2. RESILIENCE BUILDING IN ETHIOPIA: ANALYSIS OF KEY INFORMANT INTERVIEWS

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A KEY ELEMENT OF THE CLIMATE RESILIENCE GENDER, CLIMATE Change, and Nutrition Integration Initiative (GCAN) framework is understanding Ethiopia's response options and the decision-making context. To reduce dependency on emergency aid and the vulnerability of communities and ecosystems to climatic shocks, a series of programs and projects were initiated by the Ethiopian government, multilateral agencies, and bilateral donors. These aimed to build resilience and simultaneously boost economic growth, create jobs and livelihoods, and strengthen access to health and education for all communities.

This chapter sheds light on the main contributions, achievements, and limitations of existing resilience programs in Ethiopia to provide insights to strengthen future climate resilience programming in the region. The findings are drawn from interviews with key informants, at both national and regional levels, who are in charge of a specific resilience projects or programs in the country or are familiar with resilience programming in Ethiopia.

METHODOLOGY

Key informant interviews (KIIs) were implemented with government officials, donors, and international and local nongovernmental organizations (NGOs) in the capital city of Addis Ababa and in three main geographic regions of Ethiopia: Tigray, Oromia, and Afar. Interviewees were selected from agencies implementing key resilience programs; in turn, they suggested additional interviewees, resulting in a snowball sampling approach.

As mentioned above, Ethiopia has two distinct geographic areas: highlands and lowlands (Table1), with highlands concentrated in the northwestern parts of the country. Climatic shocks and livelihoods differ markedly in these two areas. Highlanders are affected by land degradation, and the population is mostly agrarian—that is, characterized by their use of crop systems or mixed crop and livestock systems. Lowlanders are mostly affected by rainfall variability, droughts, and high temperatures; given the low rainfall levels in this region, the population consists mostly of pastoralists and agropastoralists.

In total, 47 stakeholders were interviewed between January and March 2018: 18 from government organizations, 6 from donor organizations, 15 from international NGOs, 5 from local NGOs, and 3 from research institutions. To obtain a general overview of resilience programs, 21 stakeholders were interviewed in Addis Ababa. In addition, 9 KIIs were implemented in Oromia Region, 10 in

TABLE 1 SOME DISTINGUISHING FEATURES OF ETHIOPIA'S HIGHLANDS AND LOWLANDS

	Highlands	Lowlands
Regions	Tigray and parts of Oromia	Afar Region, and Guji and Borana Zones of Oromia Region
Primary livelihoods	Agrarian: teff, wheat, other crops	Pastoralism: goats, cattle, camels, or agropastoralism: livestock with some crop production
Primary climatic shocks	Excess rainfall and floods	Rainfall variability, droughts, and high temperatures
Sources of vulnerability	Deforestation and land degradation, small landholding sizes	Lack of infrastructure and basic services, limited market access, conflict, land degradation, insufficient watering points and grazing land in the dry season
Sources of resilience	Some existing infrastructure and services, such as health, education, and financial services	Social capital
Main impacts of climatic shocks	Crop loss	Water shortage, lack of grazing land, undernutrition, human and livestock disease

Source: Authors.

Tigray Region, and 7 in Afar Region. Depending on interviewees' responsibilities, they were asked questions about a specific program or, alternatively, more general questions about different resilience programs implemented by their organization.

The KIIs included questions on what needs the resilience program aims to address, which population is targeted and through what interventions, how programs are monitored, the implementation capacity, and the extent to which programs are adaptable to changing situations. Interviewees were asked to comment on key successes, failures, and entry points for strengthening resilience programming in Ethiopia. The information is treated confidentially and therefore no names or organizations are linked with any specific interview or statement made in this report.

DO NATIONAL AND REGIONAL POLICIES SUPPORT RESILIENCE GOALS?

The three big government programs for resilience building are Ethiopia's Program of Adaptation to Climate Change, the Productive Safety Net Programme (PSNP), and the Agricultural Growth Program. All fall under the government's Climate-Resilient Green Economy (CRGE) Strategy and its Growth and Transformation Plans (GTPs). In addition, substantial programs are targeted at pastoralists in lowland areas. Key among these are the Intergovernmental Authority on Development's Drought Resilience and Sustainable Livelihoods Program (DRSLP), which covers pastoralist areas across the Horn of Africa, and the Pastoral Community Development Project (PCDP).

Most stakeholders interviewed said they think that national policies support resilience goals. "*These policies are good and well written,*" explained one interviewee. However, the greatest challenge is to ensure proper implementation, understanding, and follow-up as well as practical alignment between policies. Some stakeholders interviewed requested the development of a well-planned, stand-alone resilience policy or strategy. "*This policy should be nationally endorsed and include national, regional, and* woreda*-level provisions,*" said one interviewee.

One of the most relevant policies for resilience building in Ethiopia is the CRGE Strategy, which was launched in 2011 and identifies green economy opportunities that can help Ethiopia reach middle-income status by 2025 while keeping greenhouse gas emissions low. However, the policy has been criticized for (1) being confined to the national level, because it has not been decentralized to the regions, for (2) not emphasizing climate resilience, and (3) for lacking specific climate resilience indicators. The government is currently developing such indicators.

The first Growth and Transformation Plan (GTP I), from 2010-2015, aimed to increase productivity and

growth of the country, but did not initially consider climate. GTP II, lasting from 2015/16 to 2019/20 considers climate and disaster management. All sectors will have to evaluate the achievements of GTP II, which will help to determine if vulnerability to climate change has been reduced in the country. An important challenge identified is that one-half of the country is disconnected from the other half in terms of growth. *"A growth strategy for the lowlands, arid [lands], and semi-arid lands is very much needed,"* according to one interviewee.

The disaster risk management (DRM) policy approved in 2013 and the social protection policy from 2014 were also identified as relevant policies. The social protection policy should support the DRM policy and help prevent shocks and disasters. However, *"there is lack of coordination and no synergy between both policies*," explained one interviewee. Another interviewee added that the paradigm shift from a reactive response to a proactive risk management approach like the one promoted by the DRM policy has not yet been realized in Ethiopia.

Several stakeholders pointed at specific policies they would like to see amended or created to improve resilience building:

- The land use policy should be refined and reformulated to consider the reality of resilience programs and the communal land tenure system.
- Implementation of the environmental protection policy needs to be improved because communal land where NGOs work are often encroached upon.
- The livestock management policy needs to be integrated with land rehabilitation work. Due to a lack of coordination, rehabilitated land is sometimes destroyed by poor livestock systems management a few years after being rehabilitated.
- The national policy on water use, irrigation, and water pricing is malfunctioning and should be revised. A water resource master plan is urgently needed.
- A policy to promote payments for ecosystem services could improve resilience: If downstream communities would pay and help upstream communities to work on water harvesting and terracing, the former would be less affected by floods.
- Policy or procedure to support the sustainability of implemented programs: Programs would be more sustainable and resilience improved if a government institution led the work started after an NGO leaves at the end of the project period.
- Resilience-building policies should include the private sector.
- The policy of the Charity Societies Agency, which uses the 70:30 budget criterion for direct and indirect costs, should be amended so more funds can be allocated to training and evaluation activities. Training support interventions and monitoring and evaluation costs are considered indirect costs, with a 30 percent limit, which can limit the capacity of the interventions.

MAIN VULNERABILITIES TARGETED BY RESILIENCE PROGRAMS

In Ethiopia, resilience is usually defined in terms of food security, and thus resilience programming often targets those who are food insecure during or because of climatic shocks. However, both climatic and livelihood-related vulnerabilities differ between highland (agrarian) and lowland (pastoralist) societies.

In the highlands, droughts are the key adverse climatic shocks, because most areas continue to be farmed using precipitation as the only source of water for crops; but floods and land degradation also cause people to experience crop failures. These vulnerabilities are compounded by general poverty and rapid population growth, leading to smaller land sizes and, in many cases, landlessness. According to

one key informant, landless farmers account for 30 percent of the population in Tigray. Nevertheless, if the climatic shock is short, highland farmers can start cultivating again when the rain comes, a few months or a year after the shock. However, in the lowlands, droughts can lead to much longer recovery periods, particularly if a large number of livestock die or are sold at low prices.

Pastoralists, who need to sell three to five goats per month per family to cover their basic needs, are the most vulnerable group in the areas under study, considering their high livestock dependency. Key challenges in the lowland areas (Afar Region, and Guji and Borana Zones of Oromia Region) are the lack of watering points in general and particularly during droughts, and the dramatic shrinkage or unavailability of grazing areas during droughts. Additionally, scarcity of land, due to encroachment of agricultural areas into traditional dry-season grazing lands, contributes to low resilience capacity. Further challenges include very low educational attainment and limited health and rural infrastructure services, including roads and access to markets, as well as the dearth of microfinance institutions for pastoralists, which makes it challenging to escape low-income, natural resource–dependent livelihoods in the lowlands. Agrarian communities in the highlands have more access to credit during shocks, as well as better-developed rural infrastructure, including health and education services.

In pastoral communities, the livelihood situation of some households can change drastically overnight. *"Climate change can erode the adaptation capacity of not only the poor but also the better off,"* said one interviewee; but the latter may not be able to get help because they are considered resilient. The erosion of indigenous mechanisms to cope with extreme weather events increases pastoralists' vulnerability to climate change. For example, pastoralists used to borrow from each other when a climate shock hit, but during the last five years, recurrent droughts have affected everybody in the community, and many have nothing left to share during adverse times. Nevertheless, interventions in lowland areas need to take into consideration the culture and traditions of pastoralists, where strong social capital and networks play a key role in addressing resilience at the community level.

HOW ARE TARGET AREAS AND HOUSEHOLDS IDENTIFIED?

Each program, donor, and NGO generally uses its own approach to targeting households for inclusion in resilience interventions. Some programs rely on the PSNP, which already uses a screening approach for targeting vulnerable households. Others focus on households facing chronic food shortages, such as poor households with children and female-headed households. Some programs target those who can afford a certain technology, such as improved cookstoves, or beneficiaries with specific features, such as those involved in livestock production. Some consult with the community to identify households for targeting through participatory rural assessment, and use wealth ranking, vulnerability tools, and screening committees to identify poor households.

To identify and select the areas and communities to be targeted by a program, most organizations work together with the existing government bodies at the zone, *woreda* (district), and *kebele* (ward) level. Programs focused on resilience aim to work in the poorest areas and the areas most vulnerable to extreme weather events such as droughts. Other criteria used to select *woredas* and *kebeles* are the level of food insecurity, access to natural resources, land degradation, access to basic services, and access to markets. However, one of the main challenges identified by interviewees is that households in more remote areas, which are generally more vulnerable, remain underserved because most organizations prefer working in easy-to-access areas.

Several tools are used to identify the main vulnerabilities and needs of communities, including index-based vulnerability assessments to identify the zones that are more vulnerable to climate shocks; consultations with community leaders, representatives, and main stakeholders; situational analysis that identifies hazards, vulnerable areas, and existing community

capacities; and the community-managed disaster risk reduction approach, whereby the community assesses and maps out its vulnerabilities to develop an action plan with implementation priorities. Communities and government officials are usually actively involved in the needs assessment process, although this area could be further strengthened, as one interviewee stated, adding that donors sometimes do not consult the community enough.

KEY RESILIENCE PROGRAMS: MODALITIES, INTERVENTIONS, AND ACTIVITIES

Many projects aiming to increase the resilience of the Ethiopian population take a multisectoral approach. Some interventions (usually natural resource interventions) aim to benefit the whole community, whereas others (usually livelihood interventions) target specific households and individuals, frequently giving priority to women and the poorest of the poor.

According to most of the stakeholders interviewed, communities are actively involved in the design and implementation of interventions. However, one interviewee explained that sometimes in pastoralist areas, communities do not know about or do not agree with the activities implemented. Others stated that short-term projects—those that are active for just three to five years—are generally less beneficial and less trusted than longer-term projects, because beneficiaries know that benefits under the former will be short term.

Several program modalities were identified in Ethiopia: multidonor programs, PSNP-related and other food-for-work programs, direct support and emergency aid programs, and renewable energy programs. (See Appendix 1 for a complete table of the main resilience programs implemented in Ethiopia.)

- *Multidonor programs or flagship programs.* Several large programs, such as the PSNP and the Sustainable Land Management Program (SLMP), are implemented by the government and receive funding from various donors. For example, the PSNP, launched in 2005, has so far benefited 7.8 million people through conditional cash and food transfers. Community members willing to participate in labor-intensive public works (such as soil and water conservation activities and rangeland management, as well as the development of community roads, water infrastructure, schools, and healthcare centers) receive the transfers. Unconditional cash and food transfers benefit people who cannot work, such as the disabled and single mothers. In 2009, the program started integrating environment and climate change considerations through the Climate Smart Initiative, making climate resilience a key priority for its interventions.
- *Programs that support the PSNP.* Several programs target the PSNP households to help them graduate from the program by increasing their ability to cope with medium-level shocks over the long run without receiving support. Most projects implement activities in different sectors such as WASH, microfinance, and capacity building for livelihood improvement. Examples include the Overseas Development Institute's BRACED (Building Resilience and Adaptation to Climate Change and Disasters) program and USAID's Graduation with Resilience to Achieve Sustainable Development (GRAD) program.
- *Other food-for-work programs.* These programs (for example, those of World Vision) frequently aim to regenerate natural resources and increase the resilience of the whole community rather than of individual beneficiaries. Households receive food and other supplies in return for their work. For example, each community member participating in the World Food Programme's MERET (Managing Environmental Resources to Enable Transitions) program receives 3 kg of cereals per day upon completing tasks related to watershed management, such as digging pits or planting seedlings. The community contributes about 15 percent of the project cost and donors fund the remaining 85 percent.

- *Direct support programs.* Programs that provide direct support usually target household members who are unable to work, such as elders, pregnant women, lactating mothers, people with disabilities, and people with HIV/AIDS.
- *Emergency aid programs.* Emergency aid programs provide food aid, seeds, and medical help that usually benefit those unable to work. For example, the Oromia Agricultural Bureau fills food gaps whenever crop failures are anticipated. Preassessment for emergency aid is completed once or twice a year, after the harvest season. If the support needed exceeds the regional government capacity, emergency aid is requested from the federal government.
- *Renewable energy programs.* These programs target everybody in a given area who can afford the technology (for example, improved cookstoves and baking ovens, and solar technologies). The programs start with building awareness of the potential benefits of these improved technologies, such as avoided deforestation, improved health, and reduced cooking time. They then create demand by displaying and demonstrating the use of these technologies in markets and bazaars, and through leaflets and mass media (radio), as well as establishing local-level producers and retailers. Beneficiaries are required to cover part of the investment and to have certain assets (such as cattle), and the federal government often covers part of the cost.

The interventions and activities promoted sometimes vary depending on the type of society (pastoralist versus agrarian), geographic area (lowland versus highland), and type of climate and hazards the population is exposed to.

Activities in pastoralist (lowland) societies

Pastoralists reside in semi-arid and arid lowlands, which are frequently affected by rising temperatures and adverse climate shocks, particularly droughts. Assessing the population dynamics and livestock production system, and understanding the culture and traditions of pastoralist societies, are very important to deliver successful interventions.

Several interviewees made reference to this challenge: *"Government and NGOs push the pastoralist society to become agrarian to make them resilient without fully understanding their livelihood system."* A different point of view was expressed by another interviewee: *"If you provide more water and food to the animals in a system which is still traditional, it may not necessarily improve; you need to modernize the system itself."*

Pastoralist areas are usually remote, and access to basic services remains very limited. Improving access to water, health, education, electricity, and roads is the key focus of several resilience programs implemented in pastoralist areas, especially in Afar, with the aim of eventually settling the pastoralist communities in one place. One question is whether improved services can be provided only to pastoralists who settle down in a specific area or whether such services can also be made available to pastoralists who would like to pursue traditional nomadic ways of life.

The main activities implemented by projects working in pastoralist and agropastoralist areas include these:

- Rangeland regeneration activities, fodder cultivation, and fodder banks, whereby pastoral communities cultivate and store grass/hay to be used in times of drought
- Livelihood diversification activities, including capacity building for beekeeping and cooperatives for gum and incense collection, with some programs giving start-up money to the cooperatives
- Livestock market access improvement activities, such as building new market centers that are closer and more accessible to pastoralists, as well as animal health and insurance services, such

as providing access to livestock vaccination and veterinary clinics

- Water resource management, involving construction of micro-dams and catchments, rehabilitation of ponds, and construction of water supply and treatment stations
- Savings and credit cooperatives, often targeted at women organized in self-help groups

Activities in agrarian (highland) societies

Resilience programs that target agrarian societies frequently aim to transform the agricultural system by introducing sustainable agricultural production and climate-smart agricultural practices. Introducing irrigation is also important to reduce the vulnerability of crops to rainfall variability.

Some specific activities implemented by programs working in agricultural areas follow. (See Appendix 2 for a full table of the activities promoted by different resilience programs and organizations.)

- Watershed management through capturing water runoff, increasing water availability (check dams, water harvesting, and moisture harvesting), and terracing
- Land rehabilitation and reforestation, including the enclosure of eroded land for protection from animals and humans, use of terracing, planting of grasses and agroforestry, soil fertility management, and promotion of climate-smart agricultural practices
- Promotion of vegetable production and crop diversity to promote balanced diets and improve the nutritional status of households
- Distribution of seeds, such as fast-maturing varieties and improved seeds (for example, improved teff and sorghum seeds)
- Crop insurance to protect farmers against the loss of their crops due to natural disasters such as drought, floods, frost, and snow

Gender considerations

Women bear the brunt of climate vulnerability. Whenever water sources dry up, women are forced to travel long distances to collect water. Women also have a harder time migrating after a shock because they must take care of their families and lack savings or assets that could aid them in coping with shocks. Government policy states that programs must be gender sensitive and that at least 30 percent of the beneficiaries of any program should be women. It also requires that programs create job opportunities for the young community members.

Programs that promote green technologies—such as improved cookstoves, solar technologies, and biogas digesters—target men and women equally. However, because more women than men are involved in using improved cookstoves, women are prioritized for such technologies. They tend to be more successful with such technologies with dropout rates lower than for men. Women who adopt the technology save time by not having to collect firewood to cook, which has a positive impact on children's school attendance and women's empowerment.

Several organizations and programs, such as the Hundee Oromo Grassroots Development Initiative, GRAD-II, and DRSLP, prioritize support to women, because they believe that empowering women is the best way to build resilience in the community. One stakeholder interviewed explained that implementing a program through women is more productive, especially in pastoralist areas, because women are responsible for every activity in the household.

Many programs report having special measures or activities that target women in particular, such as self-help groups, savings and lending groups, specific income-generating activities (for example, goat and chicken rearing), trainings on business and bookkeeping skills, and DRM. Similarly, many programs have provisions to include a minimum number of women on the different committees created. For example, some projects report that they try to ensure that water management committees,

early warning committees, and disaster risk reduction (DRR) committees comprise at least 40 percent women.

Other stakeholders reported difficulties in involving women. "*The leader of the household is usually a male, which makes it difficult to reach 50 percent women's participation*," explained one interviewee. "*We try to benefit women intentionally, but the culture by itself does not give permission to women to go out in public in pastoralist areas*," explained another interviewee.

Some stakeholders interviewed explained some of the challenges they face listening to women's needs. "*Unless you talk to women alone, they will not tell you their problems*," explained one interviewee; thus some programs conduct discussions with men and women separately. Another great challenge programs face is in having women play decision-making roles.

Catholic Relief Services (CRS) explains that it uses role models to teach communities about gender equity and gender equality. It also encourages and rewards positive models. CRS brings spouses or families together for discussions on gender and gender-based labor division. Based on these discussions, families and communities develop a community- and household-level action plan to increase gender equality.

DISASTER RISK REDUCTION: CLIMATE FORECASTING AND EARLY WARNING SYSTEMS

Climate shocks are increasingly unpredictable, and therefore improving climate prediction systems is becoming increasingly important to enhance resilience. Several programs incorporate a DRR component that aims to improve early warning systems and the preparedness of the population for drought and other shocks.

If communities know in advance when rainfall is forecast to begin or whether to expect a seasonal rainfall shortage, they can prepare for it. For example, agrarian communities can plant drought-tolerant and early-maturing seeds, which need less water and grow faster, or can choose when to plant. They can also get agricultural advisory services that help them choose the right seed and fertilizer for each situation. If above-normal rainfall is anticipated, flood control activities can be prioritized. In pastoralist societies, it is critical to receive information about an expected shock beforehand. For example, if a drought is forecast for the coming months, pastoralists can sell their animals at the market and save the cash before the shock hits them.

Farmers and pastoralists draw on local knowledge that functions as an early warning system. They forecast weather based on wind direction, star positions, animal behavior, and soil moisture. Traditional knowledge can be amalgamated with scientific knowledge to reduce uncertainty and unpredictability through the co-production of climate information systems.

Several programs also work on climate information dissemination to increase climate understanding and prediction capacity at the community level. A consortium of several aid and development organizations works to make climate information available on the ground in Oromia and to disseminate downscaled climate information for local communities. "*This program is very relevant and successful to help communities deal with climate variability and shocks*," explained one interviewee.

The government is planning to install weather stations at the *woreda* level beyond the zone level where they are usually found. Furthermore, early warning systems and information dissemination mechanisms from the *woreda* to the *kebele* level are very weak. Farm Africa is promoting an interesting approach to improve early warning procedures, installing 25 automatic weather stations in its program areas. A weekly resilience radio program is also broadcast at the national and regional levels and targeted to different groups, along with advice on what to do when a shock is predicted.

However, one interviewee stated the belief that "*the existing climate modeling follows a top-down approach that is difficult to explain to local communities*." Effective and reliable early warning and information systems should be timely, relevant

to communities' livelihoods, and communicated in local languages and through channels accessible to all members (including, for example, the illiterate or those with no access to radio or mobile phone).

PROGRAM IMPLEMENTATION AND INSTITUTIONAL CAPACITY

Government bodies such as the Ministry of Agriculture, the National Risk and Disaster Management Commission, and others are implementing many of the programs on resilience building in Ethiopia (such as the PSNP, MERET, PCDP, SLMP2, and the Regional Pastoral Livelihoods Resilience Project, or RPLRP). Some international NGOs (for example, Save the Children) use government structures to implement programs and largely work as facilitators to support and enhance the quality of services provided by the government. In contrast, other international NGOs (for example, CARE and CRS) work in partnership with local NGOs to implement their programs on the ground. A few international NGOs (for example, World Vision) act as direct implementers of programs, and their staff work together with community actors at the grassroots level.

Some stakeholders highlighted that the capacity of government structures at the lower (kebele) level is limited. Many resilience programs expect the government to help them implement their programs, but due to the government's limited capacity, programs sometimes get delayed. "This challenge could be minimized if project owners looked for synergies and planned the implementation of the programs together," explained one interviewee. Linkages between government structures from the kebele to the woreda level and from the woreda to the regional level are also weak.

To enhance the implementing capacity of government bodies, some programs train government workers. GIZ (the German government's development agency) prefers to give trainings at the kebele development agent level because the development agent can meet more easily with beneficiaries. The community and the main local stakeholders are generally actively involved in the design and implementation of resilience programs.

Other challenges to implementation pointed out by some interviewees are lack of human resources, logistical issues, droughts and conflict, limited budget, low planning capacity, and lack of commitment from government bodies. For example, some organizations face challenges in finding staff willing to work in remote and marginal areas at the district level.

Challenges related to program implementation are particularly significant in pastoralist areas, especially in Afar. "The work done in pastoral areas is very slow," stated one interviewee. For example, an interviewee explained that implementation of RPLRP in Afar faced a two-year delay at the start due to financial constraints and lack of commitment from policy makers. Meanwhile, high inflation rates significantly increased the cost of planned interventions. As a result, only half of the micro-dams initially promised could be built, which created a conflict between the communities and the project. Creating a government body committed to monitoring and evaluating the proper management of a project can improve implementation.

Another stakeholder, from a regional government agency, explained that due to lack of a sufficient annual budget, it takes two to three years to complete a project. The informant explained that no contractors with the required capacity are available in the area. Many of the needed materials have to be ordered from Addis Ababa, and delivery can take several months, so many projects get delayed.

Complaint-handling mechanisms are important because they encourage feedback from communities and can lead to improvements in implementation. The main social accountability mechanisms set up by programs include providing the community with the contact details of the implementers or regional village office head so that community members can file a complaint or provide feedback, creating special committees where communities can address their complaints, using community scorecards for beneficiaries to rate their satisfaction with the goods and services provided, and

having civil society peer-review committees assess program implementation.

COORDINATION WITH OTHER PROGRAMS AND INSTITUTIONS, AND CHANGES OVER TIME

Stakeholders reported both good and bad coordination experiences between the different institutions implementing resilience programs. The overall sense is that coordination has improved but could be better.

Some stakeholders said they believe coordination is good, and explained that they share their experience and learning with other institutions and mutually support each other. Several efforts are in place to integrate programs through the creation of consortiums formed by different organizations working in the same area, or in some *woredas* by holding periodic *woreda*-level coordination meetings between the implementers of different programs. Some organizations talk to each other and carefully select project sites during needs assessments to avoid overlap between programs.

A good example of a joint venture between two projects and institutions can be found in the MERET project. The MERET project, implemented by the government, built water-harvesting infrastructure (bench traces and check dams) in Tigray. Afterward, World Vision and the Relief Society of Tigray developed irrigation infrastructure in the area, thus improving the resilience capacity of the community.

In contrast, other stakeholders said they believe that resilience programs are not implemented in an integrated way and that coordination needs to further improve, an issue that seems more significant in pastoralist areas and in Tigray. An example is the reported discrepancies between the Agency of Mines and Energy and the Agricultural Bureau in Tigray, where each entity promotes a different type of fertilizer.

> *"Many resources are wasted when projects work in parallel and don't communicate with each other. We have to learn to share experiences and show the way to others, so that they don't pass on the problems we [experienced]."*
>
> —Key informant from the pastoralist areas

Some stakeholders complained about projects interfering with their programs by giving free handouts, which goes against the "work-for-food" mentality they are trying to establish. This makes community members reluctant to participate in program that require taking a loan and returning the money afterward.

Negative interactions between the PSNP and a program on natural resource management were reported by one stakeholder due to the use of different approaches to pay beneficiaries for their work. Whereas PSNP beneficiaries are paid a daily amount for public works, the other program pays beneficiaries per public work completed. As a result, beneficiaries of the latter complained about not getting paid enough.

Interviewees identified the need to work with a larger range of partners. To avoid redundancy between programs, some stakeholders suggested working closely with the government, while others expressed their desire to cooperate with other NGOs and the private sector. Several institutions reported working in coordination with research institutes, while others expressed their desire to do so.

Multisectoral coordination is required for successful implementation of the CRGE Strategy, and several high-level committees were formed for that purpose. However, *"these committees are not functioning at the level required, and as a result, different sectors are operating independently,"* stated one stakeholder interviewed. The coordination and linkages between government structures and at the different administrative levels are also weak.

Over the last 10 years, noticeable changes in programming have occurred. Important improvements have been observed in terms of planning for and fulfilling communities' needs, as opposed

to previous practices of imposing practitioners' views. The first interventions focused on providing emergency relief through direct support, which created dependency; these were followed by interventions that took a food-for-work approach. The current modality adopted focuses on livelihood development. And some programs have shifted their focus from implementation of "reactive" measures after a disaster hits to a more proactive risk management approach. Several programs are now focusing on targeting lowland areas, while a few years ago most programs operated in the highlands.

Some programs have evolved based on learning acquired from their previous phases. Now in its fourth phase, the PSNP has added new components, such as a credit program and natural resource protection. PSNP IV incorporates a component that promotes climate-smart and nutrition-sensitive agriculture, a stronger youth focus, and institutional capacity building to cope with some of the weaknesses of previous phases. The monitoring and evaluation process has also been strengthened. Some programs have had to rethink their activities due to the occurrence of drought during their implementation. For example, due to lack of rainfall, the initial design of one project revolving around water harvesting had to be rethought, and the activity's budget was reallocated to emergency aid.

MONITORING, EVALUATION, AND LEARNING STRATEGIES

Although some projects are not evaluated at all and no learnings are available, most government agencies, NGOs, and donors monitor and evaluate their programs using their own system and focus. Some hire an external evaluator as well.

Large government programs have created committees at the different administrative levels to oversee implementation of their programs and conduct follow-ups. Some institutions conduct evaluations quarterly and annually. Others conduct baseline, midline, and endline surveys, and a few also conduct an impact evaluation with a counterfactual, or use checklists to monitor and evaluate program results.

Every project develops its own output and outcome indicators to determine if the project has met its goals. Indicators in use include improved access to water, share of communities using climate services, percentage of land rehabilitated, presence of women in leadership positions, community food deficits, dietary diversity, and wasting and stunting rates. Most stakeholders affirmed that their programs collect sex-disaggregated data, but other differentiators, such as age group, are not generally collected.

The lack of unified resilience indicators presents a serious challenge that hinders harmonization of resilience activities and coordination between sectors. A national monitoring and evaluation system for resilience interventions should be developed to better harmonize and centralize data collection and analysis. Such a system might also enable more informed decisions about the needs of different regions.

Some stakeholders said they believe monitoring and evaluation activities are not well planned or thorough enough. For example, some stakeholders recognized that baseline surveys are sometimes not conducted before the start of the project or are of poor quality.

In Afar, the main challenge in monitoring and evaluating the work done is the lack of professionals in *woredas* and the difficulty of accessing many areas. The coordinator of one project implemented in Afar explained that he has not been able to visit some project sites to evaluate the work done because they are too hard to reach.

Among the three big government programs, the PSNP has undergone the largest number of continuous and large evaluations and impact assessments. The PSNP has mixed but overall positive results, showing households that participate in the program are more resilient to adverse climatic events, such as droughts. It is important for the government to ensure that all agencies involved in the PSNP are aware of the need to target the poorest households

and to not overly focus on graduation. The final goal of the PSNP should be a program that meets the basic food and nutrition needs of all household members to keep households or their members from falling into poverty traps or spirals as a result of adverse shocks and events, including El Niño–Southern Oscillation events.

EXPERIENCES OF PAST PROGRAMS

Many programs report having increased the resilience capacity of their beneficiaries. Other programs note that they could not achieve resilience goals because their beneficiaries still depend on emergency aid.

Success stories

During the 2015 drought caused by El Niño, Oromia Region was able to respond to the disaster without external help. The following year, a serious drought affected Bale and Borena Zones in Oromia Region as well, and the federal government did not need to get involved or provide help. The greatest success, according to key informants, is that no one dies or is displaced as a result of a drought.

Another key area of success is increased awareness of natural resource management and the understanding that farmers can actively increase their resilience by adopting a series of climate-resilient approaches and technologies. During the 2015/16 drought, in Enderta *woreda* (Tigray), project beneficiaries at Lemlem village witnessed how the irrigation system helped them produce vegetables and sustain their livelihoods until the government reached them.

Fodder cultivation at the community and household levels has also proved very successful. People in pastoralist areas have learned to save grass and store it to cope with shocks. Other success stories have been reported for watershed management, asset building, increased government commitment, animal health, human health and nutrition, youth employment, fruit production and agriculture, and financial services.

Failures

The stakeholders interviewed reported specific failures or elements their programs were not able to achieve in the different regions under study.

In *Oromia,* few people can afford green technologies such as biogas and solar systems that the Environment, Forest and Climate Change Authority had funds to build. Also, a farmer-managed natural regeneration program promised the community it would develop carbon trading after the forest was fully recovered. However, due to budget cuts, it could not fulfill its promise, disappointing the community. Lack of commitment of staff and the government, and lack of rapport with the community were also mentioned as key failures in Oromia. Furthermore, key informants noted that graduation from the PSNP was sometimes rushed or fabricated, with the result that beneficiaries fall back into poverty traps shortly after graduating.

In *Tigray,* farmers faced challenges with improved cookstoves from the Agency of Energy and Mines. Users complained about the small size of their improved stoves because putting firewood in them was hard. "*This clearly shows how much we failed to build awareness*," explained one interviewee. Further, biogas pits were not always completed even if reported as such, and the quality of construction was sometimes poor.

In *Afar,* some credit and savings cooperatives were not being adequately supported, resulting in weak structures. Also, due to lack of risk management in pastoral areas, early warning was not effectively implemented, and information dissemination was delayed.

MAIN CHALLENGES AND RECOMMENDATIONS

Several recommendations emerge from both the synthesized literature and the KIIs. Some of the main challenges and recommendations provided are summarized below. Box 2 outlines the challenges and recommendations specific to agrarian and pastoralist areas.

Ensure that activities are not affected by drought and climatic shocks. Many stakeholders state that drought itself is the main challenge they need to handle while implementing resilience programs. Interventions should be better linked to addressing the key challenge at hand. Sometimes some activities, such as fodder development or construction of water-harvesting infrastructure, cannot be implemented due to lack of water. Even the livestock provided by some programs have been lost due to the occurrence of drought. Contingency budgets that some programs use in times of severe droughts can help.

Ensure community involvement and ownership. Some stakeholders demand more effort on awareness creation. Understanding communities' needs, listening to their problems, and involving them in the needs assessment, design, implementation, and monitoring of the project is critical to designing successful interventions, ensuring smooth participation and commitment, and promoting sustainable outcomes. One stakeholder highlighted the importance of having the community do the work, rather than outsourcing it, to increase the sense of ownership among community members. Furthermore, the distribution of free handouts (for example, beehives) without any awareness building is seen as harmful for resilience programs because it promotes a dependency culture.

Program modality: Do not focus on singular interventions that might target many but are fit for few. Interventions in one activity area are not sufficient to achieve resilience. Programs need to promote multiple interventions in different areas to achieve resilience outcomes. Similarly, farmers and pastoralists need to engage in diversified income-generating activities to enhance their capacity for resilience to shocks.

Support sustainability of projects after completion. Ensuring the sustainability of projects after completion is a great challenge of NGOs. Developing a policy to encourage government supervision or follow-up and supporting community facilitators after a project phases out were presented as possible solutions. Longer-term programs are seen as more sustainable.

Increase institutional capacity and integration. Lack of institutional leadership, professionalism, commitment, and collaboration from the government was also highlighted by some stakeholders. Furthermore, communication between the federal, *woreda*, and *kebele* levels needs to improve. Capacity-building activities to enhance the technical background of some government workers can help improve their performance. It is also important to align project activities with government activities for synergies. Creating steering committees to enhance the level of coordination between sectors has proven to be effective. Slow budget release from the federal government to the local level was also pointed out as an area in need for improved coordination.

Make early warning systems and climate data more user-friendly. Limited availability of meteorological data was mentioned as a constraint for the design of effective interventions. Improving climate forecasts at the regional level and producing longer-term estimates will help support early warning systems and disaster risk prevention.

Early warning systems are an important contributor to any resilience program. Such programs could be improved by (1) choosing information that is relevant to people's livelihoods and their local geography (for example, the NMA has certain calendar data associated with crop production that are not useful for lowland pastoralists, who use a different calendar), (2) transmitting information at the right time to be actionable, (3) transmitting information in an inclusive manner (for example, in local languages, accessible to illiterate people and to poor people who may not have access to a radio or mobile phone), (4) making sure that people comprehend the information and know whom to contact in case of questions, (5) including strategies to cope with predicted shocks, and (6) considering

BOX 2 CHALLENGES AND RECOMMENDATIONS BY LIVELIHOOD AREA

Agrarian areas

Address scarcity of seeds. Seeds are sometimes very expensive or very hard to get, which has created problems of supply for some projects in Oromia.

Improve market accessibility. Challenges related to market accessibility to support cereal, vegetable, and livestock production were encountered in Oromia.

Facilitate access to irrigation by the poor. Vulnerable farmers may not get access to irrigation systems because of their geographic location. In contrast, irrigation systems frequently are sited next to farmers who are already relatively well-off.

Diversify rural income sources to reduce pressure on natural resources. Agriculture puts important pressure on land, which is almost at the tipping point in some areas. Promoting other forms of livelihood and amendments in the national economic policy can help prevent soil degradation in some areas.

Improve provision of agricultural information. Agricultural advisory services can contribute to increasing productivity by providing climate-adaptive seeds and context-specific advice related to the use of inputs.

Consider the cropping cycle when planning. Programs should consider the cropping cycle when planning activities such as land preparation, planting, and harvesting. For example, activities such as soil conservation should be implemented when farmers are not busy with other activities. Water conservation activities should also be planned before the rainy season starts.

Pastoralist areas

Address conflicts over natural resources. Conflict between different clans for natural resources is reported as an important obstacle to resilience building in some areas, particularly around borders.

Review pastoralist settlement policies. Donors have attempted to change the way of living of pastoralist communities without understanding the dynamism of these societies. The fact that people shift from one place to another as a livelihood strategy poses some challenges to resilience programs, especially with infrastructure construction activities. Thus, it is very important to design programs in collaboration with the beneficiary population and create a sense of belonging in pastoralist areas.

Incorporate pastoralist culture in resilience activities. Pastoralist culture influences the implementation capacity of some programs. Several stakeholders reported difficulties in involving women in interventions, because they are not allowed to go out in public. Furthermore, in times of shock, pastoralists share their resources with their neighbors, which may go against some project goals by dissipating the assets saved by the household. Bringing microcredit associations into pastoralist communities has been difficult because the associations initially did not trust pastoralists. At the same time, pastoralists believe that a person with a debt should not be buried until the debt is paid. This practice may ensure that microcredit associations get paid back.

Urgently improve basic services for pastoralists. Lack of infrastructure (such as roads, health centers, schools, and so on) is one of the biggest challenges that resilience programs face in Afar and other pastoralist areas. Furthermore, the materials required by some interventions can take a long time to reach project sites, which delays program implementation.

Provide livestock marketing and veterinary services and better markets to pastoralists. The price of livestock is not fixed by the owners but by brokers and traders. As a result, middlemen benefit at the expense of poor farmers. Similarly, veterinary services need to improve to prevent the spread of animal diseases.

Improve human resources and capacity. Due to the remoteness of pastoralist areas, it is hard to find capable, skilled personnel to implement programs. Staff turnover is also high. Designing a reward system for people implementing projects in pastoralist areas was suggested as a mechanism to increase their morale and commitment.

Source: Authors.

the co-production of climate information services (whereby, for example, communities tell climate forecasters when the rain has actually started).

Improve monitoring, evaluation, learning, and technological innovation. Resilience is difficult to measure because it is a multidimensional concept observed in the long term and cannot be easily quantified. Harmonization and sharing of lessons learned by different programs is very much needed. Monitoring, evaluation, and learning activities need to be geared more toward resilience building and resilience thinking.

Improve resilience services: Improve microfinance and create a national insurance company. Key services that need improving include microfinance, insurance, and rural infrastructure, including markets. In Ethiopia, the field of insurance providers is very limited. More than 80 percent of the farmers who have insurance in Ethiopia are insured with international insurance companies, which have high premium rates. Creating a national insurance company for farmers would help lower the premiums and encourage more farmers to invest in insurance products. Another way to increase the uptake of climate insurance is through promoting group

FIGURE 5 ENABLING ENVIRONMENT KEY INTERVENTIONS

Key indirect interventions in the enabling environment

Infrastructure

Focus on ***better infrastructure that helps facilitate resilience and can help provide a buffer in times of water stress***

- Improve road networks (market and input access)
- Develop improved storage infrastructure (to reduce post-harvest losses)
- Create infrastructure to store water, such as dams or on-farm tanks and ponds (water access)

Risk and volatility

Focus on ***increasing the stability and reducing the vulnerability of household indicators to different types of risks***

- Link with private insurance against natural hazards
- Improve collection of and access to early warning and weather information
- Improve extension support

Institutions and markets

Focus on ***providing stronger institutions and better policies to help people improve their resilience***

- Continue reform of land rights
- Support the functioning of the Ethiopia Commodity Exchange
- Enable farmer access to plant and livestock disease control methods
- Improve access to finance to increase adoption of technologies
- Strengthen trust in cooperatives and their capacity

Key direct interventions for households and communities

Food production

Focus on ***different techniques and technologies that help increase agricultural productivity***

- Promote a functioning and dynamic private sector for fertilizers, seeds, credit, and market information systems
- Increase farmers' access to improved germplasm and more resistant livestock breeds
- Improve food security under climate change through promoting diversified income

Natural resources

Focus on ***management and policies that conserve and enhance natural resources***

- Strengthen current efforts to reduce deforestation and land degradation
- Move away from biomass fuels and toward cleaner stove technologies
- Enrich understanding of how climate change impacts the interactions among crops, livestock, and other productive uses, such as forests

Source: Authors.

insurance. Investment risks can be mitigated through risk sharing, which has also been shown to increase the demand for insurance products among farmers (Dercon et al. 2014).

Focus on youth unemployment and migration. Many programs have special provisions (skills training and local investment opportunities) to enhance the livelihood opportunities of youth, who often migrate to cities in the absence of alternative livelihoods. In pastoralist areas, working with youth is especially important because, if they lose their animals due to lack of rain, they often lack the skills for other work without proper support.

Protect communal land. Limitations on protecting communal land were reported. Communities who live on communal land are sometimes afraid that restored land would be redistributed among individuals. Some stakeholders requested changes to the existing land use policy to consider the reality of communal land tenure systems.

KEY INTERVENTIONS IN THE ENABLING ENVIRONMENT

Several interventions in the enabling environment appear necessary to achieve increased levels of economic resilience and food security. Some are already the target of programs and projects, and are mentioned to reiterate their importance. Figure 5 (see prior page) summarizes these investments.