



Photo by CRS Ethiopia staff

Building resilient communities

SYNOPSIS

The target population of Resilience through Enhanced Adaptation, Action-learning, and Partnership (REAAP) is vulnerable to shocks, including price-related and weather-related shocks (e.g., drought and floods). Successful resilience programming not only enables communities to better respond to shocks, but also actively invests in ways to avoid and adapt to shocks and

stresses. Because the impacts of climate change will likely exacerbate vulnerabilities in East and West Hararghe in the future, REAAP communities have developed improved mechanisms to prevent, respond to, and mitigate shocks at multiple levels. These mechanisms include community-led early warning, meteorology information collection, indigenous knowledge sharing, contingency budgets, and community collective investments.¹

¹ REAAP is funded through the USAID Office of U.S. Foreign Disaster Assistance, Global Climate Change, and Feed the Future initiatives. REAAP is a three-year, USAID-funded project specifically designed to address resilience. This project aims to sustainably increase resilience and reduce long-term vulnerability to current and future climate change, and climate-related shocks and stresses in vulnerable communities of East and West Hararghe zones of Meta, Fedis, Midhega Tolla, Mieso, Tulo, and Oda Bultum *woredas* in Oromia region. Catholic Relief Services (CRS)/Ethiopia, Ethiopian Catholic Church - Social and Development Coordinating Office of Harare (ECC-SDCOH), Handicap International, and Cordaid consortium members are REAAP implementing partners. REAAP is helping nearly half a million people adapt new practices and technologies that mitigate drought, erratic rainfall, and land degradation, and to better withstand climate change.



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OVERVIEW OF AND USE OF EARLY WARNING (EW) INFORMATION

- **30,000 people** are using early warning information for long-term forecasting and better agriculture activity planning within the REAAP coverage area.
- **100 Disaster Risk Reduction (DRR)** facilitators provide weekly rainfall data via mobile short message service (SMS) devices.
- **Analysis and forecasts** of bi-weekly/ monthly rainfall data have been provided to 100 DRR facilitators.
- **100 sub-districts** and communities have gained access to short-and long-term sub-national level economic and weather forecasting systems.
- **17 rain gauges** have been provided to each one of the 100 *kebeles*, to support innovations in technology and collective natural resource management, as well as data usage for analysis.
- **100 DRR committees** have been created as legitimate community leadership and decision-making platforms.
- **DRR committees use rainfall data** for community-led discussions integrated with their action plans, while community members apply knowledge at the farm level.

Interpreting trends and specific context. Building resilience reduces individuals' vulnerability to shocks and persistent food insecurity problems, and helps them respond to and plan for change. REAAP fosters resilience by building households' and institutions' capacity to withstand the likely events associated with changing weather patterns, and to manage a range of livelihood activities that improve food security. Using the Community-Managed Disaster Risk Reduction (CM-DRR) model² developed by Catholic Relief Services (CRS)—an approach that assesses threats, identifies risks, and prioritizes actions through a Participatory Disaster Risk Assessment (PDRA)—REAAP has helped communities determine who is most vulnerable to food insecurity by evaluating:

- Sensitivity to food security shocks
- Adaptive capacity
- Overall vulnerability to food security shocks
- Humanitarian crisis levels
- Food availability at the household-level
- Nutritional status
- Exposure to food security shocks

The REAAP approach is an inclusive community process that involved women, people with disabilities, youth, and other vulnerable households in resilience-focused discussions regarding needs and actions. Through a mapping process, communities identified threats that included drought, land shortages, population pressures, deforestation, soil erosion, pests, and diseases. Thus far, using the CM-DRR model and PDRA tool, REAAP has helped communities in 100 *kebeles*³ to recognize important needs and build pathways to resilience against future shocks.

As a result of the participatory process, communities better understand the threats they face and how they can mitigate shocks by identifying: (1) their own resources and adaptive capacities, and (2) the horizontal and vertical partnerships that can supplement their early warning (EW) and shock mitigation needs. REAAP also helps communities identify existing strengths and opportunities, such as indigenous knowledge sharing and informal

2 The REAAP Program has used the CRS CM-DRR tool to guide activities in the project, which examines not only household-level vulnerability but also community-level vulnerability: www.crsprogramquality.org.
3 A *kebele* is the lowest administration unit in Ethiopia.

REAAP EARLY WARNING (EW)

The USAID-funded REAAP co-plans with targeted communities to follow these principles:

1. Ensure regular communication of collected EW information both “upward” (e.g., to donors and departmental decision makers in the Ethiopian government) and “downward” (e.g., back to the communities and members from which the data were collected).
2. Enhance capacity of local entities (e.g., beneficiaries and institutions) to actively participate in the EW program by:
 - a. Strengthening their ability to establish an evidence base of information that fills an identified knowledge gap and can be used for self-advocacy in future, localized food security issues
 - b. Increasing the likelihood that entities use EW information to inform proactive planning, initiatives, and community-led actions, in part by encouraging demand for this information.

social networks, which can be supported and strengthened in resilience programming. After initial mapping, the CM-DRR was given more organizational and leadership structure by the formation of a Disaster Risk Reduction (DRR) committee in each REAAP community.⁴

Agriculture programming and early warning systems (EWS). Because of the severe drought that occurred alongside the 2015–2016 El Niño in the East and West Hararghe zones, the number of individuals in need of food assistance in Ethiopia spiked dramatically. Rural food security in Ethiopia depends largely on rain-fed agriculture, and climate change is expected to lead to more erratic rainfall and frequent extreme weather events that adversely impact food security. Large-scale EWS, such as the Famine Early Warning System Network (FEWSNET), are not designed to track and report on conditions at the community level, leaving communities to manage their own EWS in coordination with the Government of Ethiopia’s national systems.

Agriculture-related livelihoods are important to households in the East and West Hararghe zones. Agriculture-related data and interventions help REAAP communities understand the reasons for establishing and then linking their local EWS to national EWS for early response, especially against slow-onset shocks such as drought.

REAAP helped CM-DRR committees look at the implications of resilience, early warning, disaster risk reduction, and climate-change adaptation interventions in the East and West Hararghe zones. REAAP and the communities observed that the lack of accessible and useful climate information hampers the ability of local communities and government representatives to adapt to the negative effects of climate change. Furthermore, within the East and West Hararghe zones, substantial bottlenecks exist in the flow of forecasts and climate analysis produced at the national level, and from the central (*woreda*) to local (community) level. REAAP found that, at the local level, procedures, information-processing systems, and technical capacity were not sufficient to request, receive, interpret, or analyze climate information for decision-making purposes. Therefore, REAAP set about strengthening communities’ capacity to:

- Monitor food security conditions.
- Share monitoring data with sub-national and national food-security monitoring entities.
- Advocate for food and cash assistance for perceived food security concerns as identified or needed, using evidence collected through this local-level monitoring system.

Early warning data collection is now operational. However, REAAP first gave more organizational and functional structure to weekly data collection and dissemination of EW information by designating a DRR facilitator in each REAAP community.⁵ REAAP provided each one of the 100 *kebeles* with 17 rain gauges to support data collection and analysis. Mobile short message service (SMS) devices were used to relay data-capturing information on rainfall, crops, pasture conditions, livestock health, and market prices for major crops. The rainfall record graph on page 5

⁴ Thus far, 100 DRR committees have been formed and conduct themselves under a set of rules that mandate women make up at least 50 percent of the committee’s members.

⁵ Thus far, 100 DRR facilitators have been identified and trained to relay analyses and forecasts, and to disseminate them both upward and back to communities.



Photo by CRS Ethiopia staff

depicts maximum rain fall recorded across REAAP *woredas* during the period of April to May 2016.

REAAP communities also use traditional indigenous knowledge from community members—in some cases, elderly citizens—who could accurately interpret natural signs of weather change (e.g., wind direction at certain points in the season) to ground truth data analysis. Through DRR committee meetings and community-wide discussions, meteorological data and indigenous knowledge help inform community members about appropriate household-level actions (e.g., the timing of planting and harvesting) and next steps in response to short- and long-term monitoring trends.

Practices and strategies communities use to adapt to or mitigate the impact of climate change and shocks. In Ethiopia, shocks and stresses are a perennial feature of the climate.⁶ With climate change, the normal weather shocks that affect people's livelihoods will become more severe and frequent, with shorter warning times than in the past.

To prepare communities for more acute shocks, REAAP provides them with technical assistance so they can consider what changes they will face locally. In addition to training on the CM-DRR approach and PDRA tool, and the establishment of a local-level EWS, REAAP provides community-based DRR committees with contingency budgets and mandates them to identify collective investments to increase the capacity of the community to withstand identified shocks. For example, one highland community identified the need to fund a collective infrastructure intervention to pipe spring water to their community, ensuring a reliable, accessible supply of water in times of drought or erratic rainfall.

REAAP communities commonly identified soil and water-management related projects as CM-DRR action-plan investments.

Communities empowered to influence resilience agendas and priorities. DRR approaches that build resilience must be participatory and community-driven while also engaging local and sub-national

⁶ Climate-change assessments predict that Ethiopia will become warmer, with average projected increases of over 3 degrees centigrade by the 2090s. Scientists believe this warming will be associated with heat waves and higher water losses from soil, water sources, and plants. In some areas, this means a real risk of more droughts that constrain crop growth. Therefore, REAAP investments need to reduce and manage risk, build adaptive capacity, and deploy a flexible, proactive response to the drought/shock cycle management.

levels of government. The REAAP Program has increased communities' willingness and ability to engage in *kebele*-level and community-level participatory planning and monitoring processes – particularly through the use of indigenous knowledge and the inclusion of women, youth, people with disabilities, and other vulnerable households.

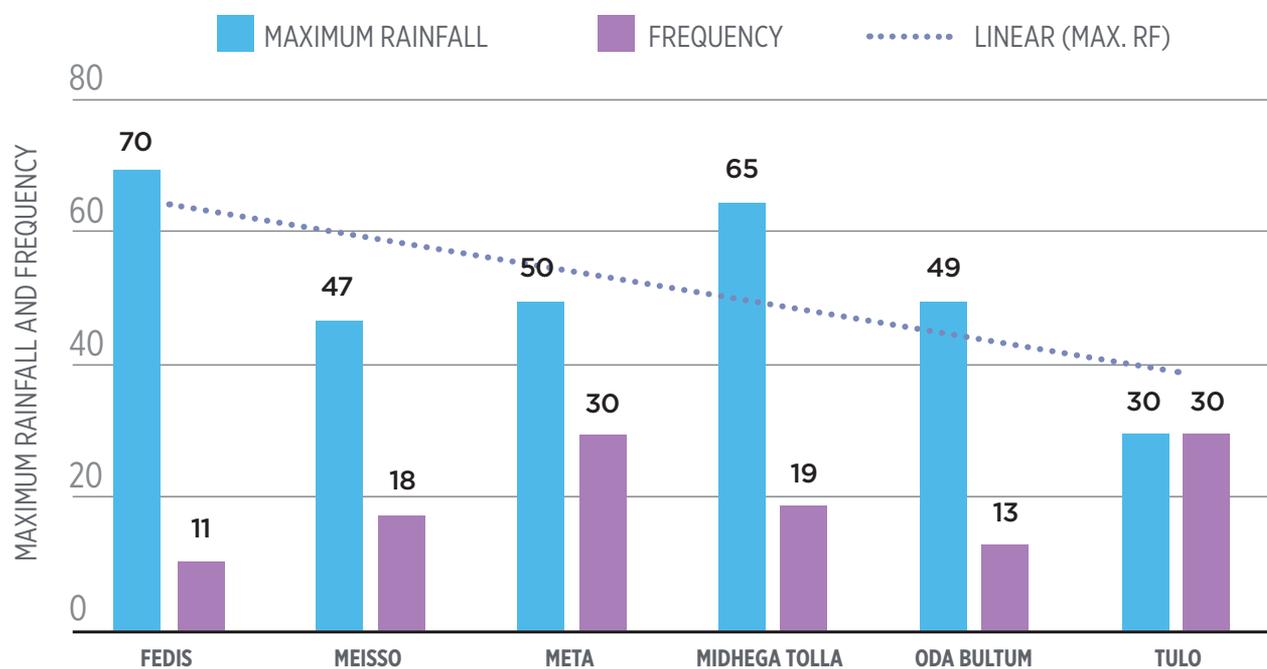
REAAP provided training and tools to men, women, youth, and people with disabilities, which stimulated them to engage in community development. The communities' own internal organizations (DRR committees) are defining the terms under which REAAP communities operate and adapt to changes. REAAP has empowered communities to influence resilience agendas and priorities for the provision of technical assistance, inputs, and other development goods and services that respond to local realities and priorities.

On the basis of current experience and future scenarios, communities can review the range of available options and select activities tailored to local needs and conditions. This approach helps communities build adaptive capacity, gain

confidence, and identify options to withstand shocks and stresses, skills that will ultimately help them improve incomes and food security. Communities use participatory approaches for developing and implementing community and district development plans to ensure that their response meets the needs of the local community. Communities also focus on interventions that:

- Have a wider development impact (e.g., small ruminant fattening)
- Address immediate needs due to drought, but also strengthen market systems.
- Increase incomes (e.g., by enabling the sale of surplus production, which allows for greater asset accumulation, food access, and consumption smoothing).
- Reduce risk by diversifying livelihood opportunities and livelihood risk profiles (e.g., engaging in off-farm and non-farm income-generating activities, such as petty trade).
- Protect assets, smooth consumption, and improve relationships for men, women, youth, and people with disabilities.

Maximum rainfall recorded across *woreda*



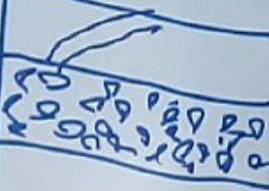
	Mark	Quantity	Rank
Drought		 31 21	1
Deforestation		 11	3
Soil Erosion		 10 9	4
Shortage of land		 16	2
Flood		 6	5
Population pressure		0	
Frost		 16 0	2

Photo by CRS Ethiopia staff

Learning to-date: Land degradation, deforestation, and drought are among the most severe challenges for agriculture in East and West Hararghe zones. REAAP helps establish community-based EWS to strengthen linkages and existing capacities in drought and flood forecasting, and empowers communities with risk identification tools. As a result, REAAP communities better understand the threats they face and how to mitigate shocks by identifying resources and adaptive capacities. REAAP communities also identify partnerships that can help supplement their early warning and shock mitigation needs, and make linkages as needed.

There are ample opportunities for scaling up REAAP, as the methods, data collection, simple tools, and templates are easy to replicate elsewhere. REAAP communities are very willing to mobilize their own resources to continue funding DRR priorities. Through the participatory process, communities learn how to restore the landscape by implementing short- and long-term action plans, and to recognize opportunities for improving incomes and food security at the household level.



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