







This project was supported by Agency for International Development (USAID) under the terms of Cooperative Agreement No. AID-663-A-12-00014.

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.



We would like to express our sincere gratitude to Mercy Corps staff and our partner, CARE, for extending their time and expertise in working with the researchers. Our special thanks to Sisay Awgichew, Alabachew Adem, and Hussien from CARE and Jeton Starova, Netsaalem Bahiru, Diana Picon, Lorenz Wild, Vimbai Chishanu, Talew Deressa, Dr. Numery Abdulhamid, Boru Jarso, and Endale Worku from Mercy Corps.





How can lessons from PRIME be used to integrate climate resilience into development work?

Pastoralist Areas Resilience Improvement through Market Expansion (PRIME) is a five-year multi-agency program in the dryland regions of Ethiopia that focuses on supporting pastoralists via market expansion and long term behavior change. PRIME also works to integrate strategies aimed at helping communities become more resilient to climate change and its affects on society. As one of the first large, multi-sector programs to integrate climate resilience across outcomes, PRIME is an opportunity to examine the successes and challenges of integrating climate change adaptation principles and practices. The goal of this narrative report is to use three case studies to describe what kinds of climate integration activities are part of PRIME and what they look like on the ground, along with some key lessons learned over the course of PRIME's first three years. We hope this will be useful information for program designers and implementers, and that it can be applied in the context of other projects and settings.

What is Climate Change Adaptation (CCA) and Climate Resilient **Development(CRD)?**

Climate change concerns shifts in the physical world that can include warmer and cooler weather, more intense dry seasons, floods, and other natural events. Yet the impacts of climate change reverberate throughout ecosystems, and affect our physical, social, economic, political, and even spiritual lives.

For example: If a region of pastoralists experiences a particularly intense dry

Climate Resilient Development (CRD): Development programming that integrates climate change adaptation and behavior change strategies, while building inclusive and resilient development pathways that can adapt to unpredictable climate futures.

Climate Change Adaptation (CCA): Strategies or actions specifically aimed at reducing vulnerability to actual or expected changes in climate.





season, the subsequent lack of grazing options can weaken livestock-which can mean less food, reduced income and/or social status, and diminished nutrition. Such scarcity can cause people to take on extra work, forgo school or job opportunities, pick new migration routes, or even enter into conflict over resources. All of the above can also lead to the breakdown of institutions and traditions that provide structure, stability, and meaning for individuals and communities.

Climate Change Adaptation (CCA) strategies are actions specifically aimed at reducing vulnerability to actual or expected changes in climate. Climate Resilient Development (CRD) is the ultimate goal of development programming that integrates climate



From a development point-of-view, the most pressing question has become not whether climate change adaptation is necessary-science has already proven this¹-but how organizations can best integrate climate considerations into broader development goals and pathways. For development gains to be meaningful, they must be climate resilient.

For example, a program devoted to reducing conflict in the Horn of Africa naturally requires conflict reduction as its focus; simultaneously, that program

change adaptation and behavior change strategies while improving overall well-being that can be maintained within shifting climate conditions.

Today, development strategies must be designed with current and future climate conditions intentionally factored in. This is the only way to ensure that equitable growth and prosperity are possible within the context of increasing climate shocks and stresses. CRD is particularly crucial in low-income countries where achieving standard development objectives is essential, yet basic infrastructure is limited and social or economic buffers aren't in place to lessen the impact of climate.

Why should programs integrate climate information and CCA strategies into broader development efforts?

The ultimate goal of development is to help communities enhance their economic and social well-being over the long term. Climate variability is a major driver and contributor to the shocks and stresses that create or magnify development challenges. Nonetheless, development actors frequently struggle to incorporate climate resilient strategies as effectively as purely social and economic ones, often viewing climate as outside the scope of their work. Yet people who live in countries facing problems with widespread poverty and conflict are disproportionately vulnerable to climate change, in large part because they lack the safety nets that exist in more developed countries.

should also understand how climate risks contribute to the root cause of conflict outbreaks, and adjust activities to account for those risks, in addition to social and religious ones.

Climate Resilient Development is a way of achieving development goals while integrating practices to reduce risks associated with current climate challenges, and preparing for projected future changes in climate.

^{1. &}quot;IPCC 5th Assessment Report," Intergovernmental Panel on Climate Change, accessed October 17, 2015, http://ar5-syr.ipcc.ch/





What is the PRIME approach to Climate Resilient Development?

PRIME is a five-year USAID funded project implemented across three of Ethiopia's pastoral dry land areas-Afar, Oromia, and Somali regions-that aims to increase the incomes of 250,000 households while also enhancing resilience to climate change through market incentives and opportunities. The project will run through 2017; at the time of this report, PRIME was nearing the end of its third year.

When PRIME was approved in 2012, an estimated 15% of all Ethiopians were pastoralists; in the three regions where PRIME works, that number is closer to 60-70%2 with two-thirds of the country's land being used for pastoralism.3 While productivity has been relatively high, these groups also experience significant economic challenges, nutritional problems, and environmental instability which includes more frequent and more intense dry periods and negatively impacts livestock.4

Such communities have practiced pastoralism for centuries, and are accustomed to a degree of climate variability. Historically, they had two main adaptation strategies: they moved to new territory in search of more resources or a better climate, and they relied on traditional rangeland councils to oversee management of natural resources and related activities. This included providing a form of informal insurance.5

Now, however, pastoralists have many factors to contend with. In addition to climate change they face rapid population growth (by 2050 Ethiopia is slated to be the world's seventh most populous country⁶), a decrease in land area available for grazing, and government rezoning of rangelands. Due to rezoning efforts, traditional rangeland councils also grew fragmented, since they were previously arranged according to geography rather than political zones. As a result of all these changes, being a pastoralist is harder than ever. There is a growing movement of people transitioning away from pastoralism, moving to towns and small cities, and looking for other ways to earn a living. At the same time, many lack the skills or training to find other work.



In the past, most overseas assistance to Ethiopia came in the form of traditional humanitarian aid, in the sense that organizations sought to alleviate immediate problems via the direct transfer of resources such as food, medicine, equipment, or other goods. PRIME took a new approach by investing in building relationships with different partners. Rather than transferring resources, it worked to change behaviors, build capacity, and increase access to markets.

Additionally, the structure of the project is unusual because it is based on a consortium of ten different national and international partner organizations working on five interagency teams, with each team devoted to leading a technical component and implementing activities with a specific focus.7 Those components are briefly described here:

^{6. &}quot;U.S. Projected to Remain World's Third Most Populous Country Through 2050, Census Bureau Reports," U.S. Census Bureau, June 27, 2010, www.census.gov/newsroom/releases/archives/international_population/cb11-116.html



^{2.} Jeton Starova, interview by Annie Murphy, August 28, 2015, transcript

^{3.} Solomon Desta, "Pastoralism and Development in Ethiopia," Economic Focus, accessed October 17, 2015, http://www.eeaecon.org/sites/default/ files/publications/Economic%20Focus%20%20Vol%209%20No%203_0.pdf

^{4.} Kidane Georgis, "Agricultural Based Livelihood Systems in Drylands in the Context of Climate Change," Food and Agriculture Organization, 2010, http://www.fao.org/docrep/014/i1786e/i1786e00.pdf

^{5.} Desalegn, A., Getu, M.,, Kassa, W., & Mamo, K., "Market Research on Existing Insurance Products and Study of Best Practices/Lessons Learned: The Case of Afar and Eastern Clusters," Haramaya University & PRIME/Mercy Corps, October 2014.



PRIME Components & Activities

Livestock Productivity

Goal: Improved productivity and competitiveness of livestock and livestock products.

Activities include: strengthening networks of private veterinary providers; promoting dairy production via milk collection groups; linkages with processors and business expansion grants to processors; promoting meat production via an export-quality slaughterhouse; live animal export, and trade fairs.

Natural Resource Management⁸

Goal: Enhanced adaptation to climate change via natural resource management.

Activities include: rangeland mapping; rangeland council capacity building, including cultivating women as decision-makers; social analysis and action groups; water point rehabilitation; weather forecasting and sharing climate information, and clearing of bush and invasive plants.

Alternative Livelihoods

Goal: Strengthened alternative livelihoods for households transitioning out of pastoralism.

Activities include: agricultural inputs; access to finance; renewable energy projects, and support for people augmenting or transitioning out of pastoralism, including vocational training scholarships, online job platforms, entrepreneur networks, and job fairs.

Learning and Knowledge

Goal: Enhanced innovation, learning, and knowledge management.

Activities include: defining indicators and other measurements; collecting, organizing, and sharing data from all PRIME components, and otherwise managing information and materials for use by stakeholders, donors, the public, and PRIME itself.

Nutrition

Goal: Improved nutritional status of targeted households.

Activities include: messages about livestock health and veterinary services; including fodder and veterinary medicine; a series of radio soap operas aimed at young mothers which provides information about nutrition during the first 1000 days of a child's life; theater performances, and a camel caravan.

LESSONS LEARNED

- CRD calls for long-term, systemic approaches aimed at behavior change.
- · Climate programming benefits from adaptive multiagency projects.
- · Climate integrated projects require an especially high level of planning.
- · Information about climate must be translated, timeappropriate, accessible, and tailored to end users.
- · Women are often early adopters of CCA strategies and thus key stakeholders.
- A culture of appropriate savings supports climate
- · Organizations need a cohesive, in-depth understanding of what CRD means.
- Programs should be designed to incorporate climate resilience across outcomes.

⁸ This component is often described as "natural resource management and climate change adaptation." While natural resource management is a key component of CCA, to use CCA to describe this one component is somewhat misleading because it implies that other components are not CCA. For the purpose of clarity, this report will often describe the component simply as related to natural resource management or NRM.



^{7 &}quot;PRIME Pastoralist components Resilience Improvement through Market Expansion: Innovation Grants," USAID, October 2012.





Heading south from Addis Ababa into the Rift Valley, evidence of Ethiopia's population growth was apparent everywhere: the capital seemed to move ever further into the surrounding countryside, which was dotted with the cement, staging, rebar, and brick of new buildings. Even when the landscape became decidedly less industrial-rolling fields, acacia trees, and stands of eucalyptus—it remained densely populated. Homes were grouped closely together, and people grazing their animals crowded the roadside, livestock often wandering out onto into the highway. In a small town known for its vast gravel pits, hundreds of red dump trucks were lined up four-wide and bumper-to-bumper all the way to the horizon as their drivers waited to cart away loads of sand for construction projects. Later, the road passed through the lakeside city of Awassa-also ringed by large construction sites-then climbed higher into the Guji mountains, and finally descended into the dryland region of Oromia, where wiry vegetation grew low to the ground, and the dirt was fine, loose, and coppery.

Oromia is one of three geographic areas that PRIME works in. Due to the effects of climate change, pastoralists and agro-pastoralists in Oromia now face a variety of challenges: greater variability in weather, more intense periods of rain during wet seasons, and above all, dry seasons that are getting longer and more intense. These challenges, particularly when combined with government policies that have often failed to consider pastoralism or traditional rangeland management or the growing population, make it difficult to raise healthy livestock using traditional grazing techniques. This in turn negatively affects the financial health of households and communities that rely on herds for income, compounds negative impacts on the environmental health of the rangeland environment, and also threatens the physical health of residents, in particular young children and infants for whom balanced nutrition is critical.

Using an integrated approach that involves various partners, stakeholders, and strategies in order to simultaneously address root causes of the above problems-livestock productivity, natural resource management, financial opportunity, governance and communication, and nutrition-PRIME seeks to integrate climate considerations into development

in a way that is broad and multi-faceted yet also focused and specific.

Here, three narrative-based case studies were carried out as a window into PRIME, and as a way of examining the integrated, adaptive approach this program strives to take.

Additionally, it is important to note that the first year of PRIME was spent largely on assessment work, which included an EMMA (Emergency Market Mapping Analysis) and a CVCA (Climate Vulnerability and Capacity Assessment). In general, an EMMA is used to look at value chains during an emergency; in this case the EMMA was done because Ethiopia's drylands have chronic issues with intense dry periods and failed rainfall, as preparation for slow-onset emergencies such as drought.

Meanwhile, the CVCA-a tool specifically developed by CARE-was a participatory evaluation that collected community perspectives on risks and vulnerabilities faced due to climate change, as well as what was needed to become less vulnerable. The EMMA was carried out by the Livestock Productivity and Alternative Livelihoods teams, while the CVCA was led by the Natural Resource Management Team.9

9 Diana Picón, interview by Annie Murphy, August 28, 2015, transcript





In 2013, PRIME began to facilitate the mapping of rangeland components and to identify traditional councils; such councils were responsible for the management of 4 million hectares in 24 different Rangeland systems located in Afar, Oromia, and Somali regions.11

Since that time, PRIME staff have been working alongside elders and other community members to understand how centuries-old council knowledge currently informs management practices. Simultaneously, PRIME also supported the revitalization of that system; this was necessary because councils grew fragmented after changes in the national government led to prioritizing politicallydefined borders rather than the ecologically-defined ones that rangeland councils had traditionally been organized by.12

Revitalization activities have included more regular meetings, organizing community rehabilitation activities such as thinning bush and clearing invasive plant species, establishing community dry season grazing reserves or enclosures known as kallo, and rehabilitating water points such as wells and rainwater collection. All the above activities are intended to help better manage the rangeland environment, thus enhancing pastoralists' adaptation to climate change.

One cool morning in Siminto, a group of about a dozen men, along with three women, convened in the shade of a large ficus tree; the men in a relaxed semicircle with the women slightly off to the side. 13 PRIME staff—who grew up in similar communities around Oromia—sat with the group, and asked for an update. They then turned the meeting over to the local rangeland leader, a serious man in a babyblue baseball cap named Liban Jilo, who led much of the discussion.

The group reviewed how it had recently selected components to build rangeland enclosures in anticipation of the coming dry season. Leaders confirmed that they received hand tools from PRIME for getting an old well up and running, and that they'd already cleared a 10 kilometer access road leading to it. They then focused on the task of rehabilitating a pond for watering livestock. It was

¹³ Previously women did not participate in rangeland council meetings; PRIME has done significant work to ensure that women participate in NRM decision-making.



¹⁰ Siminto is a subunit of the Dheda-Dida rangeland unit.

¹¹ Lorenz Wild, interview by Annie Murphy, August 27, 2015, transcript

¹² Talew Dheressa, interview by Annie Murphy, August 20, 2015, transcript



a key decision and the discussion was long and detailed-not only did they need to select a site with the right kind of soil and water flow, they also needed to pick a place that was relatively central, since people often walk for hours to water their animals. PRIME staff listened attentively; one team member spoke up about an hour and a half into the meeting, when there was mention of digging an entirely new pond instead of rehabilitating an old one. He reminded the group that ground gets trampled around any water point, and that a new one would mean additional rangeland degraded by constant foot and hoof traffic. Everyone nodded in agreement. Ten minutes later, they'd picked an existing site to rehabilitate, and also set a date for PRIME staff to return with GPS to map the pond's exact location.

grown very quickly, and the land is also drier. We used to just move when we needed resources. I do wish for that time to come again, when we can move from place to place."

Talew Dheressa, the regional technical team leader for natural resource management, said that no one knows what the future holds for pastoralists, but that given the government's use of more land for plantations and other industry, coupled with the growing population, it's unlikely that pastoralists will ever be able to return to their former patterns of movement.

While the visit to Siminto focused mainly on the rangeland council, and its management activities, it was clear that those activities often intersected with and informed other PRIME components.

"No one wants to stop being a pastoralist. But what happens when a pastoralist can no longer move? We can at least support them, not just with natural resource management, but management of livestock, diversifying income streams, making better use of food and nutrition."

-Talew Dheressa

After the meeting Liban Jilo, the group's leader, sat down for an interview. He began by stressing that rangeland councils are not an invention of PRIME.

"We've had these for centuries," he said. At the same time, he was also quick to credit PRIME with helping revitalize the traditional councils. He also said that strengthening these groups was directly helping communities reduce their vulnerability to climate change. Just being encouraged to meet regularly, he said, had made a big difference in terms of the measures they were taking to be more

"We do more strategic management now, and we decide all together where to graze our animals, where to get water. The last few years, with the drought, my animals had become less productive. But now that we are managing the rangeland more and focusing on ways to have the animals be more productive, they're healthier again. I have more milk for my family, I send my kids to school in town, and I even save some money. It's not perfect, but we're doing our best."

"Before, the land was open," he said. "The population was small. Now the population has Liban Jilo mentioned a PRIME-supported radio soap opera with a large listenership, and that it was teaching people about nutrition and child health. He also talked about encouragement from PRIME to diversify income streams and save money as a strategy for coping with less predictable weather patterns -and said that these activities were part of why he'd prioritized producing more milk and meat for his household, and had even sold a few animals before a recent dry season, something that he'd previously resisted doing because a larger herd traditionally means more prestige.

Most people in the area first learned about PRIME and the strategies it offers via their local rangeland council-and for rangeland leaders deeply involved in planning and management, the council remained the primary way of interfacing with PRIME. At the same time, after being introduced to the project via their council, people in Siminto and nearby villages started to branch out and interact with strategies offered by other components. They said the rangeland councils were a critical first point of contact that anchored PRIME; not only in terms of managing natural resources, but as a way for PRIME to build trust and mutual respect with the community, and to set the stage for relationships across a range of activities.





For a two-day Participatory Scenario Planning (PSP) meeting, about seventy people from local communities gathered in a concrete compound in Negele, a small but fast-growing city at the heart of Oromia. The PSP approach was originally designed by PRIME partner CARE. It is based on a collaborative process of sharing both traditional and meteorological forecasts with community members, facilitating conversation about those forecasts, and discussing possible adaptation strategieswhich can include anything from selling some animals prior to a difficult dry season and putting that money in the bank, to planting crops for early harvesting.

At the PSP in Negele, officials from the regional government ran the meeting, helping stakeholders contextualize weather forecasts by linking traditional and 'scientific' forecasts, developing disaster preparedness plans, discussing potential adaptation strategies, and finding climate-resilient livelihood decisions that participants could easily apply and implement in their home communities.

The main auditorium space was in transition. Temporary paint meant to indicate which side of the window should face outward during installation remained on the glass, and metal office chairs seemed new. At the same time, many of those chairs and overhead lights were broken, and while a generator was set up, there was no gas available to run it until noon.

The group was focused on the work at hand, and did not seem phased by the initial lack of electricity to run equipment. In addition to Ethiopian government

officials, PRIME staff had attended as support. The audience was made up of pastoralists and agropastoralists, as well as a few traditional forecasters. Everyone was intensely focused on discussing weather predictions for the upcoming season, along with potential strategies for resilience.

Members of the government team passed out spiral-bound notebooks, pens, and bottles of water, then began describing disaster management models and general ways for communities to practice risk reduction. They soon segued into a more specific discussion of the recent growing season, what had or hadn't worked in terms of predictions, and strategies used to cope with weather events and the effects of the changing climate.

Participants took turns talking; everyone agreed there were many similarities between the forecast provided by the national meteorology organization and that of traditional forecasters—and they





said both were quite good, although they had underestimated the actual rainfall for that season.

During the meeting, PRIME team members sat in the back of the room or off to the side, assisting in whatever way seemed most useful, whether it was gently moving the agenda forward, or simply finding more drinking water to distribute to participants. In previous seasons, they had taken the lead on these workshops, but now they were transitioning into more of a support role as local¹⁴ government officials took on the responsibility.

One participant-Liban Jilo, the rangeland leader from Siminto, in his blue baseball hat-stood to say that while the two forecasts were similar, the traditional forecast had actually been more specific about where rain would fall, and where drought would strike, and with good accuracy. He insisted that this be acknowledged before moving on, then sat as government officials agreed with the

Just before lunch, the power came on, slides started running on a projector, and the discussion shifted focus to the coming year. When government officials began to fly too quickly through slides, one of the PRIME team members respectfully yet effectively let him know, and helped set a more appropriate pace; it was a good example of the teaching-viasupport technique that various team members had mentioned in interviews.

During a tea break, area pastoralists Hajite Gobana and Mohamed Ware sat outside and discussed what they found effective about the PSPs, and what they would improve upon.

Speaking about the past two years of PSPs, both Hajite and Mohamed reported positive changes in terms of coordination and forecasts; they especially liked that forecasting was not just sharing information, but also helping participants come up with strategies to adapt to a variety of

"It's difficult to tell a pastoralist to change how he manages his animals," said Hajite Gobana. "Those are his assets. But over time, if accuracy increases, trust increases. People trust what they see, and they need to see results over time."

analysis. Another man said that he tried some of the strategies offered at the last PSP-things like preparing fodder for animals, creating enclosures as a way of saving pastureland, and suggestions for crops to plant according to the forecast-also with good results.

A third man in a navy blue windbreaker talked about trust. He said that this is what helped people move beyond the hesitation they initially felt about scientific forecasting.

"Because the last PSP took place, and many people received the weather advisories, it also helped build trust in the community," he said. "Now we need to try to keep building trust in the community, especially with people who are wary of the PSPs."

Before sitting again, he added that he specifically meant religious leaders, who tended to be strongly against PSPs-because, as one man had put it, "only God can know what will happen in the future."

potential scenarios. They said they'd started to do things like making hay for fodder, practicing more efficient management of water resources, saving money from selling a few animals before the dry season, and improving nutrition by keeping more milk for home consumption—as well as trying out some new additions to their diets, such as eggs and fresh fruit like papaya. All these actions integrated with strategies from the other components: fodder (livestock productivity), savings (alternative livelihoods), and diet (nutrition).

They also said that if PRIME wanted to have even more impact, it needed to improve the accuracy and frequency of forecasting-which is currently being done twice a year-and get that information to more people.

"If you meet more, the forecast will improve even more," said Mohammed. Both he and Hajite agreed that more information not only helps build climate resilience, but the trust necessary to make changes.

14 "Local government officials" refers to officials at the woreda and zonal levels.





The village of Darara lies along the paved road that leads north, back toward the city of Awassa six hours away, and onto the capital of Addis Ababa. It's a busy place. There is steady traffic, and along the road there are constant herds of sheep with pinto spots or black-and-white patches, limestone-colored cattle, and camels.

The year before, two PSP workshops took place in a large area that included Darara; the following year, in an effort to make sure people had the level of access and attention required to sustain change over time, smaller Social Analysis and Action (SAA) groups were set up. This approach involves working with communities through regular dialogue to address how social and behavioral conditions perpetuate development challenges; the approach was initially developed by CARE.15 In this case, SAAs were intended to be a way for communities to discuss how social attitudes and behaviors create challenges for the uptake of climate adaptation strategies.16

This particular meeting started at 11 o'clock in the morning, an hour when most pastoralists naturally had a break in tasks related to caring for their animals; it would end around 1:30 p.m. when it was time to water the animals. PRIME staff mentioned that the simple act of finding the right time had been critical to the success of the SAA groups. When they

started out six months before, staff had tried to hold meeting at 10 o'clock or earlier, but with very little turnout. As a result, they'd worked to find an hour that better fit into herding responsibilities.

The meeting was more informal than other events; a relaxed space for people to discuss their successes with adaptation, as well as to identify social, cultural, and institutional barriers, and to collectively discuss strategies for the future.

While the main group continued its discussion, a few people volunteered to talk off to one side: Daniel Udessa, Sara Orana, and a young woman in a whiteand-blue headscarf who simply used her first name, Lelo. Lelo was reserved and quiet for most of the discussion, save talking briefly about her new job as an animal health professional, one of the alternative livelihoods supported via that component. Because animal health services help improve livestock productivity, they also contribute to resilience by supporting household nutrition.

^{16 &}quot;Changing Climate, Changing Behaviors" PRIME document, June 2015.



^{15 &}quot;Ideas and Actions: Addressing the Social Factors that Influence Sexual and Reproductive Health," CARE, 2007, http://www.care.org/sites/default/ files/documents/social analysis manual.pdf



Sara and Daniel-Sara in particular-were more talkative. They seemed excited about regularly using their SAA group to reflect on the changes taking place in their community. They described how before PRIME, people would simply move when the climate caused grazing to get bad, and how, as climate challenges grew, animals grew weaker and options became more limited. It was clear to them something had to change.



Photo: S. Sheridan/Mercy Corps

"Now we can discuss options with forecasters, and make a plan," said Sara. "We can map ways to manage our water reserves leading up to a dry period, store crop residues for animal feed and make land enclosures to save grass for grazing, and be strategic about selling a few animals to put money in the bank. We can even get early maturing seed varieties that will allow us to harvest earlier and cut risks that way, too."

But they also mentioned practical challenges that cropped up as they sought to become more resilient. For instance, when a prior forecast called for an early drought season, one of the recommended strategies had been to plant early maturing crops, specifically French green beans. Yet when much of that harvest was attacked by worms, the community was caught off guard, because no one had counseled them on possible treatments for pests unique to that crop. Another challenge was that while there was demand

for the beans in Somalia and Kenya, about 250 kilometers away, they're not traditionally eaten in Oromia. Even those who were able to harvest beans had difficulty finding a viable market.

Sara said she believes such challenges are surmountable with proper planning. What really takes time to change, she said, are cultural attitudes about how work should be done, and by whom. Many adaptation strategies are focused on keeping smaller herds of dairy animals closer to the house, and managing them intensively, rather than letting large herds graze over large areas as was done in the past. Work around the home traditionally falls to women, so they began to tend those animals near the house. When women like Sara got engrossed in new ways of doing things, it sometimes created friction with their husbands, who were used to having their wives and older female children spend more time inside the home, managing household duties like cooking and childcare.

"At first, my husband said, 'You are getting crazy; you need to stop.' But now he sees the money our small herd brings in-and that we can invest that money in other businesses. And he's starting to say that it's a good idea."

While both Sara and Daniel agreed there were still many challenges to overcome, they were also hopeful and pragmatic; they said they'd prefer to make changes now and work on adaptationincluding diversifying their income streams—than to be forced out of pastoralism entirely. But, they caution, they're still an exception rather than the rule.

Real, community-wide change, they said, takes time.

"You don't usually change people by telling them about the consequences of not doing something," said Daniel Udessa. "People learn from watching each other, from practice, and from experience. If someone else is doing something good, they'll get resultsand you'll see it, and learn from them that way."







"Imagine that each component is part of a vaccine that can help communities adapt to climate change; each community should get all the courses of the vaccine-from animal health to natural resource management to access to finance to nutrition—in order to become truly resilient."

-Netsaalam Bahiru, Alternative Livelihoods Advisor, PRIME

PRIME strives to integrate components in a variety of ways, and tries to ensure that all components are engaged in programming which helps reduce vulnerability to climate change. Three kinds of integration are considered: a) Geography, b) Organization, and c) Activities.

- A. Geographic Integration means field teams collaborate according to location as well as component. For instance, while all members of the natural resource management team work on that set of activities, they also share office space with members of other components working in their geographic cluster. They participate in planning activities, interventions, and evaluations that cut across all five PRIME components.
- B. Organizational Integration means that teams in the Addis Ababa office and in field offices incorporate staff members from different agencies who work together on PRIME. Rather than, for instance, having a team that is just made up of staff from Mercy Corps, a team might include staff from CARE, Mercy Corps, local NGOs, researchers from local universities, and local government partners.
- C. Integration of Activities means that when one component takes on an activity, that team plans and executes it alongside complementary components to broaden the activity's impact and to identify the full range of climate resilient strategies available. This is perhaps the most challenging and impactful aspect of integration. PRIME, for instance, grouped CCA activities into the Natural Resources Management component, creating some initial confusion about whether climate is a cross-cutting issue.

Below are a few examples of integrated activities carried out as part of PRIME:

Villages Savings and Loan Associations (VSLA) Soap Opera for Social Change

Animal health, climate change, nutrition, and markets are all closely linked. For example, if there is a drought, animals grow weaker and less productive due to the lack of food and water; without proper resilience strategies, this can then translate into less milk and meat for sale or for human consumption. As a strategy to reduce climate vulnerability, PRIME has identified the need to improve both nutritional practices and the use of animal health services. The healthier animals are, the more milk they provide for consumption and sale, which allows families to be more food secure.

Vimbai Chishanu, the Nutrition and Behavior Change Communications Advisor for PRIME, said her team wanted to find a way to overcome barriers around animal health and nutrition, and had observed the

popularity of radio. It decided to create a radio soap opera that would portray pastoralists using animal health services and planning for family nutrition, as a way to influence attitudes around these strategies. In order to maximize the soap opera's impact, the team also wanted to establish listener groups to discuss each episode, reflect on what they'd seen, and refine messages to take away. Instead of creating groups from scratch, the team decided to work with ones already in place: Village Savings and Loan Associations (VSLA) already established by PRIME's Alternative Livelihoods team.

"Rather than spending time coming up with a new group of people and starting from zero, we realized we could build on the work of another component," said Vimbai.





Her team produced a series of guidelines for community dialogue, and handed them out to



Photo: S. Sheridan/Mercy Corps

an already-established VSLA group, which then gathered to listen and discuss episodes together. Thus far the soap opera has been a hit. The

narrative is high quality, thanks to a partnership with writers from the American entertainment company Warner Brothers. The listening groups became a space to reflect on behavior change around nutrition and animal health, as well as a way of reinforcing other attitudes and strategies which reduce vulnerability to climate-induced malnutrition and livestock losses.

Listening to and discussing radio soap operas helps community members get used to the idea of strategies like animal health services or nutrition planning. It helps break down social barriers around using services and encourages people, particularly women, to focus on good nutrition during the first 1000 days of a child's life. This helps children and entire households become more resilient; healthy children are better equipped to withstand shocks, be it economic hardship or climate events like a drought. In a similar vein, the soap operas also help stimulate good livestock practices and crop diversification; those adaptation strategies support household nutrition at the same time that they create climate resilience. Listener groups also encourage their members-many of whom are women-to continue meeting and discussing CCA strategies, which supports CRD in general.

Loans for Livestock Traders

Many livestock traders are interested in scaling up their businesses-which makes traders more climate resilient-but they often lack capital or other support in the venture. Additionally, climate impacts (such as drought or increased animal disease) often result in losses and further reduce available capital. By providing loans to traders, PRIME helps stimulate Ethiopia's livestock trade, helps more pastoralists to become players in that trade, and increases climate resilience all around. At the same time, traders also demonstrate their commitment by investing some of their own money.

This project directly interacts with both the Livestock Productivity and Alternative Livelihoods components. It stimulates the market for healthy and well-tended for animals, incentivizing people to use CCA rangeland management strategies such as water point rehabilitation and fodder collection. It also creates jobs for those looking to leave pastoralism, and for pastoralists who want to diversify income streams. Because there is increased demand for animals, pastoralists are incentivized to adopt other climate-resilient strategies such as using animal health services to make sure their animals are strong and healthy. Vulnerability to climate is further reduced when they have climate information that allows them to sell animals at strategic times, thus providing pastoralists greater returns for investing in other businesses or to use as a cushion in times of







scarcity. All these adaptation strategies lead to more climate resilient communities.

While discussing livestock trading loans, Jeton Starova succinctly described the importance of integration in general:

"To make livestock more productive you need access to inputs and opportunities: from better rangeland management, slaughterhouses, to markets and demand for products-which ties into [all the other PRIME components]. This also creates employment and income-generating opportunities for other community members and more opportunities to improve the nutritional status of families-because here, nutritious food often means milk. If we increase demand for milk, we're also incentivizing greater livestock productivity and natural resource management, as well as creating jobs for other community members in milk collection. It all works in synergy."

Increases in profitability also result in decreased vulnerability, as those added profits allow families and communities to cushion themselves from the impacts of climate change.

Marketing Camel Milk

Pastoralists in Oromia increasingly keep some camels; because camels eat both leaves and grasses, they are more drought resistant than cattle, which eat only grasses. This is a clear climate adaptation strategy for reducing sensitivity to climate change. After observing this-and using their successes with women's cooperatives for milk



collection—the Alternative Livelihoods team began to work with businesses looking at ways to package and market camel milk, and otherwise make this

product more widely consumed. But instead of simply partnering with businesses to collect and process the milk, and trusting it would then get sold, the team also partnered with the Nutrition team to do a barrier analysis aimed at figuring out why some people currently consume camel milk and others do not. The result of this study is expected to better inform the people they work with about ways to effectively market what is currently something of a niche product, and bring it to a larger public. At the time of writing, that barrier analysis is still being carried out.

Intervention design in the context of a marketfocused program like PRIME involves figuring out at what point to enter a value chain to create high impact for a specific component, while also stimulating other parts of the value chain that will translate into opportunities for other components. For this intervention the development outcome is increased income or livelihood opportunities, particularly for women. It becomes a climate adaptation strategy through the adoption and facilitation of an adaptation strategy-the switch from cattle to camels-as a core element of the market system being built. This intervention then translates into climate resilient outcomes throughout the value chain. Stimulating the market for camel milk also: incentivizes climate smart management practices that will allow pastoralists to better manage rangeland in order to produce more milk; creates the possibility of new jobs that diversify earnings and cushion the blow of climate events; brings in extra income that can be saved to help get users through intense dry periods or floods, and increases milk consumption.







Climate change adaptation strategies help achieve climate resilient development goals by cutting across sectors and working with a wide range of stakeholders to address the root causes of issues—rather than just their symptoms—which opens the door for meaningful, long-term transformational change for critical interconnected systems.

Programs like PRIME seek to simultaneously support the resolution of immediate challengessuch as a drought, or the lack of a market for selling milk-while using systems thinking to stimulate and create behavior change that will make communities more resilient in the face of shocks over the long term. This can include improved management of

livestock and natural resources, a culture of saving, or better nutrition at home—and ideally communities have access to a variety of these strategies. This makes development more effective over the long term, and also enables programs to be more easily replicated or scaled up.

"In any activity, we always want to be supporting a sustainable system that can continue to function on its own." Boru Jarso

One way to look at this is to consider how each component interacts with climate resilience:

Livestock Productivity

Goal: Improved productivity and competitiveness of livestock and livestock products.

Activities—such as strengthening networks of private veterinary providers, and promoting dairy and meat production—lead to healthier, more productive herds which provide both increased nutrition and greater adaptability in the face of extreme weather events such as drought or flooding. Increased livestock productivity also means pastoralists can sell some of their meat or milk to save money that will help them get through times of scarcity or climate shock.

Natural Resource Management

Goal: Enhanced adaptation to climate change via natural resource management.

Rangeland mapping, rangeland council capacity building, and social analysis and action groups all help communities make better decisions related to climate and the rangeland environment. Water point rehabilitation and clearing invasive plants improves the overall health of the rangeland environment, in turn improving resilience of herds and pastoralists, by providing more food and more opportunities to access markets.

"Behavior change can't happen by interacting with just one component of PRIME; it's much more likely to have an impact when people are getting all the integrated components—this is why CCA needs to be offered to communities as part of a package." Vimbai Chishanu

Alternative Livelihoods

Goal: Strengthened alternative livelihoods for households transitioning out of pastoralism.

Agricultural inputs, access to finance, renewable energy projects, and support for people augmenting or transitioning out of pastoralism helps introduce new jobs into communities, while also creating opportunities for pastoralists in terms of technical services and market opportunities. Such jobs allow people to be more resilient by allowing them not to be so directly tied to weather dependent livelihoods, while better inputs and access to finance help those who continue to practice pastoralism find efficient strategies for making the best of their herds, crops, and other resources.





Learning and Knowledge

Goal: Enhanced innovation, learning, and knowledge management.

By defining indicators and other measurements; collecting, organizing, and sharing data from all PRIME components, and otherwise managing information and materials for use by stakeholders, donors, the public, and PRIME itself, this component supports climate resilience by spreading information that is vital for making climate-related decisions that range from when to move herds or plant crops, to participating in a PSP. Having access to information is critical for anyone who is using CCA strategies.

Nutrition

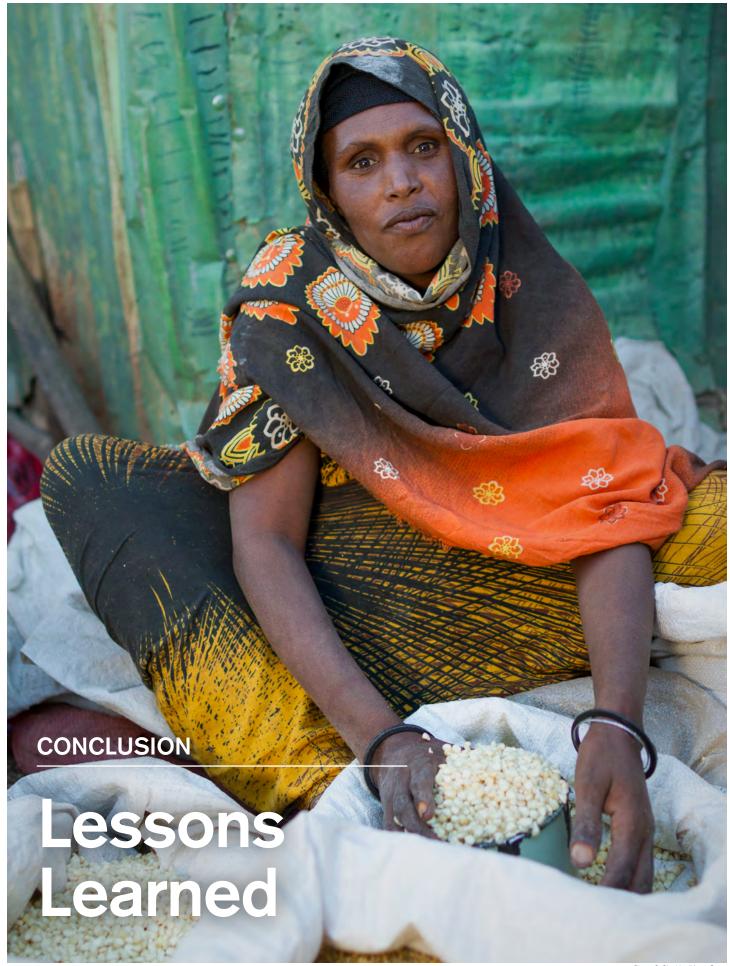
Goal: Improved nutritional status of targeted households.

Messages about livestock health and veterinary services, including fodder and veterinary medicine along with messages about the first 1000 days of a child's life-help infants and young children grow up healthier. By stimulating the demand for household milk consumption and a varied diet, this component also contributes to climate resilience by incentivizing good rangeland management. Additionally, it incentivizes selling some milk, often to buy supplemental foods that can't be grown or to pay for animal health services, which also stimulates those components and allows households to diversify their diet-while also diminishing their vulnerability to climate change via healthier herds and the accumulation of savings.

Climate Resilient Development provides an effective lens for programming because it sees communities as interconnected spaces where stimulating a few strategic areas naturally stimulates many others. Take, for example, the Rangeland councils in Oromia: there are nine primary councils, with an average of six or seven subunits within each one.

"Those subunits then have sub-subunits," said Talew Dheressa. "From the primary councils, there are lots of branches into the community-so you don't have to directly reach every single individual as long as you use these structures, which have been there for centuries."







LESSONS LEARNED

1. CRD calls for longer-term, systemic approach aimed at behavior change.

Integration of climate adaptation strategies means larger scale and longer term programs that bring together various organizations and partners, and work across social, ecological, and economic systems of which communities are a crucial part. This is not only a more effective way of stimulating the kind of dramatic shifts that behavior change implies, but a more efficient way to run climate programming, because it enables communities to continue to enhance their resilience and well-being over the long term.

2. Climate programming benefits from adaptive projects.

Given both the breadth and depth of activities to help users become more climate resilient—as well as the constantly changing nature of climate and climate events-CRD projects require an adaptive approach that highlights agency and decision-making for all users. For PRIME, this includes anyone from managers in Addis, to team members in field offices, to pastoralists. An adaptive approach also requires continuous monitoring to adapt strategies during the course of a project. This means flexibility, communication, and decentralization whenever possible. Staff must be knowledgeable about how climate change interacts with their component, as well as the project as a whole.

3. Climate integrated projects require an especially high level of planning.

With development projects, teams often try to increase geographic coverage via a fast rollout. This is one way of increasing target numbers and arguing in favor of a return on investment. Yet truly integrated Climate Resilient Development projects provide a better return on investment for donors, because not only are they more likely to facilitate deep, systemic change over the long term-they are arguably the only way to support communities becoming resilient to climate change and climate events. Such programming requires a phased and deliberately planned rollout, careful management of which should be viewed as part of the investment.

"We have such a diverse team of people from different backgroundseconomic, social, climate change, livestock—and at different stages in their careers. I think this is so important, because it gives us the expertise and energy required to push such a complex project forward."

-Talew Dheressa

4. Information about climate must be translated, time appropriate, accessible, and tailored to end users.

Successful integration of climate strategies means decision makers across scales must be able access and interpret relevant climate information in a way that is straightforward and easy. This includes government and market actors, community members, as well as project teams. Participants in various settings and workshops reported that there was growing interest in having access to climate data, as more and more of their fellow community members became aware of its existence, and how to use it. At the same time, many participants said that other community members were still unsure about how to go about accessing and using that information.

5. Women are often early adopters of CCA strategies and thus key stakeholders.

Women witness firsthand the effects climate change has on their families; they are also least attached to the idea of maintaining the status quo. PRIME has observed that women should be cultivated as early adopters. Not only did women prove more open to trying new strategies¹⁷ but once community members observed tangible benefits reaped by using CCA strategies, other users followed suit¹⁸-regardless of whether it was a woman or man that was the trailblazer. As such, PRIME's Natural Resource Management component has worked closely with rangeland councils to encourage them to include women in decision making, while other components-including Livestock Productivity, Alternative Livelihoods, Nutrition-also recognizes women as key drivers for adopting CCA strategies.

17 Hajite Gobana, interview by Annie Murphy, August 20, 2015, transcript

18 Sara Orana, interview by Annie Murphy, August 18, 2015, transcript





6. A culture of appropriate saving supports climate resilience.

Saving resources, in the very broadest sense-food, fodder, land, water, money, knowledge, organizationalcapacity, social capital, or any other tangible or intangible asset—is the most surefire way to enhance the ability to absorb climate shocks. Resilience in the face of climate impact is in part dependent on adaptive capacity, which expands via a culture of saving. Development organizations working on climate also benefit from a saving mentality, in terms of helping them frame and rationalize time investments that will ultimately lead to behavior change, and for internal operations: streamlining processes; making best use of climate information, expertise, and resources by enthusiastically integrating programs, and also striving not to duplicate efforts—be it two people writing a similar report, or components working on similar activities.

7. Organizations need a cohesive, in-depth understanding of what CRD means.

With regard to PRIME, a key challenge is that one component (Natural Resource Management) was branded and linked more to CCA from the program outset. Though most staff understand how all PRIME components integrate with climate change adaptation, the way they articulate it varies. For those not directly involved or not as familiar with CRD-other staff, donors, the general public, etc.-this can unintentionally obscure a) linkages between components, and b) how each component itself is infused with a climate change lens, consisting of multiple strategies that help households and communities adapt to the impacts and effects of a changing climate.

Programs should be designed to incorporate climate resilience across outcomes.

While PRIME staff worked to integrate climate resilience across outcomes, CCA activities were still frequently put into a silo. One key cause of this was confusion over whether CCA pertained to one component, or was a cross-cutting issue. While the program design mandated that all components consider and work toward CCA, that one component-Natural Resource Management-was considered the" CCA component. This was contradictory and became an additional challenge to integration.

CONCLUSIONS

As one of the first large, multi-sectoral development programs to integrate climate resilience across outcomes, PRIME illustrates many challenges and successes particular to Climate Resilient Development.

For multi-sectoral programs, strategies must cut across activities and geographic areas while also bringing together different organizations and actors via climate resilient development strategies. This is a complex aim, and can become more complicated if programs or practices create parallel funding streams or artificial divisions between components. In addition to directly addressing such issues, successful CRD makes information in general a top priority: from hiring staff trained to understand and incorporate climate issues, to designing programs that bring clear and easy-to-understand climate data to communities, to creating internal exchanges for communication between components and geographic areas.

PRIME also shows why programs must work to change social or cultural norms related to CCA activities, building capacity, and increasing access to markets, rather than simply transferring resources. This approach is more likely to stimulate long-term behavior change, yet it also requires a greater investment in terms of time and organization.

While still a work in progress, PRIME already demonstrates the particular effectiveness of Climate Resilient Development when intervention design is able to identify strategic points at which to enter a value chain, and adaptation strategies overlap with core elements of the market system.





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