

Building adaptive communities through integrated programming:

CARE Ethiopia's experience with Climate Vulnerability and Capacity Analysis (CVCA)



CARE Ethiopia

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Executive Summary

Rainfall variability and increasing temperatures over the recent years have resulted in increased vulnerability in the already fragile Ethiopian environment. Rainfall patterns are fluctuating both in the long-term and short-term significantly threatening Ethiopia's growth and transformation into a middle-income economy.

Climate change is prompting re-evaluation of existing development strategies and new flexible models that allow programmes to respond to the real and changing needs of rural populations are needed. One example is CARE's approach to local stakeholder analysis. CARE applies participatory values, processes and methods, to enable communities to articulate and enhance their own knowledge and understanding, and to plan actions accordingly.

The Climate Vulnerability and Capacity Analysis (CVCA) methodology helps communities and facilitating organisations to understand the implications of climate change for lives and livelihoods. By combining local knowledge with scientific data, the process builds people's understanding about climate risks and sustainable adaptation strategies. It provides a framework for dialogue within communities, as well as between communities and other stakeholders. Recognising that local actors must drive their own development, CVCA prioritises local knowledge on climate risks and adaptation strategies in the data gathering and response planning process. The CVCA methodology in Ethiopia has been used and adapted to increase understanding among stakeholders, gather and analyse information to design climate change adaptation initiatives, and integrate climate change adaptation issues into livelihoods and natural resource management programmes.

This paper was prepared for the "Symposium on Climate Change Adaptation in Africa". It presents CARE Ethiopia's experience of promoting climate change adaptation through building communities' and partners' capacities on using a range of adaptation approaches, more specifically CVCA.

Acronyms

ACCRA	Africa Climate Change Resilience Alliance
CRGE	Climate Resilient Green Economy
CSI	Climate Smart Initiative
CVCA	Climate Vulnerability and Capacity Analysis
CBPWD	Community Based Participatory Watershed Development
DA	Development Agent
EWC	Early Warning Committee
FEG	Food Economy Group
IPCC	Intergovernmental Panel on Climate Change
GoE	Government of the Federal Democratic Republic of Ethiopia
GRAD	Graduation with Resilience to Achieve Sustainable Development
HABP	Household Asset Building Program
Kebele	Village
PRIME	Pastoralist Areas Resilience Improvement through Market Expansion
PSNP	Productive Safety Net Program
REST	Relief Society of Tigray
SAA	Social Analysis and Action
SNNPR	Southern Nations, Nationalities and Peoples Region
UNDP	United Nations Development Program
USAID	United States Agency for International Development
Woreda	District

1. Background

Climate change in Ethiopia: Rainfall variability and increasing temperatures over the recent years have resulted in increased vulnerability in the already fragile Ethiopian environment. Rainfall patterns are fluctuating both in the long-term and short-term. Mean annual temperature increased by 1.3°C between 1960 and 2006, at an average rate of 0.28°C per decade and 0.32°C during July, August and September period (JAS) (McSweeney et al., 2007). Hot days (i.e. temperatures exceeded on 10 percent of days/nights of a specific region and season) have become increasingly frequent, as have hot nights. The number of cold days has decreased significantly throughout the year, except for December, January and February (DJF), and cold nights are much less common in all seasons (McSweeney et al., 2007).

Ethiopia's vulnerability to climate change: Climate change is threatening Ethiopia's development. Changing patterns and intensities of rainfall and increasing temperatures will have consequences for all Ethiopians, but especially for the more than 70 million poor people who depend on rain-fed agriculture (crop and livestock). There are multiple reasons for Ethiopia's vulnerability, including the geographical location and topography. Historically, Ethiopia has been prone to extreme weather. Since the early 1980s, the country has suffered seven major droughts – five of which have led to severe food insecurity – in addition to dozens of local droughts (World Bank, 2010). Ethiopia's economy will remain highly vulnerable to exogenous shocks mainly because it is highly dependent on rain-fed small-scale agriculture, which is subsistence-oriented and characterised by low inputs and outputs. Pastoral areas struggle with rangeland degradation, cyclical drought and historic under-investment. The population growth rate is 2.5 percent per annum, resulting in a doubling of the population in less than 30 years. Ethiopia's population is projected to reach 174 million by 2050.

Re-evaluation of existing strategies: Climate change has prompted a re-evaluation of existing strategies and the development of flexible models that allow programmes to respond to the real and changing needs of rural populations. In order to plan effective adaptation actions, scientific climate change analysis is vital for the broad context. However, the most relevant information and knowledge often already exist at the local level or can it be generated through local stakeholders' own analysis. This entails facilitating analysis of vulnerability and adaptive capacity by community members themselves. In doing local stakeholder analysis CARE applies participatory values, processes and methods, to enable communities to articulate and enhance their own knowledge and understanding, and to plan their actions accordingly. CARE's approach to climate change adaptation is grounded in the knowledge that people must be empowered to transform and secure their rights and livelihoods. It also recognises the critical role that local and national institutions, as well as public policies, play in shaping people's adaptive capacity.

Climate Vulnerability and Capacity Analysis (CVCA): The CVCA helps communities and facilitating organisations to understand the implications of climate change on people's lives and livelihoods. By combining local knowledge with scientific data, the process builds people's understanding about climate risks and adaptation strategies. It provides a framework for dialogue within communities, as well as between communities and other stakeholders. Recognising that local actors must drive their own future, CVCA prioritises local knowledge on climate risks and adaptation strategies in the data gathering and analysis process. The CVCA methodology is applied and adapted in Ethiopia to increase understanding among stakeholders, gather and analyse information to design climate-smart initiatives, as well as to integrate adaptation issues into local planning and decision-making.

What's new and different about the CVCA?

There are a number of characteristics, which make the CVCA process different from other forms of participatory learning and analysis. These include:

- **Focus on climate change:** The CVCA focuses on understanding how climate change will affect the lives and livelihoods of target populations. It examines hazards, vulnerability to climate change and adaptive capacity with a view to building resilience for the future. The types of tools suggested are tried-and-true Participatory Learning for Action (PLA) tools, but with a climate “lens”. The tools are used to draw out issues, which are then examined in the context of climate change through guided discussion.
- **Analysing conditions and hazards:** The CVCA attempts to combine good practices from analyses done for development initiatives, which tend to focus on conditions of poverty and vulnerability, and those done within the context of DRR, which tend to focus on hazards. The framework of the CVCA facilitates analysis of the information gained from both types of assessments from a climate change perspective.
- **Emphasis on multi-stakeholder analysis, collaborative learning and dialogue:** While the primary purpose of the CVCA is to analyse information, the methodology is designed to balance the research agenda with a process of learning and dialogue among local stakeholders. This can yield a greater understanding within communities of the resources available to them to support adaptation, and can promote dialogue among stakeholders on adaptation actions that make sense. ³
- **Focus on communities but also examines enabling environment:** Vulnerability to climate change can vary within countries, communities and even households. Therefore, adaptation requires context-specific activities, with strategies targeted to meet the needs of different vulnerable groups. At the same time, local and national policies and institutions play a critical role in shaping people’s capacity to adapt to climate change. Thus, the CVCA process focuses on the community level but incorporates analysis of issues at regional and national level in an effort to foster an enabling environment for community-based adaptation.

Through the World Bank supported Climate Smart Initiative, CARE Ethiopia has conducted CVCA in 24 woredas (districts), comprising 212 watersheds in six regions of Ethiopia. Through the USAID **Graduation with Resilience to Achieve Sustainable Development (GRAD)** project, CARE has conducted CVCA in 16 woredas in highland areas (Productive Safety Net Program (PSNP)) and in 32 woredas in pastoral areas (Pastoralist Areas Resilience Improvement through Market Expansion (PRIME)). These exercises involved 168 community groups.

2. CARE Ethiopia's selected projects

This report draws on analysis and evaluation undertaken by three projects implemented by CARE Ethiopia

2.1. Climate Smart Initiative (CSI)

The Climate Smart Initiative (CSI) is a multi-donor trust-funded component of two important food security programmes in Ethiopia: the Productive Safety Net Program (PSNP) and the Household Asset Building Program (HABP). This second phase of CSI is designed to ensure that these programmes become climate-smart through the systematic integration of climate change implications in all activities. The programme has piloted climate-smart activities and drawn together lessons learnt to ensure that the next generation of resilience building programmes will enable the Government of Ethiopia to better manage risks related to climate change. CSI is implemented through the existing PSNP and HABP systems and structures.

The CSI CVCA process and achievements

CSI has been implemented on a pilot basis in 212 kebeles (villages) in 24 woredas (districts), across six regions of Ethiopia. There were two rounds of analysis: in November 2013, the process was facilitated with 72 kebeles as an initial pilot and capacity development exercise; it was conducted in the remaining kebeles as part of the PSNP/HABP joint planning process in April 2014. The process was conducted by teams comprising of Development Agents (DAs) and woreda staff, including experts on natural resource management, early warning, crop extension, and livestock production. PSNP and HABP oversaw the process in each region (in some cases, the regional experts also participated in the field work). Discussions were held with focus groups of women and men in each of the targeted kebeles. The focus groups discussion (FGDs) gathered information on community perspectives and experiences using participatory tools. These tools were: community mapping, historical timeline, seasonal calendar and vulnerability matrix. In addition, the process (in the second round) included a discussion on access to information and knowledge on climate change. The climate-smart planning guide provided detailed guidance on facilitation of FGDs and reporting of the results.

Although the CVCA process was found to be highly resource- and labour-intensive, there was a consensus among government decision-makers that it was a highly valuable undertaking. The following benefits were identified during the pilot phase.

Demand-driven and participatory planning

- CSI planning, including the CVCA methodology and building participatory planning capacity among officials at woreda and kebele level, and among communities and individuals themselves, constituted probably the most important achievement of the programme.
- There is anecdotal evidence from the final CSI Regional Workshops that woredas and regions are committed to sustaining at least some of the methodological innovations. Furthermore, the second CVCA process resolved many of the time and cost related issues experienced during the initial phase. The process was revised with a view to integrate Community Based Participatory

Watershed Development (CBPWD) guidelines, including tools to match interventions to CVCA findings and a prioritisation tool, to the planning process.

Climate-smart clusters

The cross-integration of PSNP and HABP activities has been hailed as CSI’s second outstanding achievement, supporting a fundamental shift in thinking towards a ‘livelihoods approach to climate adaptation’ by which income-boosting activities are chosen in a risk-aware manner.

Although PSNP 4 has been designed to integrate livelihood activities alongside public works, there is a risk that parallel processes will apply in practice, rather than the genuinely integrated approach developed by CSI. Sustainability will depend on the political will to embed the approach in future PSNP 4 operations.

Figure 1: CSI Approach in PSNP/HABP

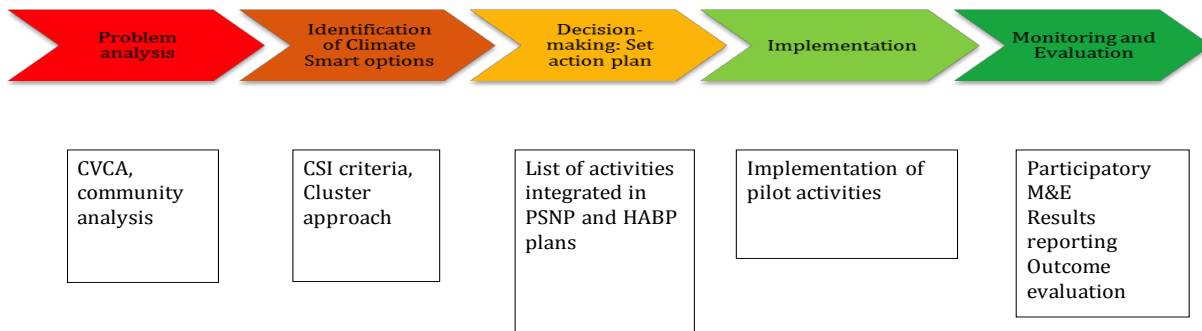


Figure 1 illustrates how CSI has worked to integrate climate-smart thinking into the PSNP and HABP project cycle. The practical meaning of ‘climate-smart’ is, therefore, of critical importance to assessing the achievements of CSI.

CSI CVCA learning

CSI has been able to move towards making PSNP/HABP plans and implementation activities climate-smart, but a degree of ambiguity remains. Improved participatory NRM planning, taking account risks and vulnerability, and the integration of measures to improve livelihoods and increase resilience, meant that the PSNP/HABP plans can be regarded as ‘more climate-smart than before’, but this is by no means absolute.

The approach falls short in two critical ways:

- The centrality of weather forecast and climate information, and contingency planning in the climate-smart approach cannot be overstated.
- More fundamentally, the findings of the Participatory Monitoring and Evaluation (PME) process and the technical assessment of CSI’s climate-smart approach suggest that officials and communities still struggle to articulate the meaning of ‘climate-smart’ as distinct from improved participatory and integrated NRM and livelihood planning. They are able to highlight the key

differences in the CSI PSNP/HABP planning process in terms of active participation of communities, climate change analysis in prioritising activities, and integration of PSNP and HABP through cluster approaches.

2.2. Graduation with Resilience to Achieve Sustainable Development (GRAD)

The Graduation with Resilience to Achieve Sustainable Development (GRAD) project aims to improve food security in rural communities in Ethiopia's highland areas by enhancing livelihood options, improving community and household resilience and strengthening the enabling environment to ensure scale and sustainability of the approach. As part of its overall approach, the project explicitly aims to support adaptation and build resilience to climate change. It is funded by the Feed the Future program of the United States Agency for International Development (USAID). GRAD works in 16 woredas in four regions: Tigray, Amhara, Oromia and SNNPR. It is implemented by a consortium led by CARE and including six partner organisation (Catholic Relief Service (CRS), ORDA, Relief Society of Tigray (REST), Agri-Service, SNV and Tufts University).

GRAD CVCA process and achievements

For the GRAD project, the CVCA process was conducted through FGDs with groups of women and men. These discussions used tools included hazard mapping, historical timelines, seasonal calendars and a vulnerability matrix to gather community knowledge on climate and livelihood linkages. The groups then developed impact chains to analyse the direct and indirect impacts of hazards on livelihoods, and discuss how people are currently responding to different impacts. Building on the impact chains, adaptation pathways were developed to identify most effective ways to manage the impacts. The tools were organised to build on one another and to provide openings to introduce the concept of climate change and to discuss observed and projected trends in temperature, rainfall and hazards. Consequently, the process not only provided critical information for project planning, but also served as an initial awareness raising exercise for the communities involved.

GRAD completed CVCA analyses with communities in 14 woredas across its four operational regions (SNNPR, Amhara, Tigray, Oromia). The process involved three half-day sessions with each focus group, in addition to time allocated for analysis and documentation of the information gathered by the analytical team. A validation session was also conducted to ensure that the interpretation of the information was correct from the community point of view.

Findings from the GRAD IR and Midterm Assessment Report for 2014:

1. 84% of households adopted at least two practices associated with climate change adaptation, up from 75% the previous year, and 96% adopted at least one practice. The three practices most often reported were early maturing crop varieties (69%), moisture conserving practices (62%), and drought tolerant crop types and varieties (51%). The other practices reported were tree planting (48%), community based upland management (30%, also part of government activities), soil fertility enhancements (47%), forage crops ("hay making", 40%), no grazing areas ("area closure", 30%) and irrigation (23%).

2. All respondents interviewed in key informant interviews or in focus group discussions were well aware of climate change issues and adaptation measures, and they verified the levels of adoption found during GRAD MID term and IR assessment:

- Climate change adaptation activities are already part of current natural resource management and agricultural good practices being widely promoted by the GFDRE. Few are actually “new” climate change adaptation activities for participating households. New activities include quality fuel saving stoves, crop insurance, rope and washer pumps, and new crops such as orange-fleshed sweet potatoes.
- The GRAD Project used the CVCA to guide activities. While the focus in GRAD is primarily on the household level, some Village Economic and Saving Associations (VESAs) also reported practicing tree planting and protection of public spaces, such as around churches and around local water sources, part of an area enclosure approach to regenerate natural resources.
- The midterm evaluation observed that forage crops and cut-and-carry practices are not yet widespread in project areas although they are increasing (30-40% in the IR Assessment for 2014).
- In one Relief Society of Tigray (REST) area, some GRAD households were enrolled in a weather index-based crop insurance pilot managed by another organisation. This programme has run for two years without any payouts, so its effectiveness remains untested.
- All households who want and can afford new technologies such as fuel-savings stoves, rope and washer pumps, and short season crop inputs, expressed confidence that they will be able to obtain them by the end of project. However, GRAD staff members are still serving as direct intermediaries between these households and the suppliers of the technologies, especially for the fuel-saving stoves and rope and washer pumps. This has implications on the sustainability and replicability of the input supply systems for these technologies.

GRAD CVCA learning

The following were the key issues learned from the analysis process.

- GRAD communities are acutely aware of climate change. They describe changes in rainfall patterns, leading to increasing uncertainty in the timing and amount of rainfall, as well as more frequent droughts.
- Because crop and livestock production are the primary sources of food and income in the GRAD areas, livelihoods are highly sensitive to climate variability and change.
- Drought is the most significant concern from the point of view of communities, due to its devastating impacts on both crops and livestock. However, increasingly erratic rainfall is also a major cause for concern.

- Some people are proactively responding to the changes by planting early-maturing or drought-resistant seeds, diversifying their income sources and investing in savings. These strategies provide a buffer when crops fail and/or livestock are lost.
- Measures such as water harvesting, small-scale irrigation and soil and water conservation actions are helping to minimise impacts on critical resources such as water and agricultural land.

Other strategies, such as sale of firewood and charcoal and sale of livestock during crises when prices are low, are not sustainable and may actually undermine people's resilience for the future.

These insights have proven to be critically important for GRAD. Building on the analysis, the project is raising awareness of climate change, its implications for livelihoods and ways to adapt in its work with Village Economic and Saving Associations (VESAs). During group discussions, VESA members have shared their experiences and observations of climate change in their community, and discussed how they are responding. In many cases, this has led the VESA members to develop Climate Change Adaptation Action Plans, which outline the actions they will take to manage climate risks and minimise the negative effects on their livelihoods. With support from GRAD, VESAs are monitoring the implementation of identified actions, sharing successes and lessons learned, and adjusting their plans accordingly. This is a key element of building adaptive capacity – strengthening people's ability to plan, monitor results and changes, and identify the actions needed to manage risks and uncertainty in livelihoods.

2.3. Pastoralist Areas Resilience Improvement and Market Expansion (PRIME)

The PRIME project aims to enhance pastoralists' resilience to climate change through increased access to climate information, improving governance systems and piloting climate solutions. More than 250,000 households in the Afar, Oromia and Somali regions of Ethiopia benefit from the project.

PRIME CVCA process and achievements

In May and June 2013, the PRIME cluster teams conducted a total of 168 CVCA focus group discussions (86 female groups & 82 male groups). During this process eight field guides or facilitation tools were developed to support climate change adaptation. Twenty-five action plans were developed, including eight with government partners, nine with male groups and eight with female groups around disaster risk management, natural resource management (NRM), and livelihood adaptation strategies across eight zones in three clusters. Approximately 258,483 km², nearly 26 million hectares, of land was mapped through participatory resource mapping and hazard mapping techniques using a systems-based approach. Twenty-five community maps were produced, including nine with women, nine with men and eight with the government across three clusters.

PRIME CVCA learning

Adopting an ecosystem or landscape based approach to natural resource management: Undertaking the CVCA analysis at the landscape or grazing system level, which incorporate multiple kebeles, enabled the

team to better understand the complex linkages between natural resource quality and availability, climate change impacts and pastoral people's responses to those impacts, including resources and conflict with governance systems.

Making climate information accessible and usable

Facilitating interaction among multiple stakeholders: Bringing together users of climate information (e.g. pastoralists and farmers), producers (e.g. climate scientists and traditional forecasters) and intermediaries (e.g. NGOs and agricultural extension services) enables different climate knowledge and interpretations to be understood, improves synergy and coordination amongst actors, and promotes consensus building and trust between diverse groups. Collective interpretation of climate information by concerned stakeholders enables locally tailored climate information services and the joint production of new and innovative solutions to help manage an uncertain climate.

Recommendations:

- Downscale and localize climate information so that it relates to local contexts and the needs of specific user, which is what people want, but it is rarely available due to the poor coverage of local weather stations and historical information gaps.
- Combine different knowledge sources: Joint interpretation of local and scientific climate information unpacks the complexity of the information, and generates better understanding and trust in both sources of information and in the recommended actions based on the forecasts.
- Build flexibility into decision-making: Approaches involving two-way learning and feedback promote flexibility at all levels of decision-making, planning, resource allocation and action and enable systems that factor in uncertainty, respond to changing needs and identify new solutions, for example, creating advisories (locally relevant livelihood options based on scenarios of possible future climate impacts).

The need to address socio-cultural and behavioural barriers to adaptation

The adjustment of the Social Analysis and Action tool (SAA) is an important step in the evolution of CARE Ethiopia's thinking on climate change adaptation. Issues around decision-making, behaviour and social and cultural norms - and how these influence reactions to shocks, stresses and change over time - are fundamental to adaptation, yet they are often neglected in adaptation initiatives and debates. This type of iterative tool is compatible with the process-oriented nature of adaptation, enabling participants to strengthen their analytical skills and incorporate new information and knowledge throughout the series of dialogues.

3. Implications for programming

This section considers the implications of this learning for programming, with a focus on what needs to be done differently to ensure the integration of climate change into programming.

Climate-related hazards can no longer be treated as an anomaly

Climate-related shocks and stresses are a defining feature of livelihoods in Ethiopia, across ecosystems and livelihood zones. While climate extremes such as droughts and floods are not a new phenomenon, community observations suggest that these shocks are occurring more frequently. The analysis also shows that recurrent shocks have undermined the household asset base and led to growing pressures on natural resources, leaving the poorest households increasingly vulnerable. With this trend expected to continue, programmes that aim to enhance food security must increasingly address climate-related hazards as characteristic of the context, rather than as an anomaly. This inevitably leads to an increased focus on measures that build resilience to shocks, in order to move people away from crisis-driven decision-making and coping strategies that undermine future potential. This has implications for both humanitarian action and longer-term development programming, demanding more effective and sustainable responses to crises and better integration of risk management in livelihoods and food security programming.

Climate change is not a ‘component’ of programming

Most of the CARE Ethiopia programmes that have conducted CVCA analysis have done so because they have a specific climate change ‘component’, and in some cases, a specific budget line for climate change activities. While this makes sense in terms of project management and ensuring that this critical issue is explicitly addressed, a major learning outcome from CARE Ethiopia’s analysis is that climate change cannot be tackled in isolation from livelihoods and food security. In addition to highlighting priorities for targeted action to address climate risks, the climate change analysis must inform interventions by the government and relevant actors in other areas, including humanitarian action, to ensure that efforts to promote sustainable livelihoods and improve food security are resilient and sustainable over the longer term and do not inadvertently increase vulnerability to climate change.

Climate change adaptation is inextricably linked with sustainable natural resource management

It is clear from the CVCA analyses that the most direct manifestation of climate change from the perspective of communities is its impact on the availability and quality of water, pasture and fertile land for crop production. It is also apparent that people’s responses to resource scarcity often result in further environmental degradation. Particularly in pastoral contexts, issues of access to and control over resources cut across communities and administrative borders, requiring a broader view of the linkages between sustainable NRM and climate change. In rural communities, the natural resource base will continue to be the foundation of livelihoods and ecosystem health will be a key determinant of resilience to climate extremes and capacity to adapt to change over time.

Adaptation to climate change requires options, not ‘solutions’

Development actors often endeavour to offer ‘solutions’ for reducing poverty, for example in the form of improved seeds, particular agricultural practices or access to markets. The CVCA analyses have revealed that the biggest climate-related challenge people are facing is increasing uncertainty about rainfall and weather conditions. In the context of increasing uncertainty, there is a need to increase the range of options available to people to secure their livelihoods and manage risks. Programmes must, therefore, move away from promoting particular strategies and focus efforts on opening up the options

available to women and men to enable adaptive management of livelihoods, as well as contingency planning for times when primary strategies fail.

Informed decision-making is key to adaptive capacity

With more options comes the issue of choice. Different livelihood options will make sense at different times, based on the weather conditions, seasonal forecasts, availability of resources to invest and market conditions, among other factors. For people to effectively manage climate-related risks to their livelihoods, they must first have access to the needed information, including early warnings, climate information and market information. Communications systems must be designed to provide this information in ways that are relevant and equitably accessible for poor women, socially excluded groups and community members with mobility issues who may face barriers in access. However, access is only the first step – in order to use the information effectively, they must also have the skills to analyse it, weighing costs, benefits and risks. Building these skills requires development actors to work with communities in new ways, facilitating learning processes that involve analysis, critical thinking and forward-looking decision-making.

Efforts to increase social equity must underpin adaptation efforts

People's social positions, including those related to gender, have a strong influence over their vulnerability to climate change and the adaptation options available to them. Technologies such as drought-resistant seeds or irrigation systems are only useful to those who have land to cultivate and the power to decide how they will use it. Information is a critical resource for adaptation, which may or may not reach all members of the community depending on how it is communicated. Adaptation actions by one group may influence the availability of resources for another, making them more vulnerable to climate-related shocks and stresses. Consequently, equity in access to resources, opportunities and benefits must be an underlying principle in order to effectively build resilience and support adaptation. To support this, analysis of vulnerability and adaptive capacity must facilitate dialogue on the barriers facing particularly vulnerable social groups and identify specific actions to overcome these barriers and ensure equitable approaches to adaptation.

A better understanding of cultural and social barriers to adaptive action is needed

Informed decision-making is a critical element of adaptive capacity, however, it is important to also acknowledge the role that social and cultural norms play in determining who has the power to make decisions, how these decisions are made, and what options are deemed appropriate. The CVCA analyses conducted by CARE Ethiopia have provided some insights into these dynamics, for example the cultural barriers to savings in pastoral communities and the role that prestige plays in decision-making. It also revealed inequalities in decision-making power within and between communities. These insights can help to inform programmes on engaging with stakeholders on decision-making processes related to adaptation, but a better understanding of these dynamics and how they relate to gender, ethnicity and socio-economic positions will enable more inclusive and effective approaches to build adaptive capacity.

4. Integrating the CVCA analysis into programmes

CARE Ethiopia is actively making adjustments to its approaches to address issues emerging from the climate vulnerability and capacity analyses. The following programme profiles provide snapshots of some of the changes in thinking and approaches that have resulted from this process.

Communicating the implications of climate change for income generating activities and value chains

GRAD used a simplified CVCA process to conduct its analysis, which was designed to inform the programme's approaches to building community and household resilience. Using the CVCA results GRAD is working with local stakeholders to address the challenges facing the most vulnerable households, for example through pilot implementation of irrigation systems and introduction of drought-resistant and early maturing crops.

The CVCA analysis has also proven very important in identifying and evaluating livelihood options. There are two main dimensions to GRAD's work on expanding livelihood options: engaging people in value chains and promoting alternative income generating activities (IGAs). Engaging poor women and men in agriculture-based value chains can make a significant contribution to improving household income and purchasing power. However, when production is affected by climate-related shocks and stresses, people may find themselves in a precarious situation, particularly if they have relied on credit to cover the costs of inputs. The CVCA analysis process yielded a better understanding of the potential risks associated with this type of activity, and led the GRAD team to conduct climate screenings on the value chains being promoted in order to deepen this awareness.

The process involved a review of each stage in the value chain, from inputs and production through post-harvest management, aggregation and processing to wholesale and retail marketing. The exercise also made clear the importance of combining work on value chains with other interventions in order to support people in developing livelihoods that are sustainable and resilient in a changing climate. Complementary activities identified by GRAD include facilitating access to seasonal forecasts for value chain participants to promote planning and ensure timely planting and on-going access to water for red beans.

Integrating climate change into Community Based Participatory Watershed Development

CSI adapted the CVCA process, which was designed as an entry point for integrating climate-smart planning within the PSNP/HABP planning process, and conducted in line with the national guideline for Community Based Participatory Watershed Development (CBPWD).

Taking a watershed approach enables analysis of interactions between measures in different communities within a single watershed, ensuring that activities in neighbouring communities are complementary. The PSNP and HABP programmes also incorporate livelihoods interventions such as agro-forestry, forage development and improved farming practices. Implementation of actions occurs through community work parties, establishment of community groups and linkages with external sources of funding, such as the PSNP and other development initiatives. The DAs and woreda government representatives provide training and technical assistance for implementation of activities.

Taking a climate-smart approach to watershed planning requires explicit integration of climate change considerations throughout the analysis and planning process. Pilot implementation of CVCA by CSI revealed a number of gaps in the CBPWD process with respect to climate-related risks, as well as the social dimensions of vulnerability, notably gender inequality. Integration of participatory climate change analysis into the process would begin to address these gaps, helping to ensure that activities are

inclusive, sustainable over the longer term, that they support people in managing climate risks and that they do not inadvertently increase vulnerability to climate change.

Addressing socio-cultural and behavioural barriers to adaptation

By using SAA, PRIME enabled communities to identify connections between social and behavioural factors, vulnerability to climate change and food insecurity. The process explores issues such as herd management, the lack of savings culture and equitable decision-making in pastoral communities, which represent important obstacles to resilience building. Decision-making processes are unpacked to build understanding of attitudinal factors that govern how people respond to climate variability and change, and to highlight social dynamics that may lead to increased vulnerability, for example the pressure to maximise herd size often results reluctance to sell livestock until a crisis occurs. Positive practices, for example rotational dry and wet season grazing and customary management of water points, will be highlighted and promoted, with emphasis on their value for risk management.

The adjustment of the SAA tool is an important step in the evolution of CARE Ethiopia's thinking on climate change adaptation. Issues around decision-making, behaviour and social and cultural norms - and how these influence reactions to shocks, stresses and change over time - are fundamental to adaptation, yet they are often neglected in adaptation initiatives and debates. This type of iterative tool is compatible with the process-oriented nature of adaptation, enabling participants to strengthen their analytical skills and incorporate new information and knowledge throughout the series of dialogues.

5. Integrating climate change adaptation into programming: CARE Ethiopia's theory of change

CARE Ethiopia is placing increasing focus on integrating climate change adaptation into its programmes. This document introduces the organisation's theory of change for climate change adaptation, which provides a complementary framework for its programme strategies. This is a working framework, which will be refined and updated over time with further experience and learning on integrating adaptation into programmes.

As shown in Figure 2, each of the domains of change involves a number of different change pathways. These are described briefly below.



Social norms and cultural practices support climate change adaptation

CARE Ethiopia's analysis has determined that social norms and cultural practices may present barriers to adaptive actions. For example, social norms that limit women's access to information, resources and opportunities and undermine their decision-making power have a negative effect on their adaptive capacity, making them more vulnerable than their male counterparts. Cultural practices, such as the keeping of large herds of livestock to demonstrate social status in pastoral communities, may also exacerbate vulnerability to climate shocks and stresses. Addressing these social and cultural barriers is a precondition for achieving change in the other domains.

Decision-making processes are informed, forward-looking and adaptive

Climate change brings increasing risks and uncertainty for people in managing their livelihoods, income and food security. Consequently, there is no single technology or practice that will be effective under all conditions and through variability and change. As noted above, adaptation is an on-going process, which involves day-to-day, seasonal and longer-term decisions about investments, activities and responses to shocks and stresses. For adaptive decision-making to occur, these decisions must be informed, taking into account the best information available on climate risks, uncertainties and changing conditions, as well as other relevant issues such as market prices.

Women and men have flexible and resilient livelihood options

The impacts of climate change manifest in effects on people's livelihoods, notably through crop losses and reduced productivity or loss of livestock. These effects have consequences for food and income security and may lead to actions that undermine longer-term adaptive capacity. Livelihoods are thus an important entry point for building resilience of poor households. In a changing climate, efforts to improve livelihoods must emphasise flexibility and resilience, opening up the range of options available to people to anticipate and respond to shocks and stresses.

Institutions and services enable adaptation

As noted above, the institutions and services that interact with communities play an integral role in enabling or constraining adaptation. These actors are themselves grappling with the new and evolving realities brought about by climate change, and are also in a process of adaptation. This domain is about supporting this process, to ensure that they have the necessary knowledge and capacities to support community adaptation efforts and that services provided are optimal in terms of enabling management of climate risks.

6. Conclusions

Integrating climate change into development programming adds a considerable layer of complexity to already complicated processes. CARE Ethiopia is in the midst of a longer-term learning process on how to do this and what difference it makes for the resilience and adaptive capacity of people, and for the sustainability of its programmes.

The experiences and lessons summarised in this report are one output of this process, reflecting the organisation's commitment to share its learning, even when many questions and challenges remain. The community profiles demonstrate that climate variability and change are critical issues affecting food and livelihood security in poor communities. They also reveal the underlying causes of vulnerability to climate-related shocks and stresses, notably those related to gender and social inequality, barriers in access to information and services and governance of natural resources and community affairs. The programme case studies illustrate the difference that the analysis has made, providing a strong case for participatory analysis of vulnerability and adaptive capacity as a basis for integrating climate change considerations into programming in an equitable and empowering way.

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