Thus, households in Jijiga were clearly more resilient to the drought than households in Borena. The areas experienced similar contrasting trends in resilience capacity, with deteriorations in Borena and improvements in Jijiga. With these trends in mind, the evaluation then estimated the impact of resilience-building interventions on households' resilience and resilience capacities.

Borena: Severe food insecurity doubled

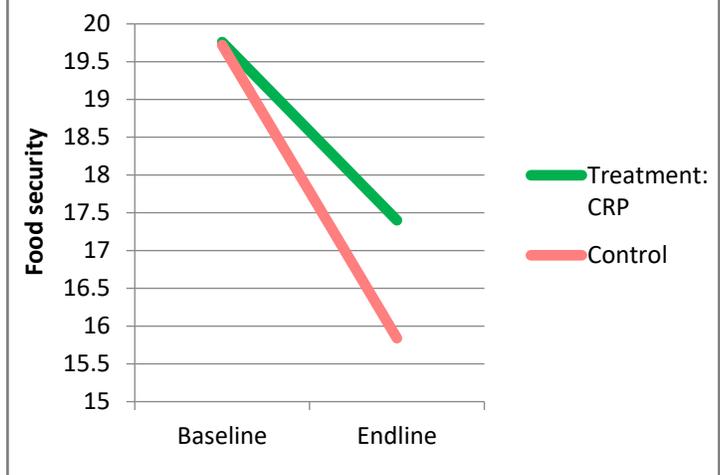


IMPACT OF COMPREHENSIVE RESILIENCE PROGRAMMING

Impact on resilience: The evaluation found that the PRIME project's interventions did increase households' resilience to drought. Implementing multiple interventions simultaneously through CRP boosted households' resilience more than separate implementation of interventions. Further, direct participation increased resilience substantially more than only indirect exposure. Households exposed to CRP had an 18 percent lower decline in their food security than those that did not. Households participating in CRP had a full 40 percent lower decline than those that did not (see figure). In the absence of exposure to the variety of resilience-building interventions made available, the prevalence of severe food insecurity would have risen to 72.1 percent (versus 56.5 for unexposed households).

Impact on resilience capacity: CRP strengthened all three dimensions of resilience capacity—absorptive capacity (*minimizing exposure to shocks and recovering quickly*), adaptive capacity (*making proactive and informed choices about alternative livelihood strategies*), and transformative capacity (*system-level factors, such as governance mechanisms and infrastructure, for more lasting resilience*). In the absence of households' engagement in CRP, the average household in the PRIME area would have experienced a reduction in their resilience capacities as a result of the droughts. However, the resilience capacities of those engaged in multiple resilience-building interventions were strengthened, enabling them to recover and preparing them to cope with future shocks.

Impact of participation in Comprehensive Resilience Programming: CRP slowed the decline in food security



The three dimensions of resilience capacity are measured using 20 indicators of specific individual capacities. These capacities are the actionable programming and policy levers for enhancing households' resilience. The evaluation found that CRP increased resilience in the PRIME project area by strengthening a wide range of capacities, including:

- Social capital
- Aspirations and confidence to adapt
- Economic sources of capacity: asset ownership, access to financial services, livelihood diversity
- Human capital
- Exposure to information
- Disaster preparation and mitigation
- Availability of hazard insurance
- Access to safety nets
- Access to services and infrastructure
- Access to markets

These capacities span beyond the economic capacities of traditional focus to include human and social capital, psycho-social capabilities, safety nets, disaster risk reduction, and access to markets, services, and infrastructure.

WHAT WORKED? IMPACT OF THE FOUR INTERVENTION SETS

For projects to leverage the greatest impacts on households' resilience, focus should be placed on the interventions that have been shown to bolster households' resilience and underlying resilience capacities the most. While showing the CRP had greater impacts than implementing sector-specific interventions separately, the impact evaluation pointed to those that contributed most.

Impact on resilience: The evaluation found that the livestock productivity & competitiveness interventions, followed by the CCA interventions, had the strongest impacts on households' resilience. The financial services interventions had no impact on resilience itself (but see below on the capacities). The PNRM interventions had mixed impacts: they had a negative impact on the small minority of households that were only exposed to them with no active participation. Those that did participate in them experienced induced improvements in their resilience to shocks.

Impact on resilience capacity: Despite not improving households' resilience over the short time span of the project, the financial services interventions had the most powerful impact on the three dimensions of resilience capacity. They had a particularly strong effect on households' absorptive capacity. In all, they served to strengthen 14 out of the 20 individual capacities. The livestock productivity & competitiveness interventions had the second-strongest impact on the three dimensions of resilience capacity, strengthening a full 17 of the individual resilience capacities.

The CCA interventions had the third-strongest impact on the capacity dimensions, having a positive (though lower) impact on all three, and strengthening 12 of the capacities. Finally, the PNRM interventions strengthened only adaptive capacity. They had a positive impact on 7 individual capacities.



Photo: Sean Sheppard / Mercy Corps



The CCA and PNRM interventions did not strengthen households' resilience as much as they could have because they had negative effects on some capacities (4 for CCA and 5 for PNRM). The evaluation also found that CRP itself, and financial services and CCA interventions in particular, had a negative impact on access to communal natural resources, including rangeland, water, and firewood. This may be due to the greater restrictions placed on the use of these increasingly degraded resources by newly-initiated rangeland management committees and to continued land privatization associated with some interventions. Avoiding such negative impacts on resilience capacities is obviously important for leveraging the greatest resilience impacts. To do so, efforts should be made to understand why they are occurring and who is being affected so that appropriate shifts in programming can take place.

THE NEED FOR ADAPTIVE MANAGEMENT

The deterioration in food security and resilience capacities seen in Borena, but not Jijiga, can be partly explained by the greater severity of shock exposure in Borena. Also, Borena households received far less assistance in the form of cash transfers and cash-for-work as part of the emergency response. However, programming decisions also likely played a role. The interventions found here to have the greatest positive impact on resilience (livestock productivity & competitiveness) were more highly concentrated in Jijiga while those with the lowest impacts (PNRM) were more highly concentrated in Borena. Food security data collected as part of Recurrent Monitoring Surveys between the baseline and endline surveys could have been used more effectively to trigger an adaptive change in programming and thereby prevent the continued deterioration in Borena. It would have been useful to have earlier data (1) on which interventions were being implemented where; and (2) to conduct an evaluation of which interventions were making the biggest difference. Interim monitoring and evaluation is important for real-time understanding of where the need is greatest, where interventions are allocated, and which are making a difference—*before* the end of a project in order to inform adaptive management.

Program Implications

The following are the implications for programming based on the findings:

- Greater impacts are achieved when interventions from multiple sectors are combined than when they are implemented separately. **Comprehensive, multi-sectoral programming optimizes resilience impacts.**
- Participation of households in the project's interventions had a greater impact than only indirect exposure. **Projects with "system-level" interventions should proactively plan for direct household participation.**
- Important knowledge was gained from this impact evaluation: livestock productivity, financial services, and CCA interventions had the strongest impact. **Projects can leverage the greatest impact by determining early on which interventions bolster resilience and resilience capacities the most and focusing on them.**
- The positive resilience impacts were brought about by strengthening a wide range of resilience capacities spanning beyond the economic to include human and social capital, psycho-social capacities, safety nets, disaster risk reduction, and access to markets, services, and infrastructure. **Shocks are not going away: Continue to strengthen a wide range of capacities to protect households' well-being and development investments.**
- The CCA and PNRM interventions had negative impacts on some resilience capacities, hindering resilience progress. **Avoid negative impacts through understanding why they occur, who they affect, and shifting programming.**

- The sharp deterioration of food security and resilience capacities in Borena could have been prevented with earlier information on food security trends, where interventions were concentrated, and which are likely to have the greatest impact. To leverage optimal impacts in shock contexts, conduct interim monitoring and evaluation and use the information gained for adaptive management.

About the PRIME Project

Stated Goal: Increasing Household Incomes and Enhancing Resilience to Climate Change through Market Linkages

Intervention Areas: Afar, Oromia, and Ethiopia’s Somali regions. The RMSs were conducted in Borena, located in the southern lowlands of the Oromia region and Jijiga, also known as “Fafan,” in the northern part of the Somali region.

Reach: The project expected to benefit 250,000 individuals.

Primary Focus Areas: 1) Livestock productivity; 2) Natural resource management and climate change adaptation; 3) Alternative livelihoods; 4) Learning and knowledge management; and 5) Nutrition. PRIME’s activities across these areas include the Innovation and Investment Fund (IIF), and a focus on gender and disability.

Baseline Impact Evaluation Survey: Conducted in November/December 2013. Sample size: 3,142.

Recurrent Monitoring Surveys (RMS): The two RMSs are an innovative feature of the PRIME impact evaluation. Implemented in the interim between the baseline and endline surveys, they captured real-time household and community responses to actual shocks. RMS1 was conducted from October 2014 to March 2015 in 6 rounds spaced 1 month apart (N=414). RMS2 was conducted from October 2015 to November 2016 in 6 rounds spaced two months apart (N=400).

Endline Impact Evaluation Survey: Conducted in December 2017. Sample size: 2,750 (panel with 12.5 % attrition from baseline)

Funding Sources: PRIME was a five-year USAID project, financed through Feed the Future and Global Climate Change facilities.

Implementing Organizations: Mercy Corps (lead), CARE International, Kimetrica, Haramaya University, Action for Integrated Sustainable Development, Ethiopian Center for Disability and Development, Horn of Africa Voluntary Youth Committee, Aged and Children Pastoralists Association, and SOS Sahel Ethiopia.

