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Resilience Assessment Report

BUDI KADIDI PROJECT | DEMOCRATIC REPUBLIC OF THE CONGO



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Cover: Marie Kapinga and her spouse, Jean Bukasa, tend to their crop in a small field in a village in Miabi, Kasai-Oriental province, Democratic Republic of the Congo.
Photo by Sam Phelps for CRS

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Acronyms

CRS	Catholic Relief Services
DFID	Department of International Development
FY	fiscal year
HNI	Human Network International
ID	identification
IDS	Institute of Development Studies
MCQ	multiple choice question
NRM	natural resources management
RACOJ	Réseau des Associations Congolaises de Jeunes
REFED	Réseaux Femmes et Développement
SMART	Skills for Marketing and Rural Transformation
TANGO	Technical Assistance to NGOs International
TOC	theory of change
USAID	United States Agency for International Development



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Given the complexity of the context in which the Budikadidi project is being implemented, the SenseMaker method was selected to conduct this assessment. SenseMaker is a complexity-aware method that recognizes that personal narratives enable better access to contextualized knowledge. *Photo by Rita Muckenhirn for CRS*



Introduction

The Budikadidi project—meaning “self-sufficiency” in Tshiluba— is funded by the United States Agency for International Development/Food for Peace and implemented by Catholic Relief Services and its partners—National Cooperative Business Association CLUSA, Caritas Mbuji-Mayi, Réseaux Femmes et Développement, Human Network International and Réseau des Associations Congolaises de Jeunes—to achieve sustained nutrition, food security and economic well-being outcomes for more than 263,900 participants in three rural health zones in the Kasai-Oriental province of the Democratic Republic of the Congo. This integrated multisectoral project leverages CRS’ and our partners’ long experience in the Kasai to deliver an evidence-based, locally appropriate package of interventions that builds local capacity, strengthens service delivery systems, increases accountability and reduces structural, cultural and gender-based barriers to change.

One of the key challenges to achieving these sustained outcomes is building the resilience of individuals, households and communities to the range of shocks and stressors that periodically put their lives or livelihoods at risk. Designing an effective strategy to build resilience must take into account the complexity of continually evolving stakeholder needs and interests, the insidious effects of unexpected shocks and long-term stressors, and the unpredictable influences of individual and collective action, adaptive responses and transformational change to deal with these situations.

The way in which change happens is influenced by many factors: social norms and community by-laws, historical precedence, private practices, public policies, and the capabilities of people, households and communities. Thus, change cannot be predicted by cause-effect relationships, but by ongoing and emergent outcomes. Truly understanding such change processes is often only possible in retrospect, as outcomes cannot be predicted accurately. USAID recognizes that strategies and projects require constant refinement and revision, as they rely heavily on adaptive management to steer effectively in complex and dynamic contexts and as they seek to influence social change or innovate to discover solutions (USAID 2018).

To address the above, the Budikadidi project was dedicated to refining and implementing its program design during fiscal year 2017, with the goal of providing CRS and the consortium with the opportunity to better understand and adapt the original proposal to the local context, applying principles of learning and adaptive management to engagement with the communities, learning from these interactions, and using the information to refine its theory of change, or TOC.

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As part of this process, a formative assessment on resilience was conducted during FY 2018, with the following objectives:

- To improve the understanding of the shocks and stressors faced by individuals, households and communities; the actions, responses and strategies that they took to cope, adapt and transform; and the outcomes, for unpacking the concept and practice of resilience.
- To use the findings to promote collaborative learning and adaptation to refine the project design and activity implementation plans, and thus to effectively strengthen the resilience of participating individuals, households and communities.
- To establish a baseline from which to draw a comparison between participant households' and communities' level of resilience at the beginning and the end of the project.

This resilience assessment aimed to ask the following learning questions:

- What are the most important shocks and stressors that individuals, households and communities participating in the project faced, affecting their advancement along a “pathway to prosperity”?
- What actions or combination of actions were individuals, households and communities taking to cope, adapt and transform to respond to these shocks and stressors and with what outcomes?
- What were the capabilities or combination of capabilities that made the difference to their response to different types of shocks and stressors?
- What resilience pathways did individuals, households and communities experience as a result of actions, responses and transformational change taken; how did these pathways influence development outcomes; and how can changes in resilience be meaningfully measured?
- What emergent practices can be scaled to build resilience, and what threats need to be addressed?
- What are the essential components of a project strategy to build resilience and how can these interventions be delivered and layered for maximum impact?

Method

Given the complexity of the context in which the Budikadidi project is being implemented; previous challenges in assessing and understanding resilience; and the experience built by CRS during 2015-2017 when we conducted eight resilience studies across eight countries in East Africa, Southeast Asia and Central America, the SenseMaker method was selected to conduct this assessment.

SenseMaker is a complexity-aware method that recognizes that personal narratives enable better access to contextualized knowledge, and is therefore based on such narratives that respondents share and to which they give additional meaning. The method enables users to gather and analyze large numbers of experiences from people, shifting the power of interpretation to the respondent, and away from the evaluator (Guijt et al. 2018). This reduces evaluator bias in the depiction of resilience.

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SenseMaker is a complexity-aware method that recognizes that personal narratives enable better access to contextualized knowledge.
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Therefore, the method has been specifically developed to better understand reality through the respondents' eyes. Nuanced insights into their experiences can be revealed through visual data pattern analysis, statistical analysis and text analysis. This enables a better understanding of the elements that contribute to resilience, which may move in different directions, making causation relations difficult to assess. This is essential for conducting an in-depth analysis of the contributing factors to certain levels of resilience, and for promoting multi-stakeholder and collective interpretation to foster needed learning for continual strategic reflection and adaptive management of interventions.

For accountability purposes, as prosperity and resilience are relative experiences, it is difficult to determine in absolute terms when an individual, household or community can be considered resilient. The SenseMaker method has enabled an assessment of the pathways that respondents followed in the experience of change shared in their narratives, using a specifically designed follow-up question, where respondents were asked how they felt before the experience, immediately after, some time after, and now; and to place these four moments along a spectrum from "very vulnerable" to "very prosperous." This question enables an assessment of the relative changes in people's vulnerability or prosperity.

Moreover, because the narratives are usually about people's personal experiences, they help reveal what is taking place and what is important to the person sharing the experience. This makes SenseMaker a powerful way to hear directly from project participants, revealing the world through their eyes.

To summarize, the SenseMaker method has key features that are explained briefly below.

1. **Uses a narrative as the entry point.** The starting point is a narrative that the respondent chooses to share about a specific and real experience, moment or event that reveals what is important to them.
2. **Facilitates self-interpretation of experiences.** Once a respondent has shared their experience, they are asked follow-up questions called “signifier questions” that facilitate further reflection and interpretation of the experience. This process provides additional layers of information about the experience shared by the respondent.
3. **Encourages respondents to deliberate over and nuance their responses.** The way respondents are asked to provide their answers encourages nuanced and deliberative responses. The nature of the questions requires respondents to think before answering, encouraging them to take time to reflect before giving their responses, which is less common in conventional surveys. Questions are designed explicitly to reduce the potential for respondents to give socially desirable or “gamed” responses.
4. **Enables the inclusion of many diverse voices.** Unlike other qualitative methods, SenseMaker enables the inclusion of many voices—hundreds and sometimes thousands. A large number of narratives is captured, making it possible to listen to diverse perspectives on the same issue, disaggregate data to compare subgroups, and—when proper sampling strategies are used—use statistical tests and make inferences.
5. **Combines qualitative and quantitative data through visual pattern, text and statistical analysis.** Qualitative and quantitative data are analyzed together to complement each other and gain better insights. The SenseMaker software enables an agile analytical process that moves between the text, visual patterns of multiple responses, and statistical analysis. Strong patterns with large visual clusters of responses can be spotted quickly, as can weak signals, or outliers, with direct access to the underlying narratives to further enhance interpretation and contextualization of the observed patterns.
6. **Values weak signals as important for adaptive management.** SenseMaker-based analysis can easily generate dominant patterns and tease out means and medians in data. But it also values individual experiences and outliers. Weak signals can help to identify aspects of a situation that can provide opportunities for innovation or support to reach positive outcomes (emergent practices). But they can also indicate challenges or problems that need to be addressed or reduced before they escalate. This feature differentiates the SenseMaker method from others and is fundamental to supporting adaptive management.
7. **Reframes indicators of success.** SenseMaker-based analysis, or sensemaking, can provide a complementary way to frame indicators of success in terms of the desirability of certain kinds of narratives and visual patterns. Targets can be identified by making statements such as: “Through the program, we would like to see more stories or responses like this ..., and fewer like that ...”

For more detailed information, see *The learning power of listening: Practical guidance for using SenseMaker* (Guijt et al. 2018).

Analytical Framing

Analytical framing is the bedrock of a quality SenseMaker process. It guides the entire design and sensemaking process. Deciding on the analytical framing is good practice for any evaluation or assessment and is a must for a research process. But it is particularly important in SenseMaker as it is a method oriented more toward unpacking concepts, assumptions and perspectives, than toward asking direct questions. Thus, the selection of the concepts that the assessment is to unpack or better understand (and the relations among these concepts) is a critical step in preparing for a SenseMaker process.

For this study, resilience was defined as “the capabilities of individuals, households, communities and higher-level systems to plan for, cope with, learn to adapt to, and transform their systems and structures in response to shocks and stressors, to follow resilient and prosperous pathways that contribute to integral human development.” This definition was adapted from the one proposed in a global CRS meeting on resilience held in Senegal in 2012, considering important elements from the current relevant literature on resilience.

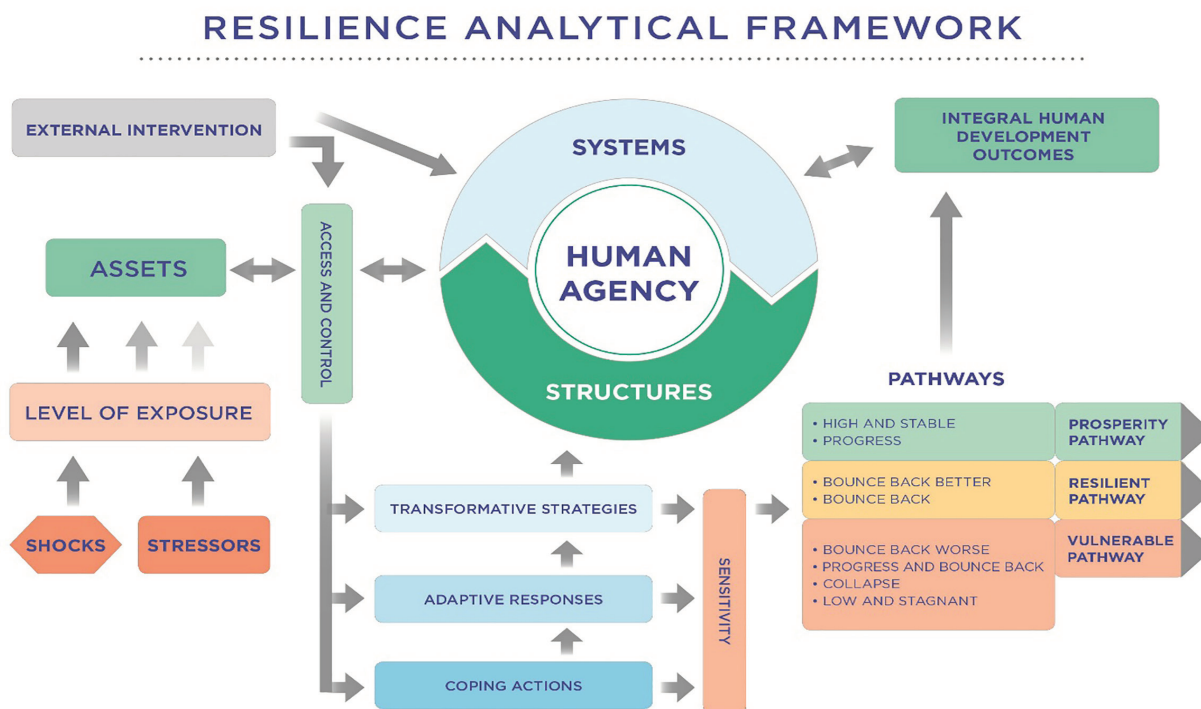
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Resilience: the ability to plan for, cope with, learn to adapt to, and transform systems and structures in response to shocks and stressors, to follow resilient and prosperous pathways that contribute to integral human development.
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The analytical framework that informed the design of this study was developed by CRS to conduct a series of pilot studies to better understand what resilience means to project participants, and how resilience can be built and assessed. The framework is based on the resilience frameworks developed by the Institute of Development Studies at the University of Sussex, Technical Assistance to NGOs (TANGO International), the United Kingdom Department of International Development (DFID) and USAID (see Frankenberger et al. 2012; USAID 2013; Brooks et al. 2014; Béné et al. 2015), and has been adapted based on CRS staff members’ empirical experience in the implementation of resilience strengthening projects, and informed by the analytical framework proposed by Gottret (2007).

The framework, in its schematic form, is presented in Figure 1. Taking an actor-oriented approach (Long 1992a and 1992b), **human agency** is placed at the center, recognizing that people are agents of their own development. As such, it recognizes that project participants are not passive recipients of aid, but are rather agents whose decisions, strategies and actions shape their own development. Thus, the notion of human agency attributes to project participants the capacity to cope with change, uncertainty, stressors and shocks, and to engage in processes to pursue their goals.

It also recognizes **systems**, defined as the legal, market, political and social systems or the religious beliefs and values (institutions) that regulate behaviors and processes; and **structures**, which are the organizations that shape and influence people’s values and behaviors (Heinrich et al. 2008), and mediate relations and interactions, as well as access and control over assets (North 1995; Leach et al. 1999). Therefore, systems and structures affect what people can do and how they do it, imposing limits on human agency or fostering it. Human agents also engage with the **systems and structures** that affect them, to influence changes over time.

Figure 1. Resilience analytical framework



The capacity to respond to shocks and stressors is determined by people’s **access to and control over assets**, be those human/spiritual, social, political, natural, financial or physical. Positive livelihood outcomes reinforce this capability by recovering, building and growing assets, and therefore create a virtuous cycle that contributes to integral human development; while negative livelihood outcomes result in the loss of assets, creating a vicious cycle that hinders integral human development. **Shocks and stressors**—depending on the level of exposure through their magnitude, frequency and duration—result in the direct loss of assets or the use of assets to cope, affecting the asset base from which households develop their livelihoods. Thus, the framework acknowledges a dynamic (virtuous or vicious) process of change.

When people’s lives and livelihoods are disturbed by (a) long-term trends or pressures that undermine their stability—**stressors** such as erratic rainfall, environmental degradation, social conflict or market crisis—or by (b) external short-term deviations from long-term trends that have substantial negative effects on people’s safety or level of assets—**shocks**, such as drought, flooding or natural disasters—human agency results in a combination of coping actions, adaptive responses and transformative strategies.

Coping actions—such as moving to temporary shelter, selling assets, reducing consumption of goods and services, using savings or taking loans—minimize exposure to stressors and shocks or enable immediately recovery. However, as stressors or shocks continue affecting lives and livelihoods, the capacity of people to cope is severely reduced unless they make proactive and informed choices to develop **adaptive responses**. Examples of adaptive responses include the adoption of new and improved seed varieties and cropping practices, the diversification of production systems or income sources, or the strengthening of organizational processes, social networks and safety nets.

Adaptive responses reduce individuals' and households' sensitivity to shocks and stresses; however, only **transformative strategies**—that create an enabling environment through investment in good governance, infrastructure, formal and informal social protection mechanisms, basic service delivery, and public policies and private practices that provide the necessary conditions for systemic change—contribute to longer-term resilience.

Livelihoods can follow three different **pathways**, depending on the access to and control over assets that individuals, households and communities have, and the coping actions, adaptive responses and transformative strategies that they use to respond to stresses and shocks. If—despite facing a shock or stressor—individuals or households can progress from feeling vulnerable to feeling prosperous, they will follow a **prosperous pathway** that leads them into a virtuous cycle of sustainable development. If individuals or households face a shock or stressor that causes a reduction in their well-being, but they can recover, rebounding to their original situation or to a better one, they will follow a **resilient pathway** that will not negatively affect their development. However, if individuals or households face a shock or stressor that causes a reduction in their level of well-being and are not able to recover to their original situation, they will follow a **vulnerable pathway** that will make them fall into a vicious cycle of poverty.

An important element of the framework is that it analyzes **external intervention** and its underlying institutional arrangements through their role in mediating access to assets. Thus, external intervention influences the possibilities to effectively respond to stressors and shocks and pursue sustainable development processes by affecting not only the endowment of assets, but also who is entitled to use these assets. External intervention programming may be designed to enhance access to assets by delivering them directly, or may engage the public and private sectors, or civil society and project participants themselves, to influence changes in their behaviors, cultural norms, policies or practices, with the aim of promoting change in the systems and structures that affect people's access to and control over assets.

Respondents were asked to characterize their livelihoods as following one of three pathways: Prosperous, resilient or vulnerable. *Photo by Sam Phelps for CRS*



Signification Framework

Preparing for a SenseMaker study requires designing a signification framework that consists of (1) the same prompt question asked of all respondents, and (2) a predefined series of questions, or “signifiers,” to enable respondents to give additional layers of meaning to their narrative (Guijt 2016). To respond to the learning questions for this study, a signification framework developed by CRS for previous pilot studies conducted during 2016 and 2017 in eight countries of East Africa, Southeast Asia and Central America was fully revised with the local team and then field tested.

The prompt question used to elicit narratives about participants’ experiences (positive and negative) that significantly influenced their livelihoods and well-being was:

“Think about an important real life experience that significantly influenced (positively or negatively) your or your household’s livelihood or well-being. What would you tell your best friend about what happened, why it happened, what it meant for you, what you did about it, and what it led to?”

The design also included a set of follow-up questions to prompt the respondents to provide additional layers of meaning to the experiences shared in their narratives, in what is referred to as the “self-signification” process. The process enables the “coding” of qualitative information about narratives, but the coding here is done by the respondents, not by external evaluators, researchers or experts, reducing their intermediation. These follow-up questions included the following:

- **Eight multiple choice questions (MCQs) focused on respondent characteristics:** Their location within the three health zones of Miabi, Tshilundu or Kasansa; proximity to all-weather access roads; and socio-demographic characteristics such as the gender of the respondent, the gender of the main household provider, formal education, main source of household income, products sold at the market and functions performed (production, postharvest management, processing and/or marketing).
- **Eight signifier MCQs about the story:** The period in which the experience occurred; shocks and/or stressors faced during the experience shared, if any; respondents’ perception of whether the experience was positive, negative or neutral; and assets that were important in the experience shared (human, social/political, physical, financial and natural).
- **Six “slider” questions to understand the relative strength of two elements of the same concept or different concepts:** These types of signifier questions were used to understand the extent to which access to the assets (human, social, physical and financial) that were important in the experiences shared, was dependent on external support; and to assess individual/household and community sensitivity to the shocks or stressors faced.

- **Six “slider with stones” questions to understand the relative strength of multiple issues (referred to as “stones”) along two elements of the same concept or different concepts:** These types of signifier questions were used to assess the level of exposure to different types of shocks and/or stressors faced in the experience shared; the effectiveness of different coping actions, adaptive responses and transformative strategies used to respond to the shocks and/or stressors faced; the pathways followed by respondents as a result of the experience; and the resulting change in development outcomes (related to the personal, livelihoods, institutional services, and empowerment dimensions of integral human development) and its direction (from very negative to very positive).
- **One “canvas with stones” question to compare multiple issues (referred as “stones”) along two axes related to different elements of the same concept:** This type of signifier question was used to assess the perceptions of participants on the health of the ecosystem (actual condition and management of natural resources such as water, soil, forest and biodiversity).
- **Three “triad” questions to understand the relative importance of three elements of a single concept in the experience shared by the respondent in their narrative:** This type of signifier question was used to assess the relative importance of three elements of human agency; three finance-related coping actions in the experience shared; and perceptions of the relative importance of three types of livelihoods opportunities (agricultural, non-agricultural and migration) for the future well-being of households.

In addition, the signification framework included protocol questions to help track key aspects of collection (time and location, respondent ID or survey ID, facilitator ID), and to ensure all necessary consent protocols for ethical collection. Narratives were collected and follow-up questions facilitated by trained facilitators through direct interviews in each health zone where the project is being implemented. These interviews were carried out in a quiet setting selected by the beneficiaries themselves for security and privacy. Before each collection process began, facilitators explained that the data collection was voluntary, anonymous and that confidentiality would be maintained, and respondents were given the option to opt out at any time during the interview. Once participants had shared their stories, they were again asked for their consent for the stories to be shared and assured that they would be kept anonymous.

Sampling and Respondents' Characterization

To determine the sample size, the study population was defined as all the people who live in the three health zones where the Budikadidi project was being implemented (Miabi, Tshilundu and Kasansa), which, according to the census conducted by the project, included a total of 426,420 people. The sampling frame included the list of the population from the census data for each of the health zones, from which a stratified sample was drawn for each zone. Using the following formula for stratified sampling and assuming a maximum standard deviation of 0.5 for discrete variables, and with a 98 percent confidence level and 5 percent error margin, a sample size of 607 was calculated.

$$N = \frac{n^2 \times 2.33^2 \times 0.5^2}{0.05 \times n}$$

In SenseMaker, the primary driver for sampling design is the need to ensure a sufficient number of stories to allow for a meaningful visual pattern analysis across all levels of priority disaggregation or subgroup of interest. For any disaggregation or voice of interest, a minimum of 80 to 100 stories is recommended for effective pattern analysis. One of the important comparisons this assessment aimed to make was between men and women, to inform needed refinement of project design to ensure that it was implemented through a lens of gender equity. Given this, it was important in this assessment to hear the voices of both men and women, and to have an adequate number from each group to enable comparisons. Therefore, for this study, it was ensured that at least 100 interviews were conducted in each health zone; and that across the whole study at least a total of 100 women and 100 men were interviewed. Table 1 shows the distribution of the population and the sample among the three health zones and by gender.

Table 1. Population and sample size, by health zone and gender

Health zone		Population			Sample		
		Women	Men	Total	Women	Men	Total
Miabi	N	48,671	69,130	117,801	128	103	231
	(%)	(41.3)	(58.7)	(27.6)	(55.4)	(44.6)	(38.1)
Tshilundu	N	50,259	65,474	115,733	134	109	243
	(%)	(43.4)	(56.6)	(27.1)	(55.1)	(44.9)	(40.0)
Kasansa	N	95,665	97,221	192,886	77	56	133
	(%)	(49.6)	(50.4)	(45.2)	(57.9)	(42.1)	(21.9)
Total	N	194,595	231,825	426,420	339	268	607
	(%)	(45.6)	(54.4)	(100)	(55.8)	(44.1)	(100)

In the case of Miabi and Tshilundu, a random sample was taken from the census list, and in the case of Kasansa, where the census list was not available at the time of starting data collection, households were randomly selected in each community. Interviews were conducted in December 2017 in Miabi and Tshilundu, and in February 2018 in Kasansa. Given the above sampling strategy, the sample of the population was made up of 56 percent women and 44 percent men, enabling proper comparisons. When these respondents were asked who generated the most income in their household and was mainly responsible for providing for the family, it was found that 60 percent of respondent households had male providers and 40 percent had female providers.

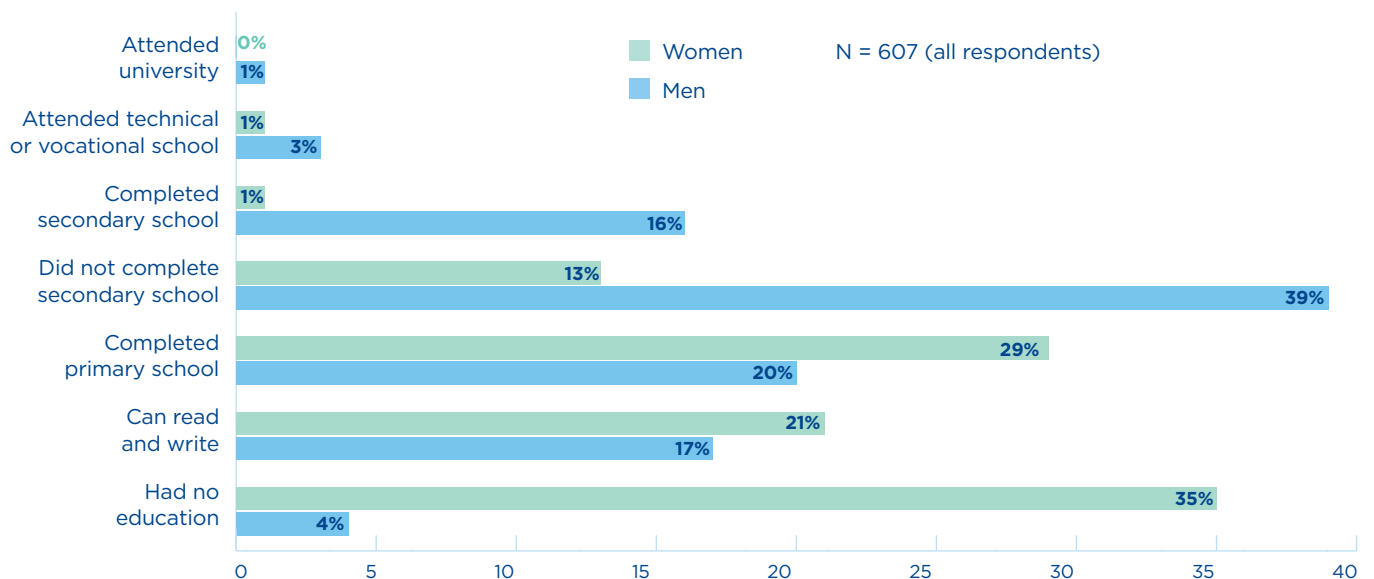
Level of formal education

The findings show that the population in all three health zones had low levels of formal education. One-fifth (21.4 percent) of the population had not attended any school and could not read and write, and an additional one-fifth (19.1 percent) could read and write, but had not finished primary school. Add to this those that had only finished primary school (25.2 percent), and it comes to 65.7 percent of the population. This needs to be taken into consideration when designing capacity building activities. This has implications for the content and delivery methods of training and technical assistance, making the use of adult education methodologies and proper facilitation a must.

.....
The population in all three health zones had low levels of formal education.

If we disaggregate this data by gender (Figure 2), we observe a significant gap between the level of education of women and men. While only 4 percent of the men had no formal education and could not read or write, 35 percent of women had no formal education; and while 39 percent of the men had some secondary education, only 13 percent of the women had. In addition, only 1 percent of the women had finished secondary education and only 1 percent had continued on to technical or vocational school.

Figure 2. Level of formal education, by gender

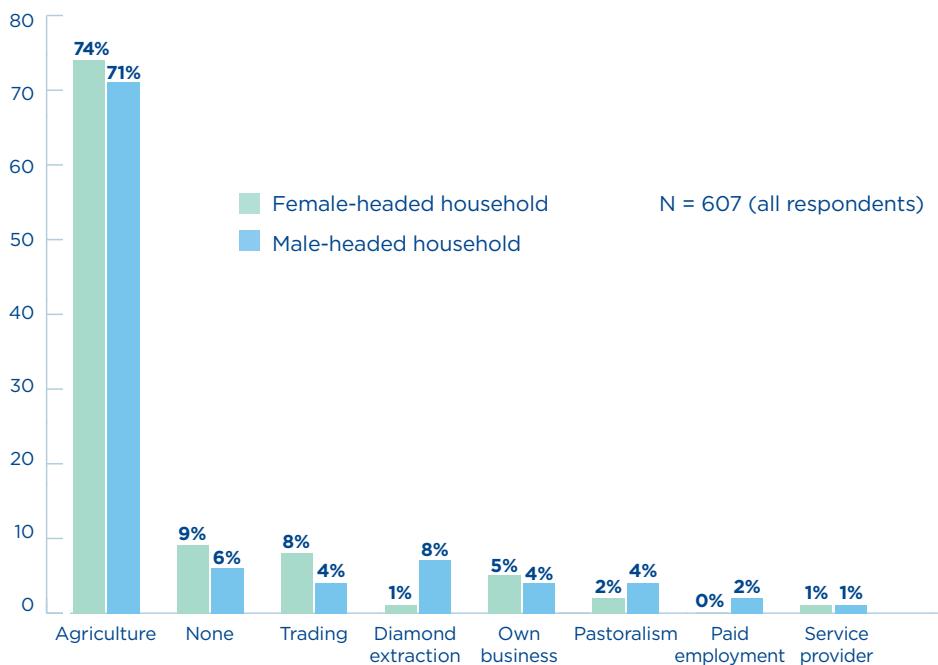


Main income sources

Both female- and male-headed households' main livelihood was agriculture (Figure 3), which together with pastoralism was the main source of income for 75 percent of households. Thus, a programming focus on improving agricultural productivity and access to markets is justified. However, it is important to highlight that 7.3 percent of households reported no main income source, making them extremely vulnerable. Also, some important differences can be observed when this data is disaggregated by gender. Trading was a main source of income for more female-headed households than male-headed ones; while diamond extraction was the main source of income for more male-headed households than female ones. While 2 percent of male-headed households depended on paid employment, no female-headed households depended on paid employment. This finding is consistent with the lower level of formal education of women discussed in the previous section.

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Households' main livelihood was agriculture. For women, the second most important was trade, while for men, it was diamond extraction.

Figure 3. Main sources of income, by gender of household head

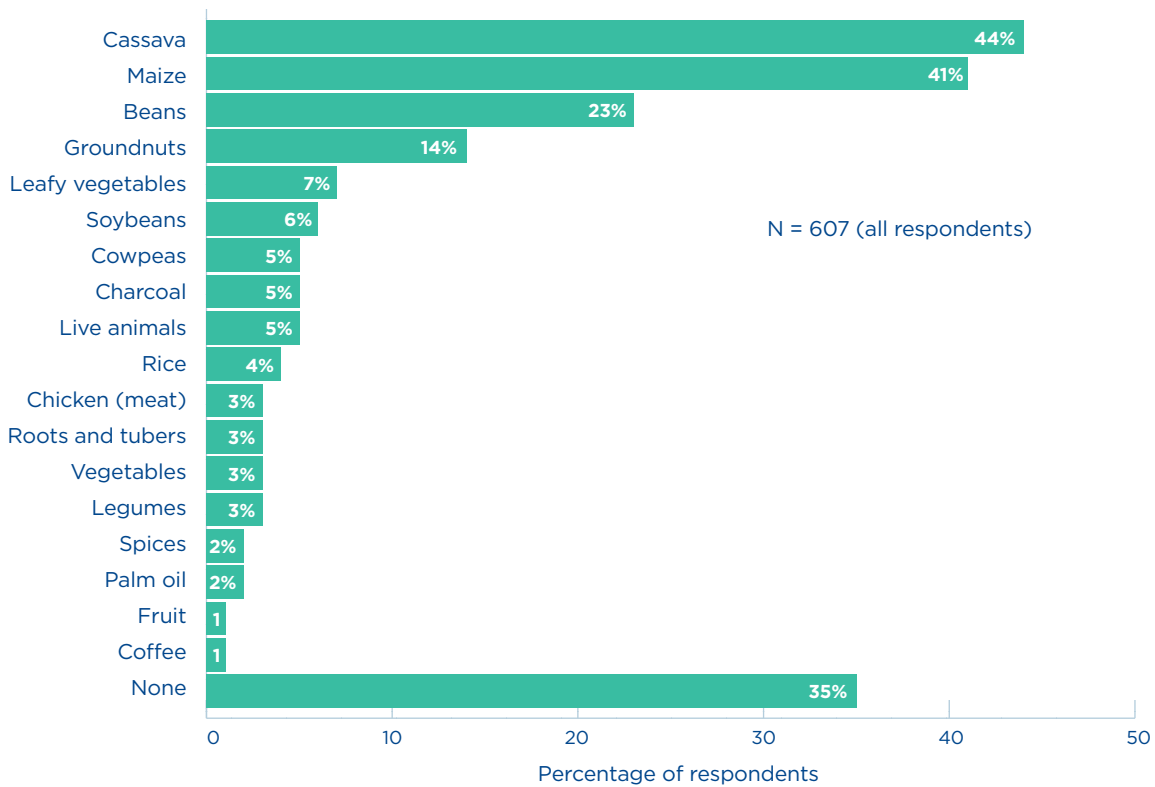


Access to markets

As agriculture was the main source of income for three-quarters of the population, assessing the level of market engagement and the most important cash crops was important. Figure 4 shows that 35 percent of respondents were not engaged in markets, 38 percent of them male-headed households, showing that more female-headed households sold produce in the market. The most important cash crops cited were cassava and maize, followed by beans and groundnuts. When asked if they were involved in marketing activities, only 21.4 percent of respondents said that they were. Engagement in postharvest and processing activities was even lower, at 12.4 and 2.6 percent, respectively.

.....
A low percentage of households were engaged in markets.

Figure 4. Produce sold in the market



Access to all-weather roads

The time it takes to get to the nearest all-weather road is very important, as it either helps or hinders development efforts by influencing access to institutional services—basic services, health services and education opportunities—and also access to inputs, technical services and markets. The study shows that most of the population of Kasansa, Tshilundu and Miabi (97.7, 97.4 and 90.5 percent, respectively) traveled a maximum of 30 minutes to reach an all-weather road; and the others between 30 minutes and 3 hours.

.....
Most of the population traveled a maximum of 30 minutes to reach an all-weather road.

Findings

After each respondent shared a short narrative, they were asked when the experience shared happened and whether they considered that it was positive, neutral or negative. Most respondents (60.6 percent) chose to share an experience that happened 1 to 2 years ago, while fewer chose stories that had happened 3 to 4 years ago or within the last year (16.1 percent and 15.3 percent, respectively). Therefore, most of the narratives were related to relatively recent events.

.....
Most respondents considered that the experience shared was negative.
.....

With respect to the type of experience, most respondents considered that the experience shared was negative (93.4 percent) with no major difference in the percentage of women and men that self-signified their experience as negative. Below is an example of a narrative that the respondent, a female household head and farmer, considered to be negative. She identified disease among her animals as the main stressor, but the narrative shows that she faced multiple stressors and shocks—including soil degradation, illness and the death of her son—and that she became more and more vulnerable. Her narrative follows, including the title she gave her story.

Misery

“My husband died and left me alone with the children. To survive, my family and I raise pigs. My fields hardly produce anything because the soil became infertile, and raising pigs has become my principal source of income. I had a lot of pigs, but this year all my animals got sick and died. As misfortune does not come alone, my 20-year-old son fell seriously ill. The hospital asked for too much money and I was not able to pay for his care. I gave them the little I was able to get from my agriculture, but it was not enough; they asked for more because he needed surgery. My pigs used to help me a lot as I could easily sell them, but they died, and I found myself unable to look after my son and he died. It saddens me day and night. Some of my children had to stop school because of lack of means. The little I can make now from my agriculture is devoted to buying food and paying for the schooling of my other children.”

Only 5.3 percent of respondents self-signified their experience as positive, with only 4.1 percent of women doing so. The following is a positive story from a male household head, who said that the main stressor faced in the experience he shared was illness, which had a negative effect on his agriculture and animal husbandry activities. He also responded that he was able to rebound better because he had a son who was able to support him with financial resources.

Disease and animals

"I suffered a lot of pain in my lower abdomen and went to the hospital. The doctor said I had [condition redacted] requiring surgery. As I was afraid of the intervention, I refused. I went home to see a traditional doctor who gave me an herbal tea. The disease was not cured. I consulted seven traditional doctors, but my health did not improve. Each consultation cost me at least one goat and some maize. Hearing that my health was still deteriorating, my son sent money and a motorcycle to take me to the hospital. The doctor did the surgery. I spent 2 months in the hospital. During convalescence, I had more pain than before my treatment. I again had to spend 3 months in the hospital. I have a large plantation of palm. I also used to raise goats and had fields of maize and cassava. While I was in hospital in [place name redacted], all my goats were stolen, and my grandsons sold all the produce from my fields. By the time I left the hospital, I had nothing left. It was painful for me. My son who lives in [place name redacted] sent me some money and I also sold the palm oil from my plantation and bought two goats and a little pig to revive my farm. Now, I have 20 goats, 34 pigs, several hens, ducks, rabbits and guinea pigs. I do not cultivate myself anymore, but I pay money to those who grow for me. I live better than before because I have a lot of animals and I have no more pain."

Very few respondents (1.3 percent) self-signified their experience as neutral. The following narrative is from a female household head, who said the main shock that she faced was armed conflict, but that she was able to rebound. The armed conflict led to temporary difficulties for her household, but they coped by working off-farm and life returned to normal after a while.

Bad displacement

Last year there were militia conflicts in neighboring villages. As a result, my husband and I were afraid to stay in the village. We sold all the maize and cassava stock we had and left for 3 months, doing nothing and spending all our money. We decided to return to our village and began to cultivate again. While we waited for the maize to grow, we did not eat at night. The children were suffering and dropped out of school. To overcome this shock, my husband started digging diamonds in the mines. When he had a little money, I started to buy maize to resell. After we were able to harvest again, my family started to live well, and my situation returned to normal.

Shocks and stressors

Most respondents (97 percent) faced a shock or stressor in the experiences shared. Figure 5 shows the diverse shocks and stressors that were selected as the major ones by at least 1 percent of respondents. To construct the graph in Figure 6, the diverse shocks and stressors were grouped into six types. The types cited more often were related to **violence** (41.7 percent mentioned armed conflict; social, ethnic and religious conflict; and, to a lesser extent, insecurity or theft; the death of a family member caused by violence; domestic violence and political instability) and to **health** (30.7 percent mentioned illness and accidents that in some cases led to the death of family members). These types of shocks affected more women than men, as can be observed in Figure 6. Economy-related stressors—such as the loss of livelihoods, assets or job—and climate-related shocks and stressors (unpredictable rains, drought and flooding) followed in importance. While economy-related stressors affected men and women equally, climate-related shocks and stressors affected men more than women.

Figure 5. Main shocks and stressors faced in the experiences shared

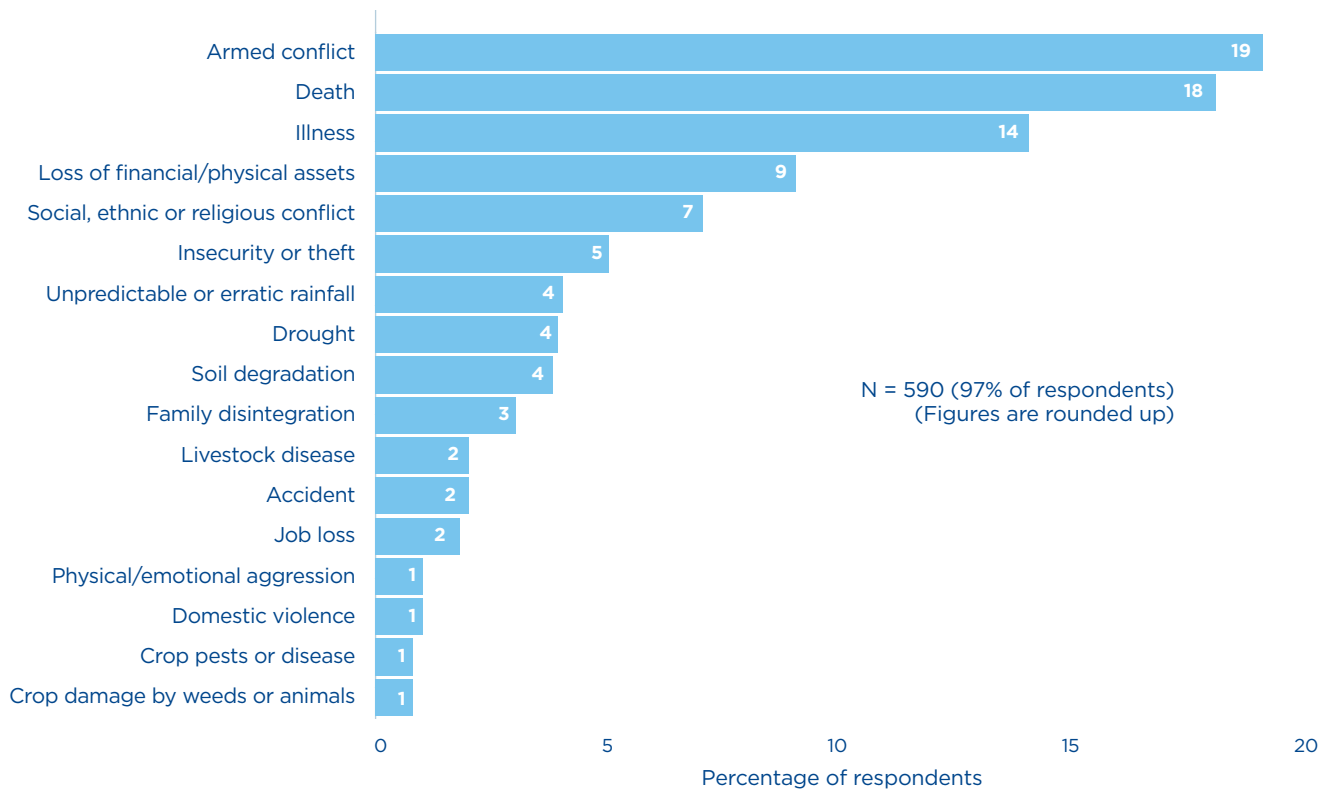
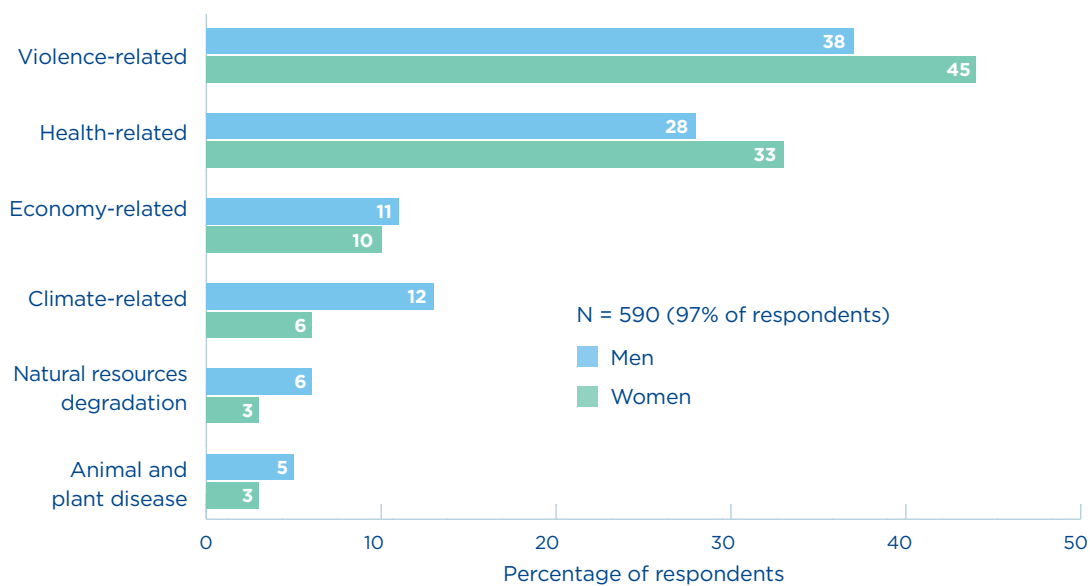


Figure 6. Importance of different types of shocks, by gender



Climate-related shocks and stressors—specifically drought and unpredictable or erratic rainfall—affected 8.5 percent of respondents, followed by the effects of natural resource degradation that affected 4.7 percent. In addition, 4.1 percent faced animal or plant disease that affected their animal husbandry and/or agricultural activities. The latter affected more men than women. It is important to highlight that respondents were asked to select the major shock or stressor faced in the experience shared to force them to prioritize. However, as can be observed by reading the narratives, people didn’t face a single shock or stressor, but a combination of them, as they were interrelated, and one type usually led to others, increasing their vulnerability, unless the respondents were equipped with the necessary resilience capabilities to cope, adapt and transform to respond and recover from these experiences.

When these findings were shared in collective interpretation workshops with groups of project participants in Kasansa, Tshilundu and Miabi, the participants, especially men, tended to place less importance on the armed conflict and focused more on the problem of soil degradation, which was chosen as the main stressor in the experiences shared by 3.6 percent of respondents. Some local authorities who attended the group meetings argued that the conflict was over, and that the region was peaceful again. However, after further discussion, participants agreed that the conflict was not over and, if old and new sources of conflict were not managed, there was a potential for it to escalate.

Sources of conflict mentioned include access to land; unresolved customary, succession and interpersonal conflict; as well as forthcoming elections. Customary conflict was associated with traditions that make it more difficult for women to respond to and recover from shocks and stressors. For example, if their husband dies, widowed women are left with no assets; a husband may abandon his wife if she is unable to conceive or give birth; or a woman whose children die will be accused of witchcraft. During the collective interpretation of findings with CRS and project implementing partner staff, conflict was highlighted as a major stressor affecting the population in the project implementation area.

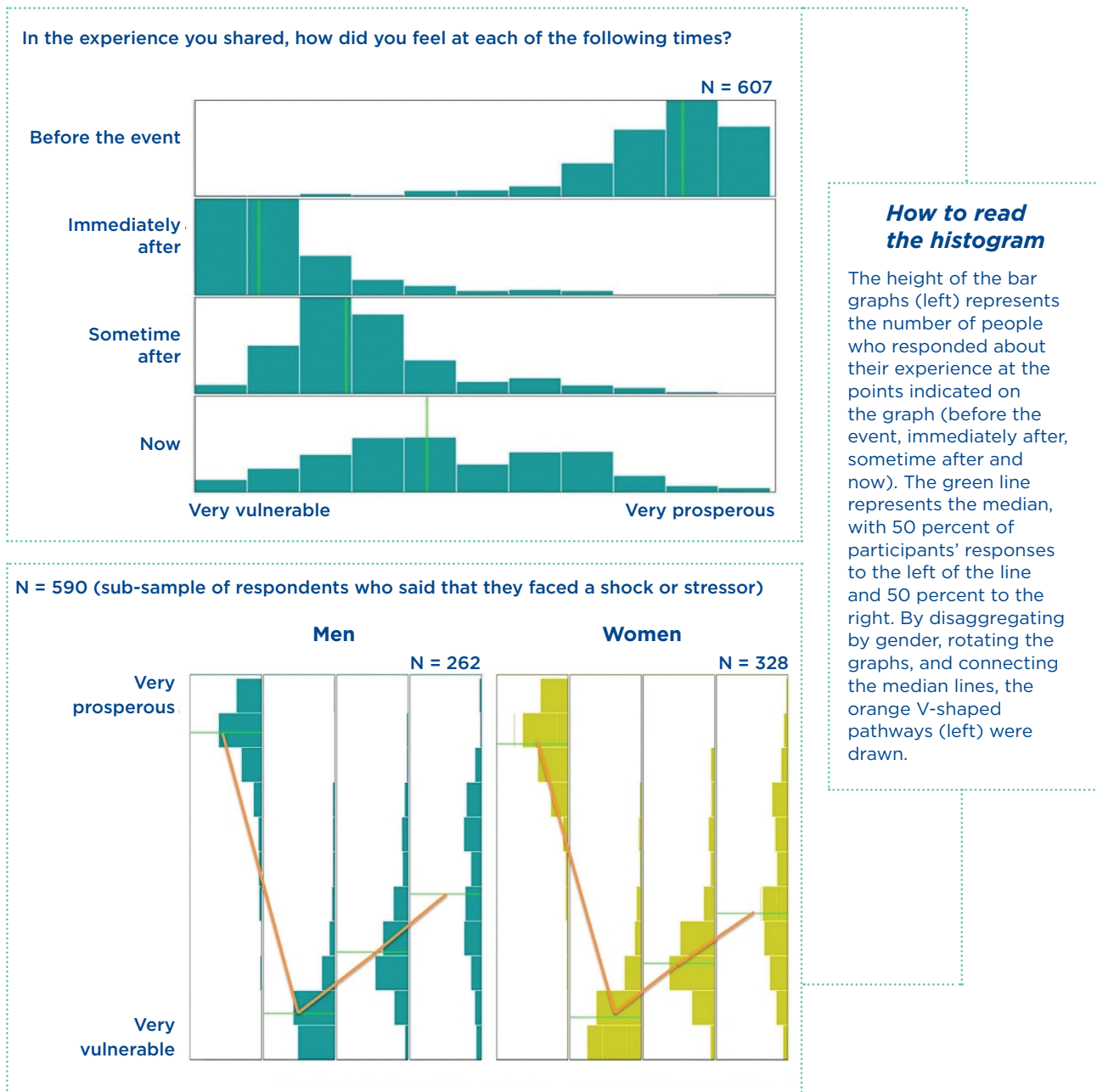
Pathways followed

Respondents' perceptions of the pathways they followed in the experiences shared that significantly influenced (positively or negatively) their livelihoods or well-being—that is, the trajectory between feeling very vulnerable and feeling very prosperous—were categorized into three:

- **A prosperous pathway:** Perceived that they had been able to progress from feeling vulnerable to feeling prosperous, despite any shock or stressor faced.
- **A resilient pathway:** Faced a shock that caused a reduction in their well-being, but perceived that they had recovered to their original situation or to a better one.
- **A vulnerable pathway:** Faced a shock that caused a reduction in their level of well-being and perceived that they had not been able to recover or were in the process of recovery, but had not yet reached the level they were at before.

To assess the pathways that respondents followed, and how the shocks and stressors influenced the pathway, a slider with stones was used to help them reflect on how they felt at four different moments—before the event, immediately after, sometime after and in the present—and place their responses along a continuum from feeling “very vulnerable” to feeling “very prosperous.” Figure 7 shows that at the median (the green lines in each histogram), respondents had a steep fall immediately after the event, then started to rebound, but were then in a worse situation than before the event, therefore they had followed a vulnerable pathway (illustrated by the orange V-shaped pathways in the lower part of the figure).

Figure 7. Pathways followed, by gender



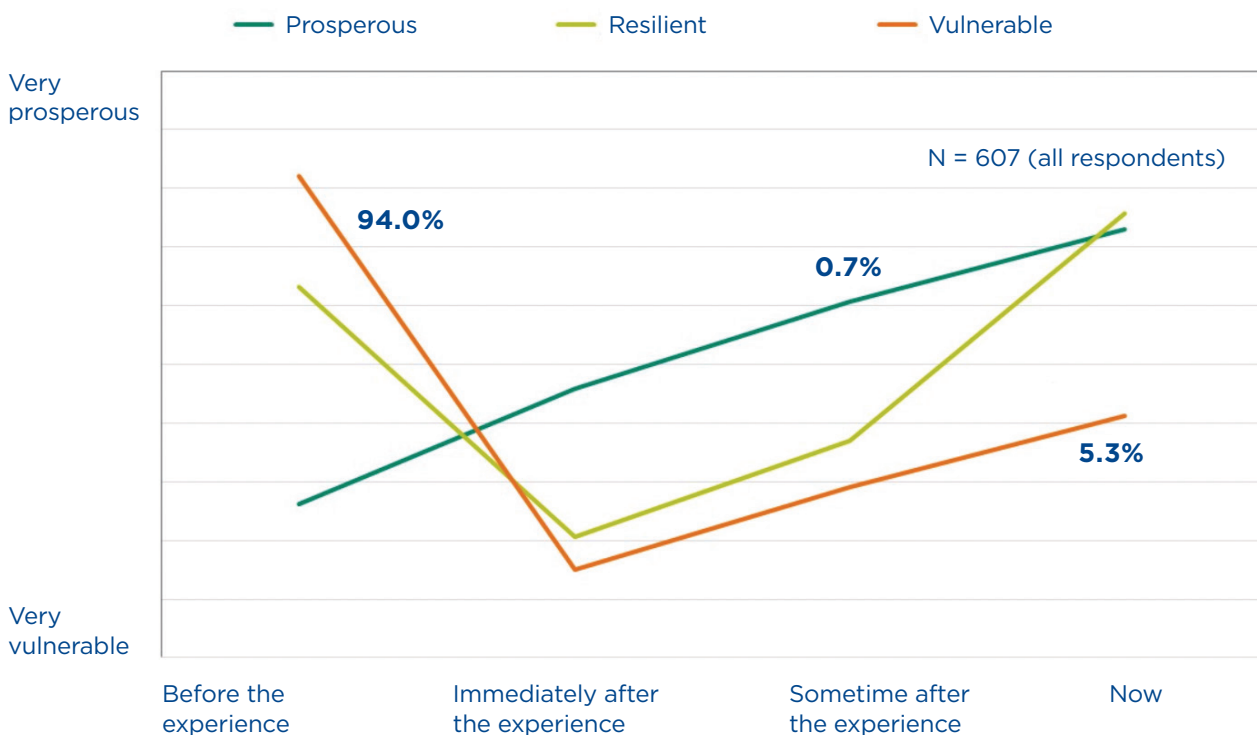
When the pathways are disaggregated by gender (see the two graphs for men and women in the lower part of the figure), we can observe two differences. First, women started from a more vulnerable position than men (*Ha: difference is not equal to 0 with a confidence level of $Pr(|T| > |t|) = 0.0512$*), and secondly, even though both men and women fell to the same level, women rebounded less than men (*Ha: difference is not equal to 0 with a confidence level of $Pr(|T| > |t|) = 0.0806$*). As discussed above, women had a lower level of formal education than men, and customary laws discriminate against women and make them vulnerable, raising structural issues that contribute to the gender gap. Given the importance of these findings to informing project implementation, further analysis of the factors that contributed positively or negatively to resilience will be examined through a gender lens.



In terms of their livelihoods, women started from a more vulnerable position than men, and even though both women and men fell to the same level, women rebounded less.
Photo by Rita Muckenhirn for CRS

To further analyze the differences in the pathways followed by respondents, the three types of pathways described above were plotted (Figure 8). The findings show that 94 percent of respondents experienced a sharp reduction in well-being and only partially recovered, following a vulnerable pathway, 5.3 percent had a less steep fall and were able to rebound better, following a resilient pathway, and only 0.7 percent were able to progress without falling, and therefore followed a prosperous pathway. This shows that most of the population in the three health zones supported by the project were following vulnerable pathways. To further explore the characteristics of those who followed vulnerable pathways and contrast them with those who followed resilient ones, respondents were classified in two groups: those who followed a resilient pathway, which included those who followed prosperous and resilient pathways (6 percent of respondents) and those who followed vulnerable pathways (94 percent).

Figure 8. Pathways followed by respondents



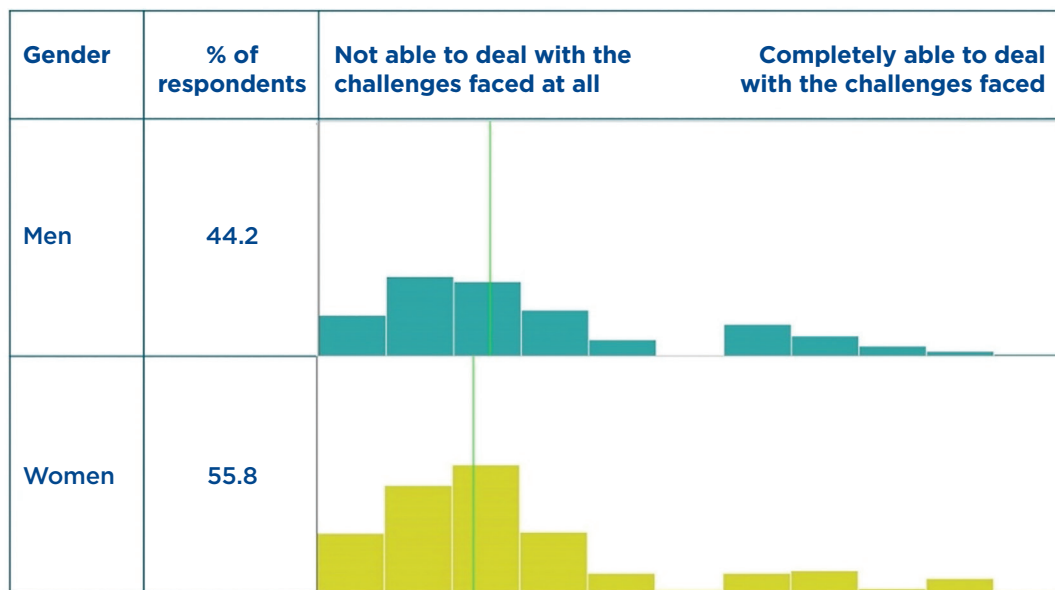
Perceptions of individual and community sensitivity to shocks and stressors

Sensitivity refers to the degree to which an individual, household, community or higher-level system is affected by a given shock or stressor. To assess sensitivity, respondents were asked about their perceived capacity to deal with the shocks and stressors faced. Their responses, disaggregated by gender (Figure 9), show that people felt that their capacity to deal with the challenges faced was low, this capacity being lower among women (*Ha: difference is not equal to 0 with a confidence level of $Pr(|T| > |t|) = 0.0512$*), which reinforces other findings from this assessment that show women as more vulnerable than men.

Figure 9. Perceptions of individual/household sensitivity, by gender

If you have faced challenges in the experience you shared, you and/or your household felt ...

N = 607
(all respondents)



With respect to the perceptions of the level of sensitivity of communities to shocks and stressors, responses visualized in Figure 10 also show a high level of sensitivity, as both male and female respondents perceived that their communities were not organized or prepared to respond.

Actions, responses and strategies used to respond to shocks and stressors

People face shocks and stressors by using different combinations of coping actions, adaptive responses and/or transformative strategies. Understanding which of these actions, responses and strategies are more effective is important for designing and prioritizing interventions that will have a greater potential to build resilience capabilities.

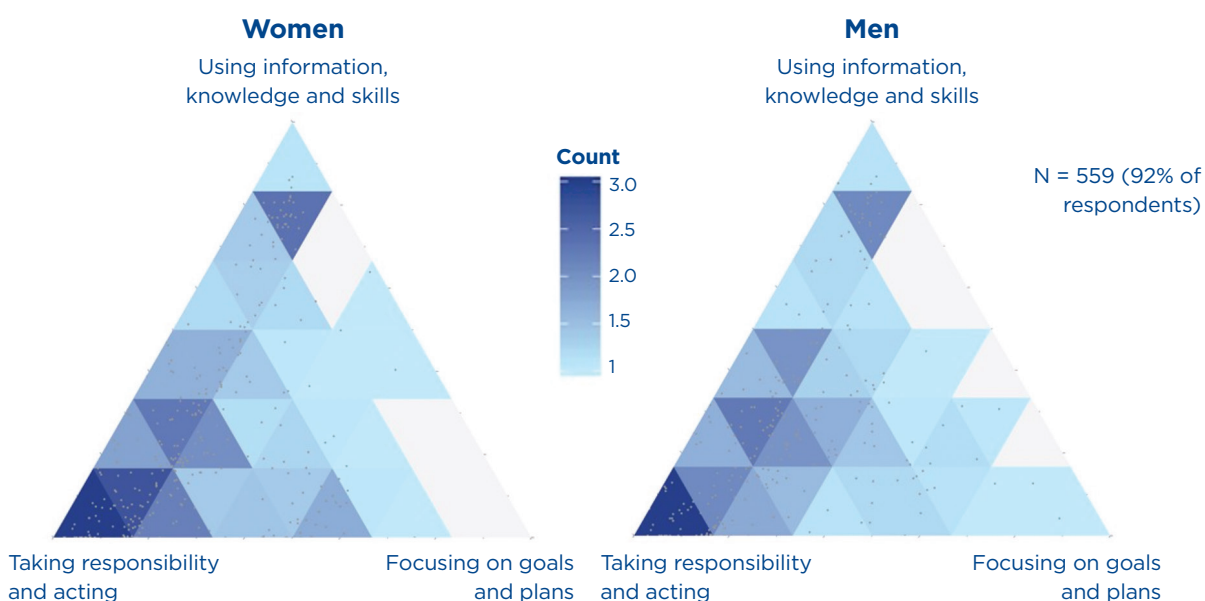
Role of human agency in coping

Human agency is defined as the capacity of human beings to make choices, take decisions, act and be held responsible for their decisions and actions, recognizing them as agents of their own development. Thus, human agency plays an important role in the response to shocks or stressors. An MCQ signifier was used to understand the human assets used to deal with the shocks and stressors faced. Those mentioned most were a good attitude and effort (57.2 percent), labor, health and capacity to work (45.3 percent), and values, beliefs and spirituality (34.3 percent). Fewer respondents mentioned knowledge, skills and experience (15.8 percent), and very few selected leadership (2.5 percent), access to information (1.1 percent) or formal education (0.7 percent).

In addition to this MCQ, a triad was used to assess the relative importance of three elements of human agency (taking responsibility and acting; using information, knowledge and skills; and focusing on goals and plans) in the experiences shared by the respondents. Responses disaggregated by gender are shown in Figure 10. The results show that 92 percent of participants responded to this signifier (each response represented by a dot on the triad), illustrating that most respondents coped in their experiences through one of these actions (dots that are toward the corners of the triad), a combination of two of these mechanisms (dots that are along the sides of the triad) or a combination of the three (dots that are inside the triad).

Figure 10. Relative importance of elements of human agency in responding to shocks and stressors, by gender

If you faced challenges in the experience you shared, you faced them by ...

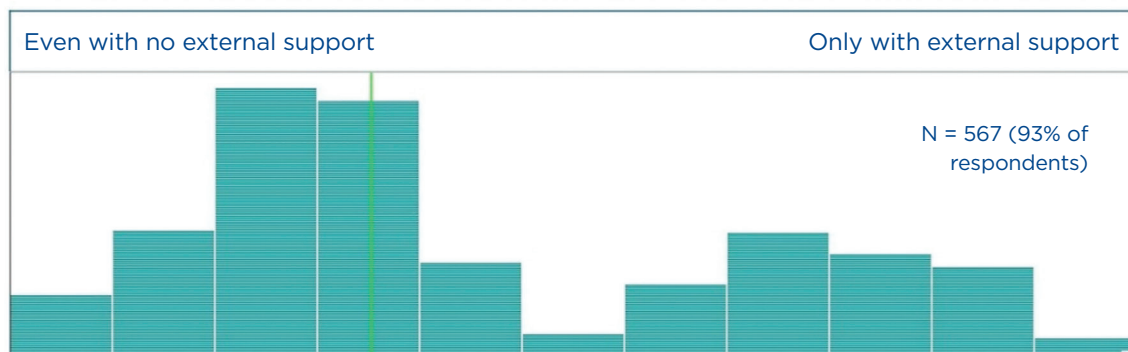


The concentration of responses in different areas of the triad shows that taking responsibility and acting (darker areas) played a relatively greater role than using information, knowledge and skills; and that focusing on goals and plans had an even smaller role (lighter areas). These findings reinforce those from the signifier MCQ discussed above, showing that given the low level of formal education, knowledge and skills, and the lack of information, most people can only overcome challenges by taking responsibility. Moreover, the urgency to simply survive takes away the focus on longer-term goals and plans, which resilience literature refers to as an effective coping strategy. This is the least used, especially among women, who tend to focus less than men on their goals and plans when facing challenges.

Responses to a slider signifier question to assess the extent to which external support aided access to new knowledge, skills and information, shows that external agents played a small role in developing these capabilities (Figure 11). Furthermore, when respondents were asked what relationships were of greater importance in the experiences they shared, most mentioned family members, relatives and friends (84.4 percent), followed by religious leaders (18.8 percent) and community leaders (6.4 percent), while very few mentioned nongovernmental or governmental organizations (1.5 and 0.7 percent, respectively).

Figure 11. External support for accessing human assets

If you have accessed knowledge or information, or developed new skills that were important in the experience you shared, they could be accessed ...



All these findings validate the importance of the project focus on developing people’s capabilities and livelihood opportunities to enable them to start focusing on longer-term goals. If the project is effective in doing that, future evaluations should show a smaller concentration of dots in the triad toward the ‘taking responsibility and acting’ corner and more toward the line between ‘using information, knowledge and skills’ and “focusing on goals and plans” (Figure 10).

Coping actions

Coping actions refer to the actions taken by individuals, households, communities or higher-level systems to immediately minimize exposure to stressors and shocks, and to recover from their effects. To assess which coping actions people took to respond to the shocks and stressors faced in their experiences, and the extent to which they perceived these actions as a good option for coping, a slider with stones signifier question was used (Figure 12). Findings show that the 23.2 percent of respondents who coped by reducing their consumption and expenditure, perceived this to be the worst option (as this is what people usually do when they have no other alternative). Reducing consumption for vulnerable households usually means reducing food intake, which is associated with negative changes in food security and nutrition, as can be observed in Figure 13a. The following narrative from a male farmer from Miabi—whose main stressor was the loss of soil fertility in his fields and whose household had been following a vulnerable pathway that had been worsening (collapsing)—shows the effects on vulnerable households of reducing consumption.

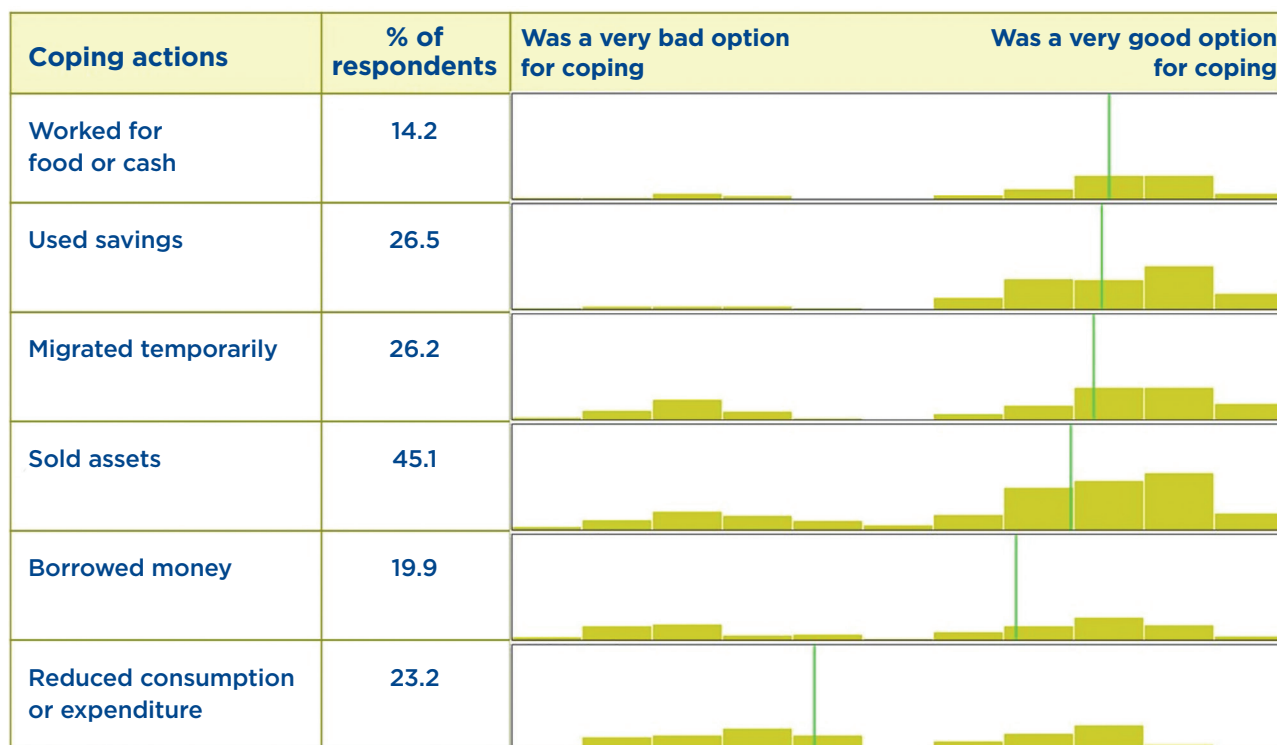
Degradation of soil

We have a crisis in our village caused by soil infertility. In the last 3 years, all field crops did not grow well because the soil is no longer fertile. We realized that at the end of each season we did not harvest as we used to, and yields have become very low. I wanted to overcome this difficulty by using traditional practices of soil fertilization such as burning the leaves in the field before planting beans. By doing this, the situation improved for some time; and now everything has deteriorated further. I continue to cultivate crops because this is the only job that I have had for the last 7 years, but the yields are still low. As a result, the amount of food available for the family has fallen and it is difficult to access health care for the children. There is no other source of income. We only have what we can produce, and this is the only thing that helps us for our everyday survival.

Figure 12. Coping actions taken to respond to shocks and stressors

If you faced challenges in the experience you have shared, you took the following actions to cope with the situation ...

N = 607
(all respondents)

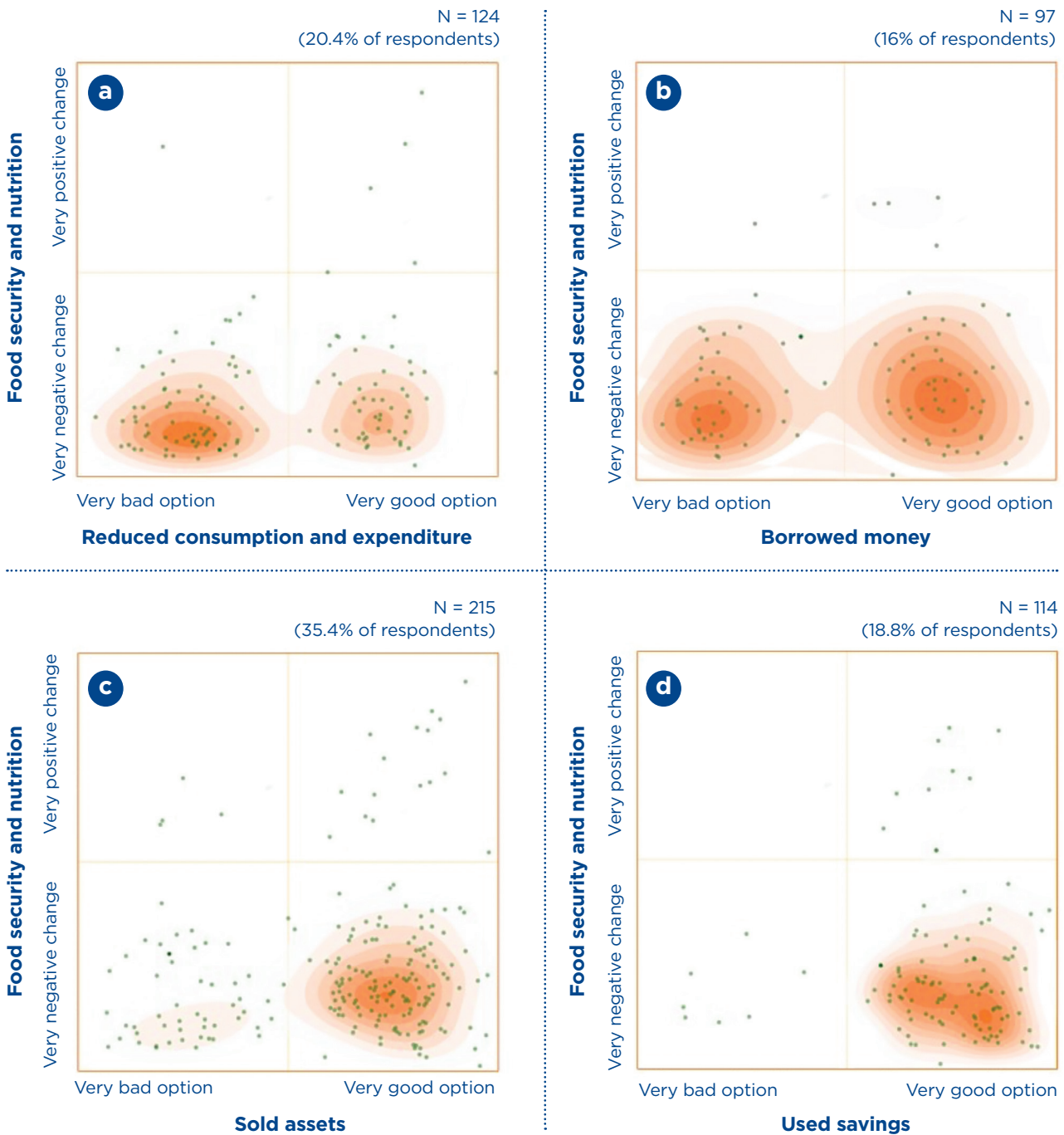


Borrowing money, if people had access to loans, was perceived as better than reducing consumption, and 19.9 percent of respondents were able to access loans to cope with the shocks or stressors. By reading the narratives of people who said that they coped by borrowing, it is apparent that most accessed loans from relatives, but other sources of finance were almost nonexistent. Moreover, perceptions of the extent to which this was a good option for coping were mixed. Taking loans for consumption can make people more vulnerable as they become indebted, especially if loans bear interest. Moreover, people who took this action still saw a negative change in their food security, but one that was less pronounced than for those who coped by reducing consumption, as can be observed in the Figure 13a. The following narrative of a young female household head, from Kasansa—whose main income source was farming and who had her crops attacked by pests—shows her following a vulnerable pathway, and how taking loans for agriculture can increase households’ vulnerability.

Heavy rains and harmful insects

I am a farmer. Last year, I faced a great difficulty caused by poor production in my fields. There was a lot of rain that destroyed all my crops, and part of the field where I sowed the beans was attacked by insects, which resulted in very poor production. This plunged me into the great difficulty that I am going through with my family. In order not to die of hunger we continued to cultivate the fields with many difficulties since insects are very numerous in our fields. These fields helped us to provide food for the children. Because of this, I borrowed money to improve the fields, but the production is not improving. I see my life falling apart.

Figure 13. Relation between different coping actions and changes in food security



Households that have assets can sell them to cope, and the findings show that selling assets was the option that people mainly resorted to in order to cope (45.1 percent), and that this was perceived to be a relatively good option and had a less negative effect on food security than reducing consumption (Figure 13a); however, selling assets can also make households more vulnerable if they are forced to sell their productive assets.

The following narrative from a male trader from Tshilundu, who was only able to partially recover, shows how coping by selling assets can have a negative effect on people’s livelihoods.

Suffering during the war

I was a great trader. I used to go out to buy produce and other goods in different villages and it sometimes took many months. One day, when I returned from a trip, I found that there must have been a war between the two troops and I had to go into the bush to hide with my wife and our children. It became impossible to get more produce or goods because there was no transportation. It was a big shock for me. We managed to bring some clothes and food with us. Life was not easy staying in the bush for 3 months. After the calm was reestablished, we were forced to sell the clothes to have a little capital to continue with my trading activities, and I started again. Unfortunately, my business is not as it was before because now I have a little capital.

Using savings was perceived to be one of the best options for coping and was the second-most-used among respondents (26.7 percent), this percentage being larger among those who followed a resilient pathway (33.3 percent). However, even those respondents who used their savings to cope experienced reduced food security and nutrition with only a few outliers who perceived a positive change (Figure 13d). The following narrative from a man from Tshilundu, who considered the armed conflict to be the major shock and who was only able to make a partial recovery, shows the importance of savings for recovering, but also that these were insufficient, given the steep fall experienced in his livelihood.

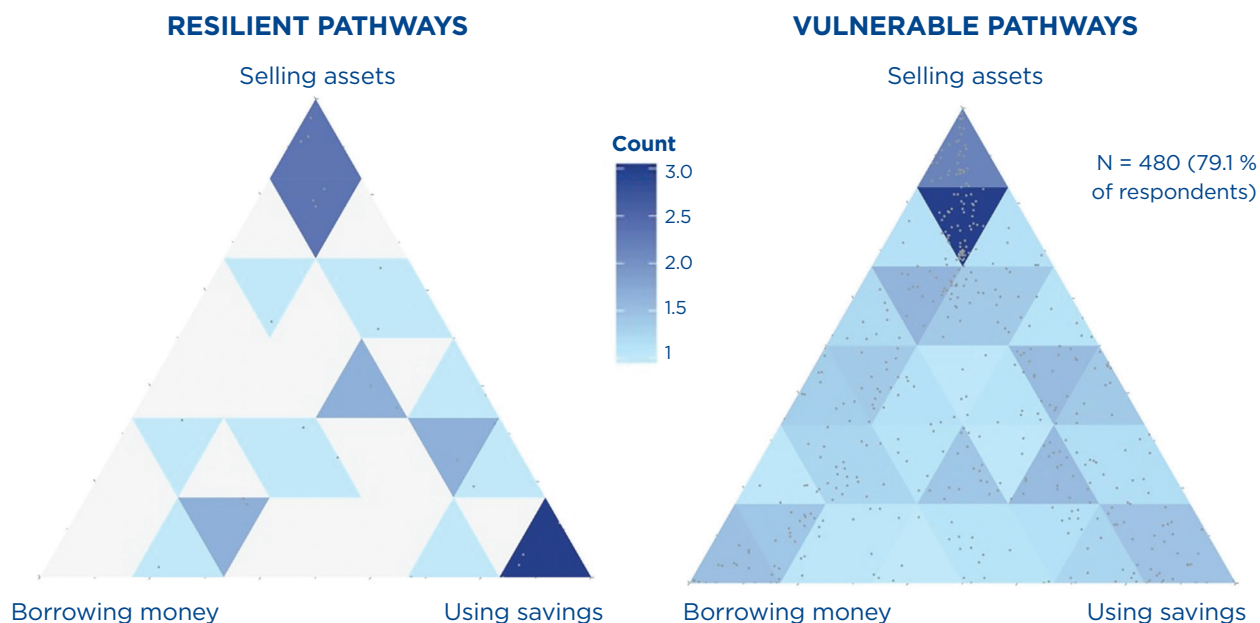
The flight to the bush

We were healthy and had a peaceful life when suddenly we heard gunfire and fled to the bush. During our time in the bush, things got worse because there was no food, no medicine and the water was very dirty. This resulted in the death of my two children, one was 4 years old and the other only 7 months old. When I came home, I had lost all my belongings, but as I had kept some money with me that I had saved before going into the bush, I was able to go back to my coffee-trading activities. I buy coffee here and in the surrounding villages and take it by bike to Mbuji-Mayi to sell. My situation is improving although it is not as before.

To further explore the relative importance that these different coping actions had for responding to the shocks and stressors faced, a triad was used (Figure 14). Findings show that for respondents who followed vulnerable pathways, the coping action that was more important was selling assets, while borrowing money and using savings had the same relative importance. On the other hand, for those respondents who followed a resilient pathway, using savings and selling assets were equally important for coping, while borrowing money was less important.

Figure 14. Relative importance of coping actions, by pathways followed

If you faced any challenges in the experience you shared, what was more important for coping?



The above analysis shows that human agency and coping actions are crucial for enabling people to survive and start rebounding from shocks and stressors, but in the case of Kasai Oriental, the coping capabilities of households were not sufficient for them to rebound. Not only did households experience a steep drop in well-being, but it is evident that they had very limited access to assets—human, social/political and financial—for them to effectively cope.

The findings also show that the best option for coping, after receiving food for work (which is not a sustainable option), was using savings and, to a lesser extent, selling assets, highlighting the importance of interventions aimed at promoting effective financial management and savings to develop resilience capabilities. As project implementation progresses, it is expected that more households will improve the management of their finances and will save so that if they face new shocks or stressors in the future, they will be better prepared to respond and recover. It will therefore be important to periodically monitor advances in project performance related to this to ensure that activities are having this expected outcome.

Adaptive responses

Adaptive responses are the proactive and informed responses taken by individuals, households, communities and higher-level systems to adapt to longer-term trends and changing conditions, to minimize negative consequences of stressors and shocks, or to exploit positive opportunities. Thus, to build longer-term resilience capabilities, it is important to understand what people are already doing, what is working for them and how external interventions can better support them in their adaptation efforts.

To assess adaptive responses, this assessment looked at adaptive responses within agricultural production, and also in off-farm (still agriculture-related) and non-agricultural entrepreneurial initiatives, employment and migration. A slider with stones signifier question was used to estimate the percentage of people who responded to the experience shared using these alternatives, and their perception of the degree to which their responses were a good strategy for responding to future shocks and

stressors.

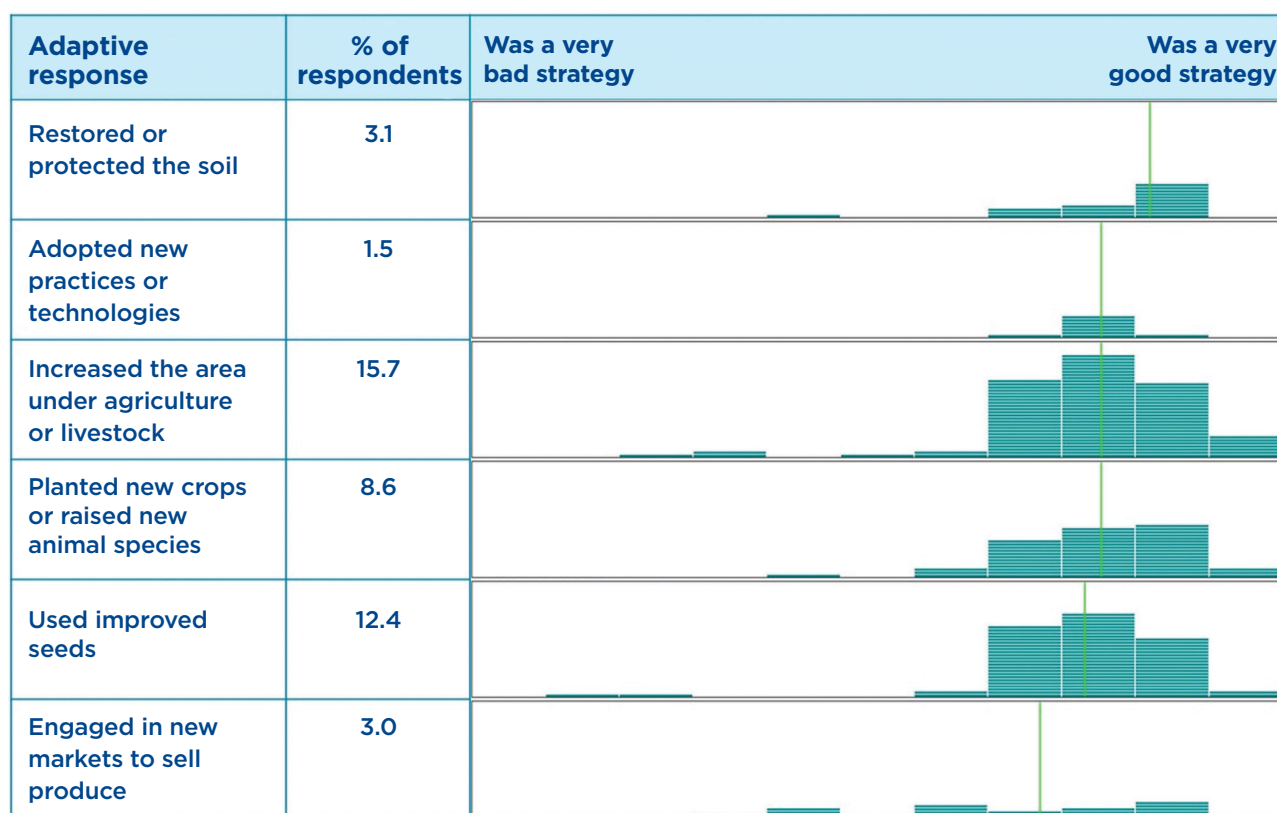
Adoption of improved agricultural practices

Figure 15 shows the percentage of respondents that took different adaptive responses within agricultural production, and the extent to which they perceived them as good strategies. These findings show that few implemented these responses, but those who did perceived them as good strategies. However, those who implemented these rarely mentioned them in their narratives or mentioned what results they had.

Figure 15. Agricultural practices implemented and perceptions of their effectiveness

Which of the following practices did you implement in the experience you have shared?

N = 607
(all respondents)



The adaptive response within agriculture that was used most was increasing areas under production (15.7 percent), which was seen by respondents as a good strategy. This response has challenges as it increases pressure on natural resources and promotes further deforestation, which is already a major environmental problem (Figure 16). In addition, if the soil degradation trend continues, the cultivable area will also decrease. Even if soil degradation was not prioritized as the main shock or stressor faced, given the strong effect that the armed conflict—which escalated in 2016—had on people’s lives and livelihoods, the following narrative from a man from Miabi shows the extent of soil degradation that farmers were facing and the detrimental effect on their livelihoods.

Suffering puts someone in a very bad position

Our land is no longer producing enough, despite all our work. My children and I are suffering because we face a permanent food deficiency. The hard work I am doing in others' fields to have enough to feed my family brings me a lot of physical suffering. We do not even have the means to undertake trade. My children get sick and I am unable to take them to the clinic for care. They are chased out of school for not paying school fees. They sleep hungry and they lack clothes. We tried everything but without any improvement. We continue to cultivate our land because we do not have alternative activities.

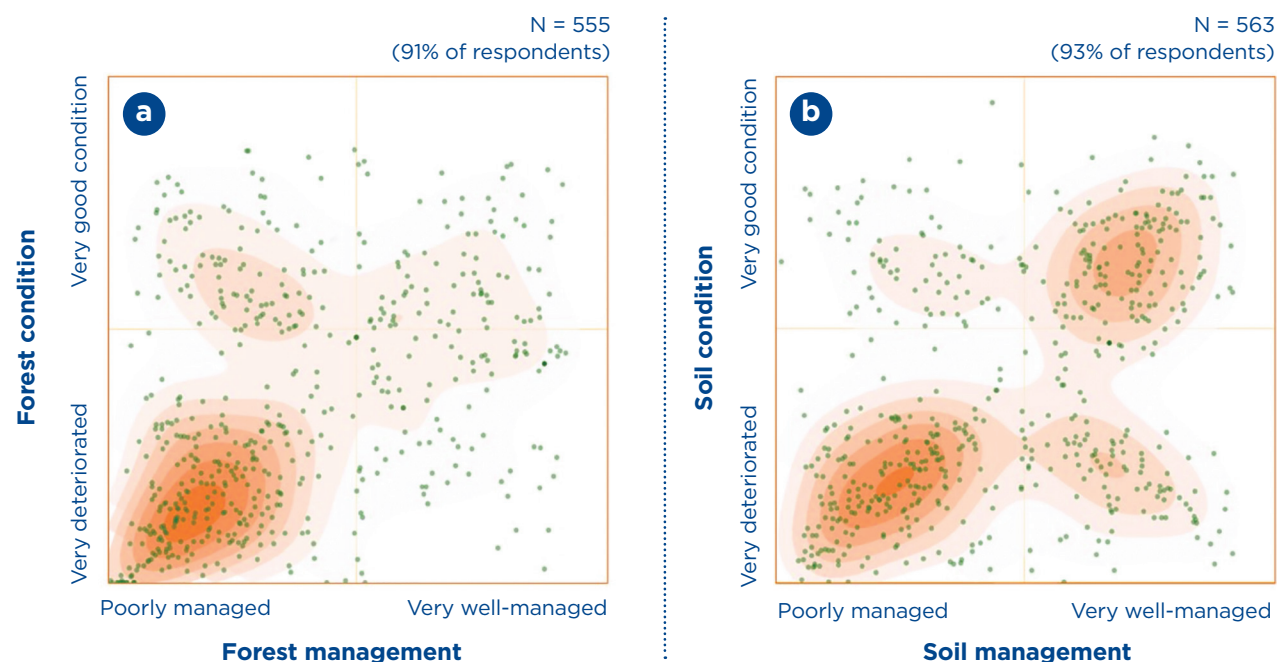
Moreover, increasing production areas could also further increase women's workload and generate even more conflict over land tenure and use.

Given the low level of formal education (Figure 2), the limited access to knowledge and skills, and the lack of access to information—only 15.8 percent cited access to knowledge and skills, and only 0.7 percent cited access to information as important human assets for responding to the shocks and stressors faced—compounded by the limited external support for developing these assets (Figure 11), the low implementation of adaptive responses within agriculture (improved seeds, soil restoration and protection, and the use of improved cropping practices in general) is not surprising.

On the other hand, these adaptive responses seem promising for improving resilience capabilities, as can be observed in Figure 17, which shows the association between implementing these adaptive responses and perceptions of the current level of vulnerability. Unlike those who took only such coping actions as reducing consumption or expenditure (Figure 17a), those who implemented adaptive responses showed a transition toward lower levels of vulnerability. Thus, to amplify these weak signals, it will be important for the project to focus on the development of farming and natural resources management skills among project participants, as most of them depend on agriculture to generate income (Figure 3). It is expected that as farmers develop these skills, they will implement these adaptive responses that are essential for restoring and protecting crucial natural resources.

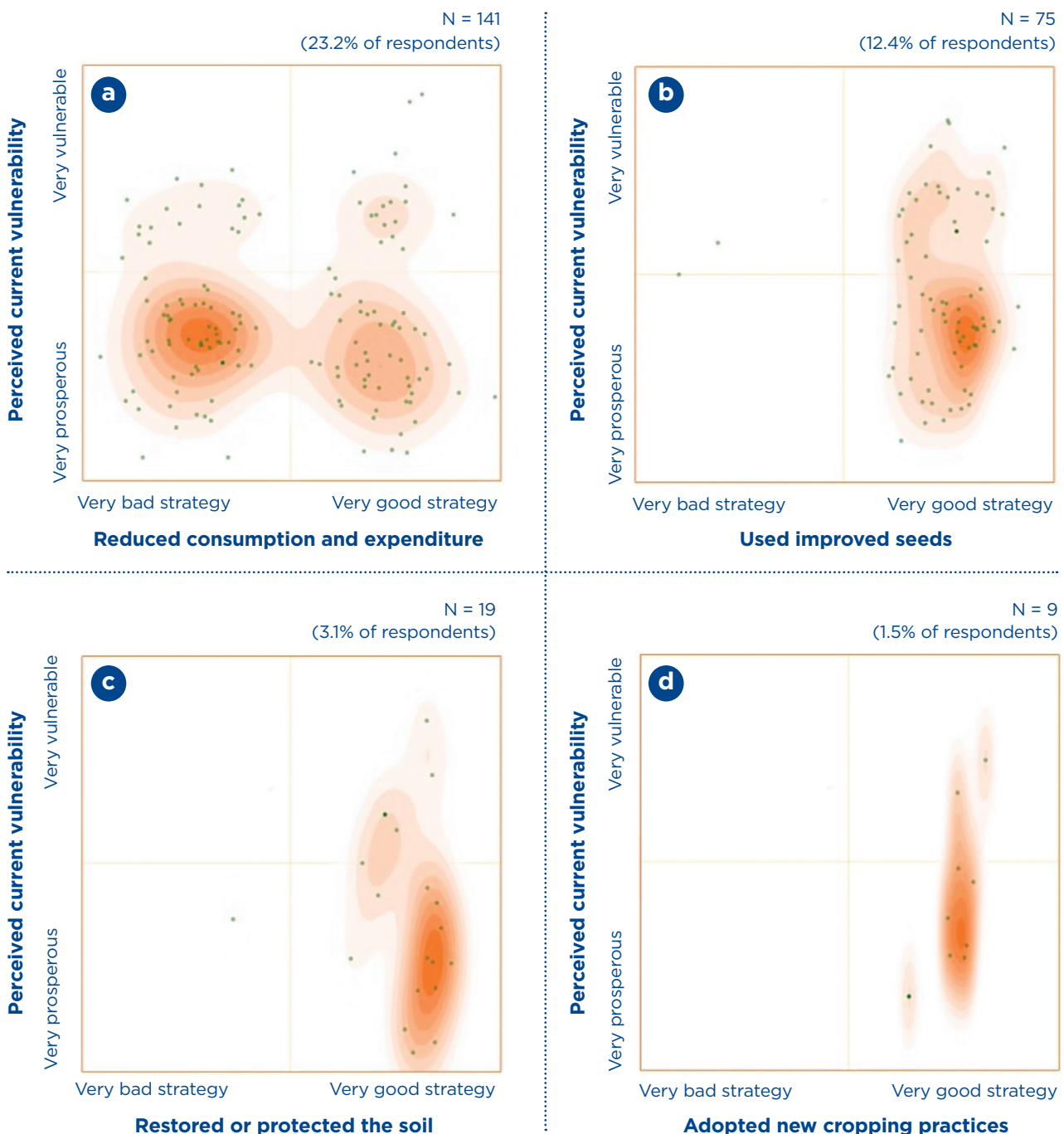
Figure 16. Perceptions of the condition and management of forest and soil resources

What was the state of the following natural resources during the experience you shared?



Participants in collective interpretation workshops discussed the high risk of natural resource degradation and climate-change stressors prioritized by respondents—unpredictable or erratic rainfall, drought, soil degradation, and crop pests and disease—and agreed that, as self-signified by respondents who selected these stressors as the most important in their experiences, these events are becoming more frequent. Moreover, they highlighted a lack of governance that negatively affects the protection of natural resources. Therefore, these adaptive responses within agriculture discussed in this section comprise a set of emergent practices that show weak signals toward reducing the vulnerability of individuals, households and communities.

Figure 17. Relation between selected adaptive responses within agriculture and perceptions of current vulnerability





The study showed there was low implementation of adaptive responses within agriculture, such as improved seeds, soil restoration and protection, and the use of improved cropping practices.

Photo by Sam Phelps for CRS

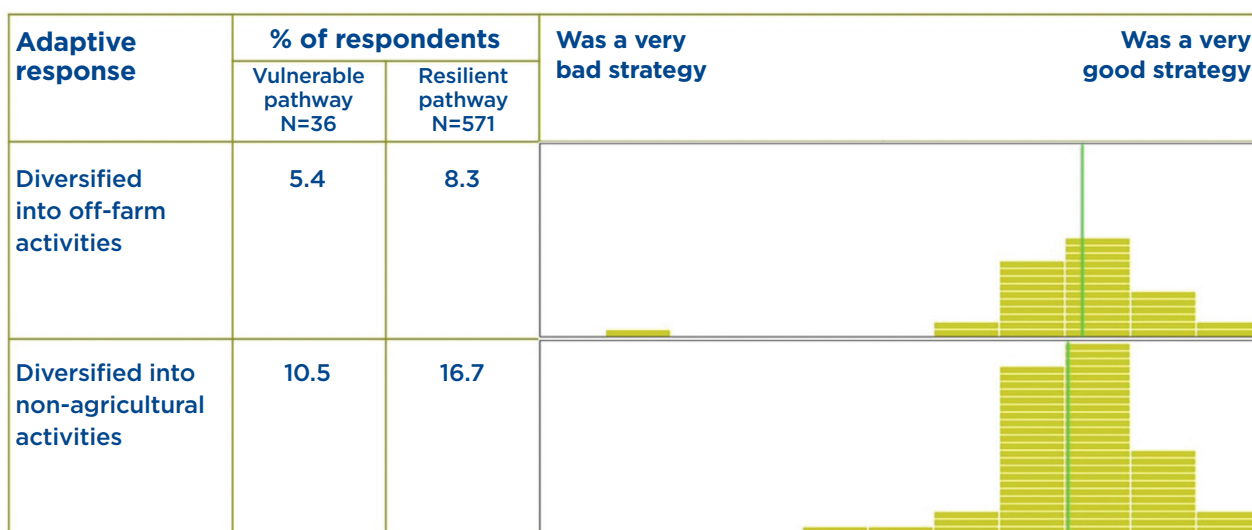
Livelihoods diversification into off-farm and non-agricultural activities

Sixteen percent of all respondents had moved into off-farm and/or non-agricultural activities in the experiences shared. Figure 18 shows the percentage of respondents who said that they had taken these adaptive responses, by the pathway followed, as well as the extent to which they perceived them to be good strategies. These findings show that more respondents who followed a resilient pathway took these adaptive responses than those who followed a vulnerable pathway (8.3% and 16.7% among those who followed resilient compared to 5.4% and 10.5% among those who followed vulnerable pathways, developed new agribusiness activities and new non-agricultural activities, respectively. However, the resulting smaller sample size of those that followed resilient pathways (36 of the total 607) enables us to reach the conclusion that these differences are significantly different from zero, with a *Pearson chi2(1) = 2.2165; Pr = 0.137*). Moreover, those respondents who took these adaptive responses perceived them to be good.

Figure 18. Diversification into off-farm and non-agricultural activities and perceptions of their effectiveness, by pathway followed

Which of the following practices did you implement in the experience you shared?

N = 607
(all respondents)



While diversifying into off-farm activities was an adaptive response taken by only 5.6 percent of all respondents (the weighted average of those who followed a resilient and a vulnerable pathway), the narratives show that this led them to begin recovering from the shocks or stressors, and, in some cases, to fully recover and even progress to a better situation. The following narrative from a male household head from Kasansa, whose main income source was farming, shows how he responded to soil degradation (main stressor faced) by adopting new practices. It also shows how his household diversified into off-farm activities, enabling them to advance along a recovery pathway, but not fully recover (vulnerable).

Great suffering

For 3 years there has been a significant decline in our agricultural production, making it impossible for me to pay for my children's schooling. There was a time when my children were getting sick regularly. The little produce from my fields was sold to pay for their medical care. This situation brought a lot of misfortune to my family. I suffered a lot; I even ran out of water to wash myself. Another farmer from the village advised us to grow cowpeas during the first agricultural season, and maize during the second on the same land. When we applied this advice, our maize production slightly increased. As our suffering was growing, my wife borrowed money from her sister and began trading with cassava. I expanded our field to maximize maize production and this started to help. My wife pays for our children's schooling, and the production from the field allows us to cover the family's food needs. Now, we live a little better, but not as before.

This narrative from a female household head, whose main income source was agriculture, shows how she also diversified into off-farm activities, but, unlike in the previous narrative, she perceived that her household had been able to fully recover and improve (resilient):

Disease

My 8-month-old son became seriously ill while my husband was absent. I took him to the village health center where he received care for 3 weeks. To pay the bill, I had to sell maize and beans that I had stored and even some household items. With some of the money from the sale of my produce, I started a vegetable market garden, and while waiting for my crops to produce, I started to buy and sell vegetables. My life has improved and is better now than before.

More households (10.9 percent) diversified into non-agricultural activities than off-farm activities. However, most of the narratives referred to the trading of agricultural produce, and therefore overlap with those classified as off-farm activities. This can be observed in the following narrative from a female household head from Kasansa, whose main income source was still agriculture, but who, after the death of her husband, was able to economically recover by trading cassava.

The death of my husband

My husband started suffering from [condition redacted]. I took him to hospital for medical care. The doctor gave us a prescription that required a lot of money. I spent all my money on the medicine, and even had to sell my clothes. After 3 weeks, my husband died. He left me nothing. I started to suffer with the children; they went to sleep hungry and I couldn't send them to school anymore, because I did not find anybody to care for us. It was difficult for me to support all the needs of the house alone. One of my friends gave me some money to start a business, and I started to buy cassava in the village to sell it in Mbuji-Mayi. Now, I am also cultivating maize, cassava and soybeans, and life has become good again because my children have returned to school.

Diversification into agriculture-related processing activities—such as the extraction of palm oil—were also perceived as non-agricultural activities by some respondents, as shown in this narrative of a woman from Miabi who said the main stressor faced was land degradation:

Poor production of the fields due to soil infertility

For more than 3 years, the production of our field has not been good. We noticed that our harvests had been falling due to the infertility of the land. Since we have always depended on agriculture to provide for the household, feed the family, pay for our children's schooling and cover other expenses, this problem has led us to a huge difficulty. During this time, we have been working hard to win nothing. The only thing that had allowed us to continue with our life is that my husband has started to cut palm nuts to make oil.

Only a few narratives refer to diversifying into activities that were not related to agricultural production, processing or trade, such as the one below from a male household head from Kasansa, who cited the main shock as the loss of his assets.

The loss of my pig

Last year when I cultivated my field, I had the ambition to trade fuel. At harvest time, I found some money. I bought a pig in the hope that I could sell the piglets to find enough capital to start my fuel trade. One night, while we slept, a thief took my pig that was pregnant. I was shocked. I spent money to find out where the thief was, but without any solution. Since I still wanted to trade, I sold some of the remaining cassava field and started the fuel-trading business. This activity helps me to pay my children's school fees. The conditions are not as good as before, but I always force myself day and night to meet the needs of my children as the head of this family.

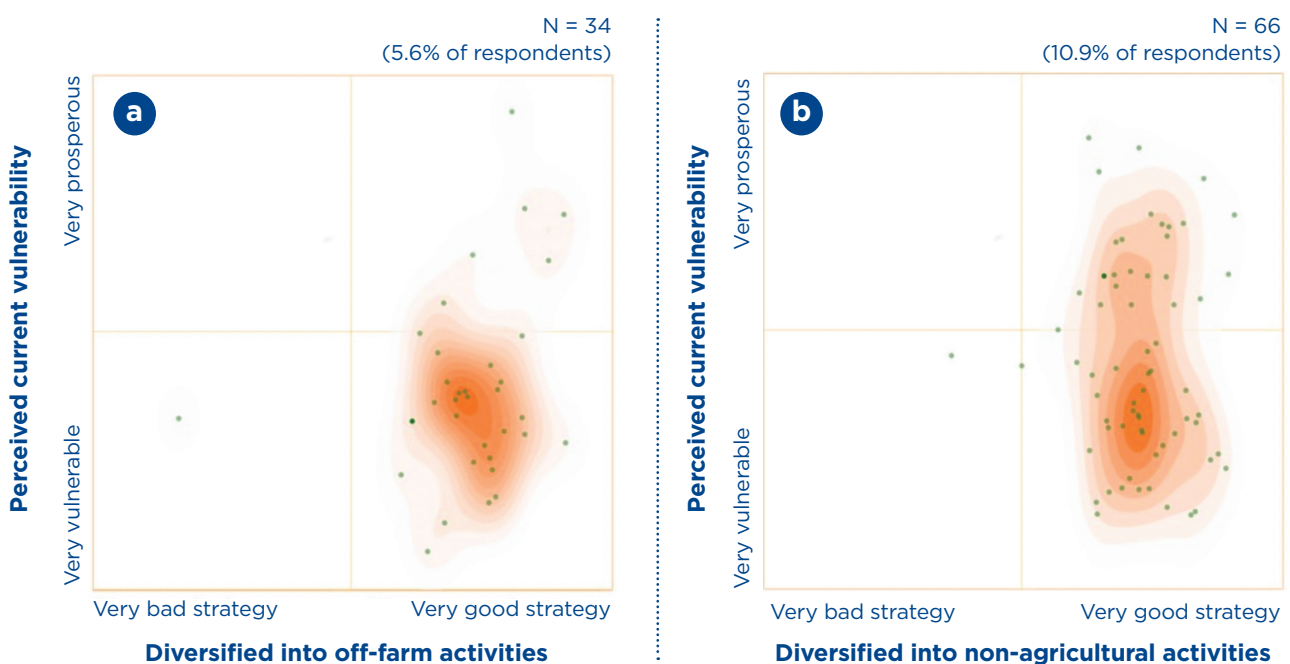
Furthermore, respondents who lost their crops due to armed conflict, illness or climate-related stressors, and received support from others to survive, also said they were responding by moving into non-agricultural activities, but these referred more to the failure of agricultural activities than the diversification of their livelihoods. This can be observed in the narrative below from a woman from Tshilundu whose fields were affected by drought and who was not able to recover.

The vagaries of climate

We are poor farmers. We use traditional farming practices. During the last year, we did not produce much in our fields. We found that soil fertility was degraded and that the soil was not able to hold moisture. A prolonged drought meant that we were no longer able to know when the rain could fall. Our maize production last year was not good. We have benefited from FAO assistance that has distributed rabbits, maize seeds and some cropping tools, but because of the lack of rain we did not have a good harvest. Even with the assistance received, it was not enough. We had to sell our belongings for survival. It's still not enough.

The association between perceptions of the usefulness of these activities to overcome shocks and stressors and the actual level of vulnerability can be observed in Figure 19. This shows that adaptive responses related to the diversification of livelihoods into off-farm and/or non-agricultural activities, especially the latter, are also emergent practices that may have the potential to improve resilience capabilities. However, it can be observed in the narratives that beyond trading agricultural produce and some processing activities, current opportunities are limited. It will be important for the project to identify opportunities for promoting off-farm and non-farm livelihoods diversification as these have the potential to be effective adaptive strategies to build resilience.

Figure 19. Relation between diversification into off-farm and non-agricultural activities and perceptions of current vulnerability



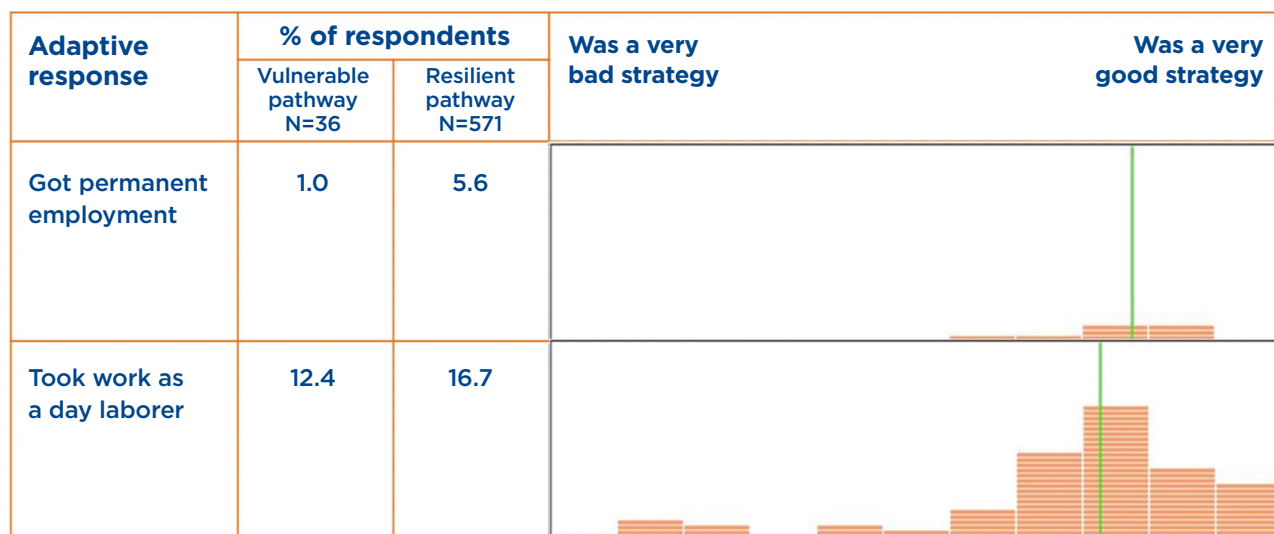
Livelihoods diversification into employment

Another adaptive response was getting employment, which was pursued by 13.7 percent of all respondents, either as day labor or permanent employment (calculated for all the sample). The former included insecure and low-paying jobs (12.7 percent), while the latter included more formal, secure labor contracts (1.3 percent). Figure 20 shows the percentage of respondents that said they had got employment, by the pathway followed, as well as the extent to which they perceived these as good strategies. These findings show that few respondents were able to secure permanent employment and that the percentage who did was significantly higher among those who followed a resilient pathway than among those who followed a vulnerable pathway ($Pearson\ chi^2(1) = 5.2839; Pr = 0.022$). This strategy was perceived by respondents to be a very good one, but opportunities to pursue it were very limited, especially given the low level of formal education among the population.

Figure 20. Employment and perceptions of its effectiveness, by pathway followed

Which of the following practices did you implement in the experience you shared?

N = 607
(all respondents)



The following narrative from a man with a high school diploma in Kasansa shows how paid employment enabled him to recover to an even better situation (resilient), despite not being able to continue with higher education.

My irresponsibility

I was not able to continue with my higher education because I got a girl pregnant. The girl was still a minor and I was arrested. My family had to spend a lot of money to get me released. After I was released, my father kicked me out of the house and I was left without any means of survival. I managed to set up a hair salon, which allowed me to support the mother of my child until the birth. As expenses increased, I decided to work in the field to feed my wife and child. Now, I teach in high school and my salary allows me to pay the labor in the field. I also raise poultry and my situation has improved.

Unlike permanent employment, work as a day laborer is usually a last resort, and more an effective coping action than an adaptive response, as can be observed in the following narrative from a male household head in Miabi whose crop became diseased, but who was able to recover:

Destruction of my maize field by a plant disease

I am a farmer. Last year in September I planted 1.5 hectares of maize in the hope of having a good harvest. Two months after germination, I found that my maize field was ravaged by a disease that I did not know. So, I did not harvest anything. It affected me a lot. I lost income and, as a result, the livelihoods of my family were lost. So, I started working in the village for cash. I was able to save some money and I bought some seeds to replant a field of half a hectare. Now, I continue to work as a farm laborer for people in their fields for a living, hoping that someday my living conditions will improve.

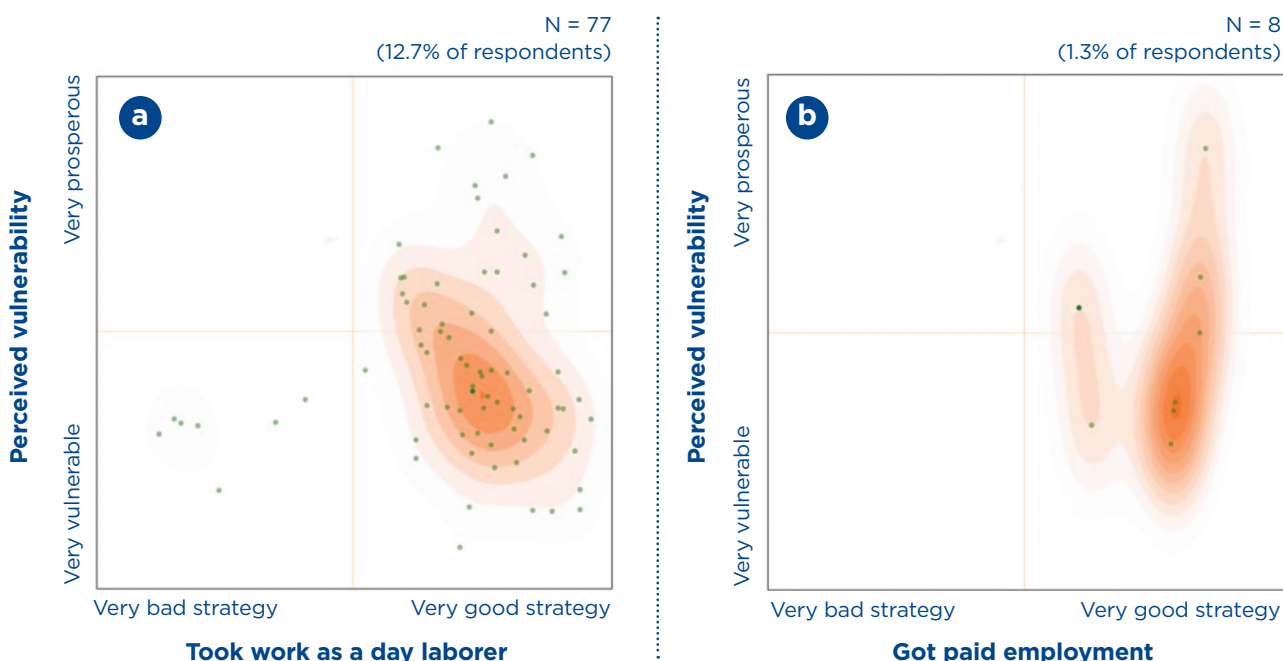
The other type of employment described in the narratives was self-employment based on a specific knowledge or skill, such as in the following narrative from a man from Kasansa, who said specific knowledge and skills had enabled him to recover.

The suffering that concerns me in this village

I planted maize and cassava. After sowing the crops, there was a drought of about 2 months and the plants did not grow well. At harvest, the production was very low, and it caused a famine in my home. Food became very scarce for my family. We don't eat as before. I use my little electrical knowledge to repair phones and radios to find some money to buy food.

The association between perceptions of the usefulness of getting employment to overcome shocks and stressors and the actual level of vulnerability can be observed in Figure 21. This confirms that adaptive responses related to taking day labor can be considered more of a coping action than an adaptive response. Looking at the project design, it will be important to review to what extent it will be possible to increase employment opportunities in day labor (only 13.7 percent of respondents took this type of employment), and also to advocate for the improvement of working conditions and salaries. On the other hand, evidence from this study shows that getting paid employment is the best adaptive response, but opportunities are very limited, especially given the low levels of formal education among the population that create entry barriers for most households.

Figure 21. Relation between employment and perceptions of current vulnerability



Migration

Temporary and permanent migration were part of the resilience framework used for this study as adaptive responses; however, in this case, temporary migration was more a coping action to save lives in response to the escalation of armed conflict in 2016. It was an action that was taken by 21.7 percent of respondents, and perceptions of how good a strategy it was varied (Figure 22). On the one hand, it enabled people to save their lives and those of their family members, but, in most narratives, people said that when they returned, all their assets (mainly animals and produce) and their household goods had been looted and, in some cases, their houses burned.

This typical narrative is by a woman from Tshilundu who perceived that temporary migration was not a good strategy to cope with armed conflict (selected by her as the main shock faced). She said, at the time of the interview, that she was in a vulnerable situation:

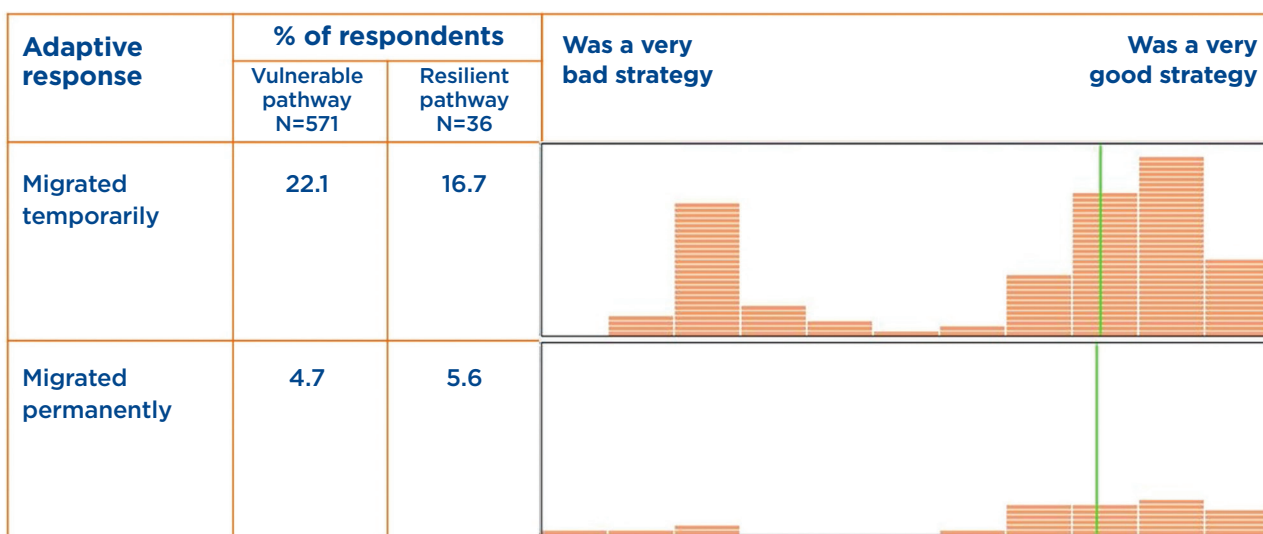
Crisis that can cause war

We have suffered a great deal from the war between the militia and the army. This forced us to flee our home and take refuge for about two-and-a-half months in the bush, where we were hit by diseases, insecurity and starvation. Back in our village, we found that all our belongings had been looted. We ended up without food and our life became very miserable. We resumed our farming with great difficulty as we lacked seeds. We are thankful to our neighbors who helped us with some maize seeds and cassava cuttings. However, the production of our fields has diminished appreciably as the soils are deeply deteriorated. Now, we consume cassava more than maize because we cannot produce maize as before. Our life has not yet resumed its normal rhythm and we are worse than in the past.

Figure 22. Migration and perceptions of its effectiveness, by pathway followed

Which of the following practices did you implement in the experience you shared?

N = 607
(all respondents)



For others, the experience was even harder when they lost relatives to the conflict, as shown in the following narrative by an elderly female household head, who also perceived that temporary migration was not a good strategy and said that she was in a very vulnerable situation.

The death

I am a poor widow. I had four children, but over the course of a year three died of disease. I used to stay with my only son who was married. Following the armed conflict between the militia and the army, we fled to escape. My only son whom I was hoping for has disappeared. I have no news of him. That's why I returned here to our village. I live alone and have some small fields. I am so affected. To survive now, I work for the people of the community in their fields for cash or maize flour. It's difficult for me. I'm unhappy.

On the other hand, other people who also faced the armed conflict and had to temporarily migrate, were able to recover by diversifying into non-agricultural activities, as in the case of this man from Tshilundu. He was able to access credit in the form of diamonds from friends and start a diamond-trading business that enabled his household to recover from the losses caused by the armed conflict.

Armed conflicts

Our village was invaded by militia. We had to leave our home and remained in the bush, leaving all the goods that we had: rabbits, chicken and stored food. This situation was very bad because it plunged me into great difficulties with my family when we returned and were left with nothing. I started farming again and buying diamonds to get by with my family. I did not have the money to buy diamonds, but due to the good relations with my diamond-digging friends, they trusted me and gave me these diamonds on credit and, after I sold them, I gave them the money. That's what helped me find at least the money to get the fields done and feed my family.

This narrative by a woman from Tshilundu reinforces the importance of social relations, access to financial resources and diversification into non-agricultural activities as strategies to develop resilience capabilities.

Conflicts between militia and military

One day I saw the militia in the village, and the soldiers firing on them. Because of this, we went into the bush and, when I came back, my house had been burned and I had lost my two children. My sons used to stay in a school far from the house, and I do not know if they were abducted or are missing. When I found my house burnt, I decided to leave the village and went to where I came from. Over there, the village chief gave me a house and money. For the moment, I'm doing a little business to support myself.

Permanent migration was mainly prompted by family conflict, which is evident in the following narrative by a young man from Kasansa whose main source of income was trade.

The death of my father and my marriage

My father had cattle, sheep, goats, rabbits and poultry, and large areas of cultivated fields. He used to cultivate with animal traction and had a large oil palm plantation. I was studying and had never had to hold the hoe to cultivate. I lived like a prince. My father passed away due to a short illness. My father's family was delighted with all the goods. It was hard to live with this; it was a really unbearable sorrow. My mother remarried my paternal uncle and I had to stop going to school. I got married to take care of my little brothers. Since I did not want to see those people who were enjoying my father's goods, I left my village to live in my mother's home village. When I arrived here, my uncle loaned me money and I started riding long distances with him on a bike to buy maize, peanuts and beans to sell in Mbuji-Mayi. Meanwhile, my wife used to work in the fields. After 6 months, I had my own capital and my own bike. My wife also harvested maize from her field. We live better now, but not as we did before my father died.

Others resorted to permanent migration after experiencing violence that resulted in the loss of their productive assets, as in the following narrative by a man from Kasansa, whose main source of income was agriculture. Access to some financial resources made migration possible for him, and having access to paid employment enabled him to recover.

A gangster hit

I had a bike that I used to go to the surrounding villages to buy maize, beans and other produce that I used to sell. With this job I lived well. One day, bandits entered my house. They took all my capital and a new bike. I sold the old bike, and the little money I got from the sale enabled me to travel to another village. Now, I am cultivating a field and working at a corn mill to provide for my family. My life has improved, but not as before since I cannot afford school fees for my children.

For others, the permanent migration of family members enabled them to recover and improve their livelihoods, as can be observed in the following narrative by a man from Tshilundu who identified unpredictable and erratic rains as the main stressor.

Suffering

I used to raise goats as my main activity and, when I had to escape the armed conflict, I had 15 goats. When we came back, it was difficult for me to resume life as it was before, especially considering the many children I have to provide for, and the fact that I was left with no goods or money to survive. Fortunately for me, after hearing the news, one of my beautiful sons who had migrated, helped me with a large amount of money that allowed me to resume my life and achieve a better situation than before.

The association between perceptions of the usefulness of migration to overcome shocks and stressors and the actual level of vulnerability can be observed in Figure 23. This confirms that, in the case of the project target area, temporary migration was more of a coping action than an adaptive response as it was mainly related to fleeing the escalation of armed conflict, and respondents' perceptions of its usefulness were mixed, but more positive than negative. On the other hand, permanent migration was an adaptive response that shows weak signals of being a promising emergent practice to build people's resilience.

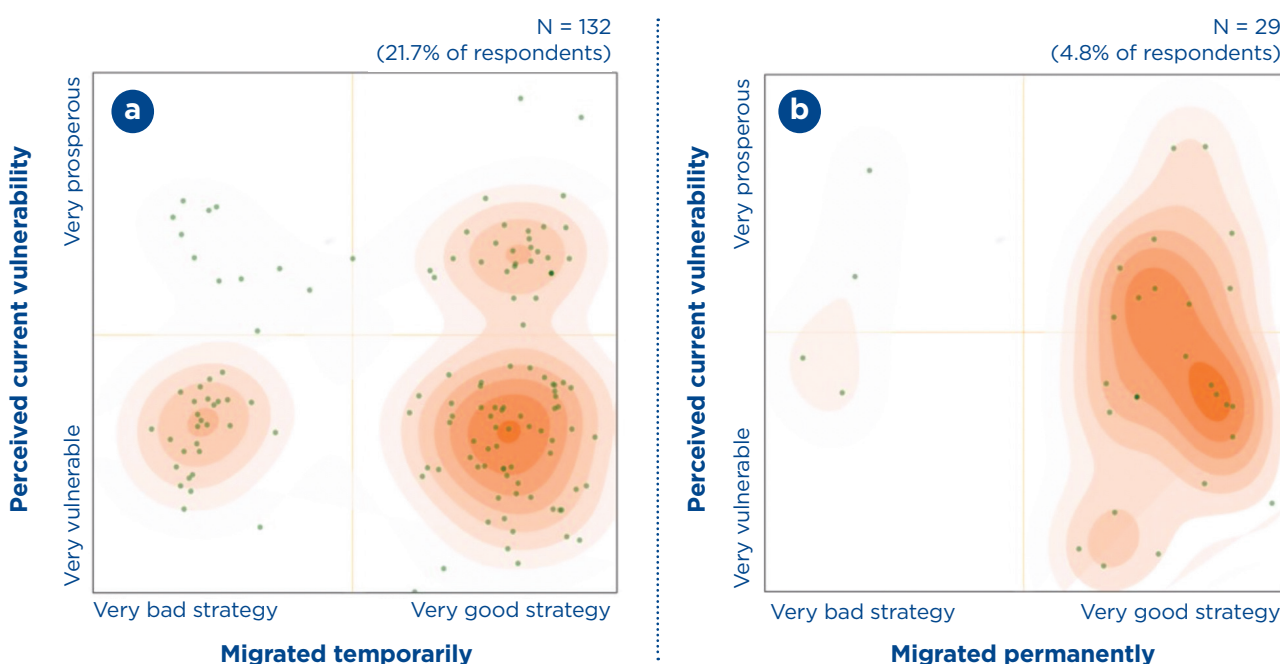
The analysis of different types of adaptive responses helps to understand which have more potential to build resilience, but also challenges some responses that were assumed to be adaptive, but were found to be coping actions based on how they were signified by the respondents and the outcomes they achieved by implementing them.

Within agriculture, the most promising adaptive responses included the use of improved seeds and the adoption of improved practices, especially those that contributed to restoring degraded soils and protecting them. With respect to the diversification of livelihoods, adding non-agricultural activities to the livelihoods portfolio also seems promising, together with permanent employment. This type of employment is by far the best adaptive response, but the opportunities are limited, and the low formal education among the population further limits access to the few available opportunities. Permanent migration also proved to be an effective adaptive response, especially to deal with domestic violence, physical or emotional aggression and insecurity, but opportunities are limited to those who have the resources to pursue this strategy.

On the other hand, in the context of military conflict, taking day labor or migrating temporarily were coping actions rather than adaptive responses. Even if taking day labor was a better coping option than selling assets or using savings, it doesn't necessarily prepare people to respond to similar future events or enable them to fully recover their well-being.

The adaptive responses that showed the most potential are still emergent practices in the context where the project is being implemented, showing weak signals of strengthening resilience, and thus, interventions that amplify these emergent practices will need to be tested, probed and adapted for them to achieve the expected outcomes and impacts.

Figure 23. Relation between migration and perceptions of current vulnerability



Transformative strategies

Transformative strategies are systemic and structural changes at the individual, relational, organizational and institutional levels, aimed to create an enabling environment that establishes the necessary conditions to prevent the occurrence of shocks and stressors, or reduce their frequency, which are essential for the long-term resilience of individuals, households and communities. To assess transformative strategies, this assessment viewed them at different levels, from changes in individual behaviors and collective beliefs and practices, to changes in local organizational practices, to changes in private sector practices and government policies. A slider with stones signifier question was used to estimate the percentage of people who perceived that changes at these levels had occurred in the experiences shared, and their perception of whether these were transforming people's lives negatively or positively.

Individual behaviors and collective beliefs and practices

Figure 24 shows that most respondents (87.6 percent) perceived that individual behaviors had changed in the experiences shared. Perceptions of whether these changes transformed people's lives positively or negatively were mixed, but the major concentration of the responses was on the negative side. On the other hand, only 19.3 percent of respondents perceived that there had been changes in collective beliefs and practices, which have a profound influence on individual behaviors. These included beliefs in witchcraft and fetishism, which especially affect women as it is believed that if a woman loses children due to illness, she is a witch and is blamed for the death of her children. This causes much suffering, as shown by the following narrative by a female household head from Kasansa.

The death of my youngest daughter

I am a widow with seven children. I usually plant cassava, beans and maize in my field to support my family. Last year, my 24-year-old daughter, who was studying 30 km from my home, died. One Saturday morning they called me to inform that my daughter was throwing-up ceaselessly. I asked them to bring her to the hospital, while I was struggling to find money for her care. At night, I was told that my daughter was dead. Following this sad news, her classmates, friends and the boys of the village hit me, and then they destroyed my house and looted all my property, saying that I was the cause of her death. This has strongly impacted my family. I lost everything I had in the house, and even somebody else's money that I had borrowed to pay for my daughter's care. So far, I have not repaid this loan yet. This situation has really destabilized my life. Today I cannot even work in my fields as usual. My life has completely deteriorated.

Figure 24. Changes in individual behavior and collective beliefs and practices, and perceptions of their effect on transforming people lives

The following changes that occurred in the experience you shared ...

N = 607
(all respondents)

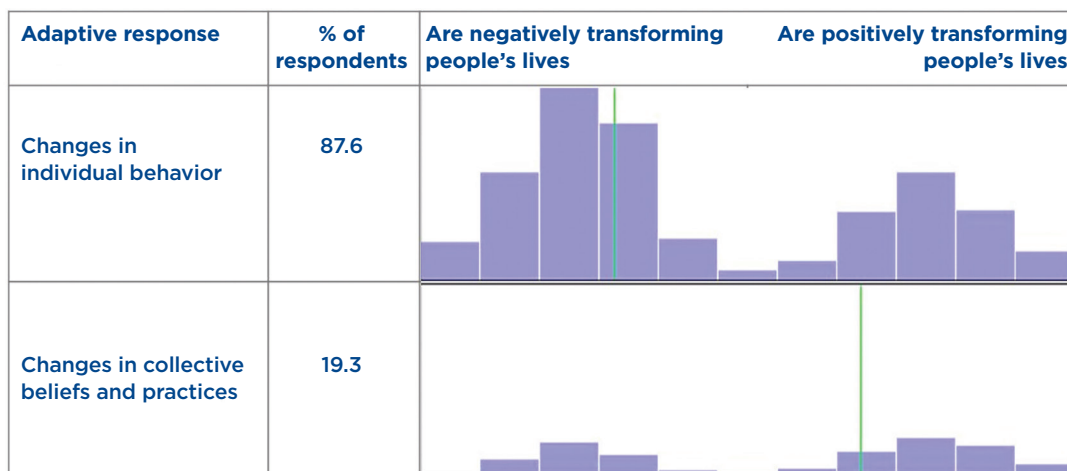


Table 2 shows a selection of narratives in which respondents perceived that in their experience there were changes in individual behavior that negatively transformed people's lives (left side of slider). These included violent behavior that showed no respect for human life—as can be read in many narratives where women, youth and even children were killed—together with looting and pillage that left people with no productive assets to develop their livelihood activities and, in many cases, with not even a place to live after homes were burnt. In addition to the armed conflict and domestic violence, criminal behavior such as theft, corruption and bribery were also frequently described. The erosion of values that leads to dishonesty, nepotism, hate and envy was also apparent. Participants in collective interpretation workshops also mentioned that these behaviors were creating obstacles for transformational change.

These findings show that even though the focus of the Budikadidi project is on food security and nutrition, it is important for the project to work directly, or through partnerships, on healing and peacebuilding processes that focus on positive changes in individual behavior, as well as on collective beliefs and practices. If these root causes of violence and conflict are not addressed, they could escalate, erasing any changes and impacts achieved by the project. During the collective interpretation workshops, participants highlighted the need to work on psychosocial support, conflict resolution and the strengthening of social cohesion.

Table 2. Narratives describing individual behavior that negatively transformed people’s lives

Type of behavior	Respondent description	Story
Violence	Elderly man, Miabi	<p>The death of my wife and my three children</p> <p>In December 2016, I went to Mbuji-Mayi to visit my family. Two weeks later a brother from my congregation called and told me that there was a clash between the militia and the army in my village and that everyone was fleeing. I asked him about my wife and he told me that he had not seen her, because people scattered, and many died. Three days later, I arrived home and found that our home was burned. I searched everywhere where people had hidden, without success, and then found out that she was burned alive in the house with my three children. She had a sore on her right leg, which prevented her escaping. I left to go to my home village. I left everything and my fields behind because I remember her and my children. I was in a shock that I cannot explain, but thanks to Jehovah I could hold on. My health and financial situation have deteriorated.</p>
Violence	Female household head, Tshilundu	<p>The life of a widow</p> <p>My husband was murdered when the militia came in 2016. It happened at night. We saw people from the neighboring village fleeing into the bush. They informed us that the military was coming, and they were killing everyone they met. We also fled without getting anything. We had nothing to eat. My husband decided to go back to the village to get the corn we had left. Unfortunately, he came across the military on his way and was murdered. It was hard for me because I became the sole caretaker of the eight orphaned children. We suffered tremendously to have just enough to eat. I started to make and sell charcoal to feed my children, which is not easy for me because the income is not enough. Today we have already harvested the products of our fields, but it does not cover our family needs as before the death of my husband.</p>
Theft	Young female entrepreneur, Tshilundu	<p>Victim of a theft of all my money</p> <p>I am a manufacturer of soap and this money helps us to survive as my husband has no income. One day, I went to buy the caustic soda that I use for soap making. When I arrived, I asked for the quantity that I needed (usually they sell it per kilogram), and once the quantity requested was weighed, the seller asked me to give the money. Suddenly I looked for money, but I did not have it. Someone had stolen it from me. I panicked because it was all my capital that I had lost. I searched a lot to find nothing. I went home with red eyes and no consolation. I got sick. Later my brother-in-law came to give me a small amount, but it was insignificant and since then I was never able to recover. It has been 3 months since this incident occurred.</p>

Type of behavior	Respondent description	Story
Theft and corruption	Female household head, Miabi	<p>Insecurity in our entities</p> <p>My shock is the armed robbery that I have suffered. I was sleeping when I heard a group of people at my door, telling me to open. They came into the house. There were six heavily armed men, who told me they were taking me to the neighborhood chief because I had to pay a fine. I asked them why I should pay this fine and they said that it was because I started screaming to warn people. Arriving at the chief's place, and even in his presence, they asked for all the chickens that I had at home to be released. As my daughter-in-law had followed me to the chief's house, I asked her to go home to bring my three chickens, and a rabbit that I had. This on top of the 20,000 Congolese francs that they had already taken when we were in the house. I have a life of suffering. I am a widow, but these bandits came to bring me even more suffering. I was able to continue as I had a good amount of cassava in my field that I sold to buy some animals again.</p>
Dishonesty and corruption	Man, Miabi	<p>My diamond well has produced a lot of diamonds after having thrilled me</p> <p>I am a diamond digger and I started this job from a very young age because I did not have the opportunity to go to school. Several years ago, I took a well under concession, not far from the village, to collect gravel and extract diamonds. One day, a diamond dealer who had great influence in the village came to take the diamond well under the pretext that it belonged to him. We brought the problem to the head of the village, who was unfortunately corrupted by the diamond dealer in question and conspired with him to rob me of the well and I lost it. In the days that followed, this well produced a lot of diamonds and this diamond dealer became very rich. When I learned that, I was very shocked. Since then my livelihood has collapsed because of this scam. I lost everything.</p>
Bribery	Man, Tshilundu	<p>Harassment</p> <p>I am a shopkeeper. I use my bike to carry the maize that I buy to sell here in Tshilundu. I must travel for 2 weeks to arrive with the goods here. Once, I was coming back with the goods I had bought, and, along the route, there were military and police who harass at every checkpoint and you must pay to pass. I was stopped by a band of soldiers who took part of the merchandise. I sold the remaining goods here, but really cheaply. This shocked me a lot because I lost a lot of my capital and have not been able since then to continue with my business. Now I work in the field to cover my needs.</p>

Type of behavior	Respondent description	Story
Nepotism	Male household head, Tshilundu	<p>Unemployment and its disadvantages</p> <p>I was prefect of studies in a private school. I was paid 100,000 Congolese francs and other benefits that allowed me to live well, meeting all the needs of my family. One day, the promoter of the school came to tell me that I should leave my post to his brother. The job ended and I did not get the final salary. It changed my life because I no longer had the means to support my family. I started growing maize and cassava, and then I started mining diamonds to have the minimum necessary.</p>
Hate	Female, Kasansa	<p>The disease of hate</p> <p>I am a farmer and I raise animals. It has been 10 months since I was attacked by a bad curse that was put on me by the villagers. I used to be able to feed my family and to pay for my children's education. I had to sell my clothes, the plates I used at the restaurant, and my animals to pay for treatment. Despite all the expenses incurred by traditional practitioners and the hospital, I continue to suffer with this disease of hatred. I don't know how I can continue to cultivate or run the restaurant because I lost all my capital. My children have started to go to the fields to work so we can have food. My husband went to Lubumbashi and does not help us. I suffer with these children. I started raising animals again to avoid the interruption of my children's studies.</p>
Alcoholism and domestic violence	Female household head, Tshilundu	<p>Drunkennes</p> <p>It's been 3 weeks since I divorced my husband because of the alcohol he drank every day. When he drank, he would always come to insult me. He lost his job and the children had to drop out of school. One day he took his machete and hurt me, so I decided to leave him forever. I took all the children to my parents' home. Unfortunately, this year the children missed school. To overcome this difficulty, I prepare alcohol to sell, and with the money, I pay for the children's school.</p>

Local organizational practices

Some 14.8 percent of respondents said there had been changes in religious organizational practices that were positively transforming people's lives (Figure 25), as can be observed in this narrative from a young male household head from Tshilundu who suffered family violence.

Suffering of my youth

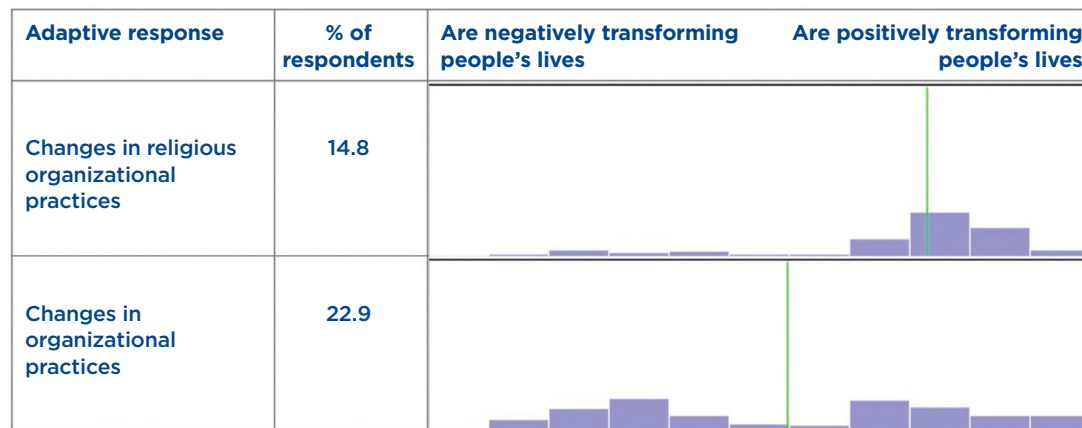
My father is a great trader and has a lot of material goods. He has two wives and I am the son of his second wife. When I was in fourth year of high school, my father refused to continue paying for my education under the influence of his first wife who was jealous because she had not given birth to a boy. My father argued that he took this decision because I was already an adult who could pay for my own tuition. I was 15 years old and had to stop studying. This was painful because my mother did not have the means to support me.

Our pastor and members of our church encouraged me and gave me advice. I began to pray incessantly. I went to the mountains every Saturday for God to reveal my future and protect me. God helped me. I learned to repair radios and phones by myself. This job allowed me to save money and I went back to school 2 years later and today I am a state graduate and married.

Figure 25. Changes in organizational practices, and perceptions of their effect on people’s lives

The following changes that occurred in the experience you shared ...

N = 607
(all respondents)



This finding shows that working with religious groups to amplify these practices could offer an opportunity to promote healing and peacebuilding, to begin addressing the root causes of violence and conflict, and changing the individual behaviors that are negatively affecting people’s lives.

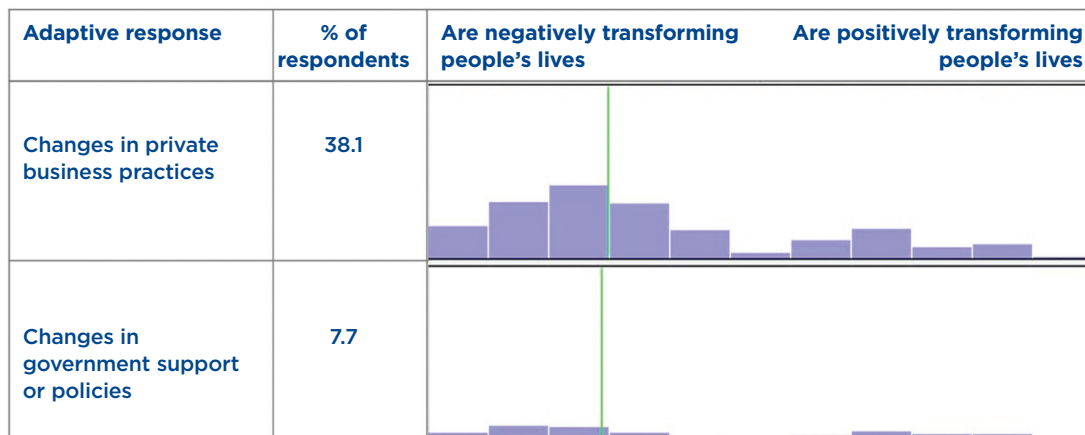
Private and public-sector practices

Respondents perceived that government support and policies, as well as private sector practices, were negatively affecting people’s lives, as can be observed in Figure 26. Moreover, only 7.7 percent of respondents perceived that there had been changes in government support or policies, and narratives hardly mentioned public policies or services. When respondents spoke about illness and the need to use health services, they always said they needed to find the money to pay for these, leading them to a loss of savings and/or assets. During the collective interpretation workshops, participants said local government made poor decisions without regard for people’s needs, and that few existing government regulations were enforced. For example, there were regulations about cutting trees and, while this had a detrimental effect on forests (see forest management graph in Figure 16), the most vulnerable depended on charcoal to generate income. Moreover, public policies were not providing incentives for job creation, and very few people were accessing permanent work opportunities (Figure 20).

Figure 26. Changes in private and public-sector practices, and perceptions of their effect on people’s lives

The following changes that occurred in the experience you shared ...

N = 607
(all respondents)



Some 38 percent of respondents believed that private sector practices were changing but were negatively affecting people lives. During the collective interpretation workshops, participants agreed that the private sector culture was to evade taxes—which reduced funding of government services such as health care—and to not comply with government laws and regulations.

These findings relating to transformative strategies show that there is ample space for improvement at all levels. Working to change existent systems and structures at different levels—individual and collective behavior and beliefs, organizational practices, private sector practices, and government policies and practices—needs to be a priority to create an enabling environment to strengthen long-term resilience capabilities.

In relation to government policies and practices, during the collective interpretation workshops, participants mentioned the need to:

- Improve governance systems by promoting tolerance, a democratic culture and the alternation of power.
- Build collaboration and partnership between the authorities and the population.
- Fight corruption at all levels.
- Enforce the laws and regulations necessary for the development of communities and the protection of natural resources.
- Provide follow-up and support for the implementation of community-level development plans.

In relation to private sector practices, collective interpretation workshop participants mentioned the need to work on labor rights, especially as they relate to access to health care and fair pay.

Integral Human Development outcomes

As described in the analytical framework used for this study (Figure 1), the combination of coping actions, adaptive responses and transformative strategies that people implement in response to shocks and stressors faced, leads to outcomes in integral human development. CRS defines IHD, based on Catholic social teaching, as comprising four key dimensions:

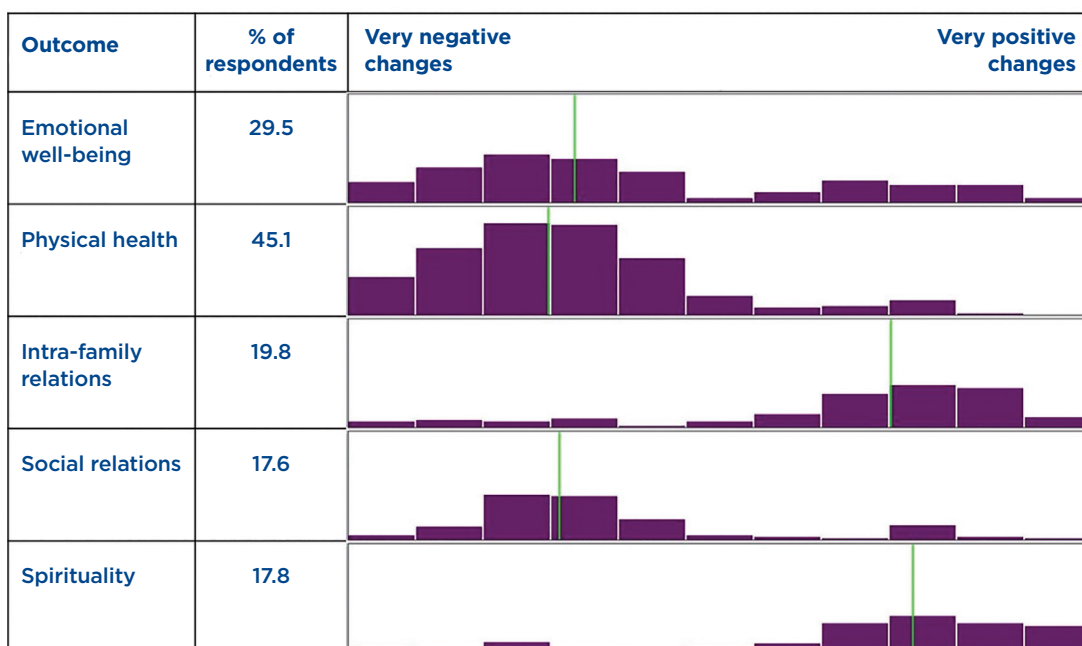
- **Personal:** Psychosocial well-being, physical health, social cohesion and spirituality
- **Livelihoods:** Food security, nutrition, income and employment
- **Institutional services:** Access to health, education, housing and other basic services
- **Empowerment:** Gender equity, decision-making capacity, influence and advocacy

To assess the perceived changes in the elements of each dimension of IHD, and the direction of the change—from very negative to very positive—a slider with stones was used. Figure 27 shows the findings for the elements of the IHD’s personal dimension. In line with the other findings discussed in this report, respondents perceived that they had seen negative changes in their emotional well-being, physical health and social relations (29.5, 45.1 and 17.6 percent, respectively). On the other hand, a smaller proportion of respondents were beginning to see positive changes in their spirituality and intrafamily relations (17.8 and 19.8 percent, respectively).

Most respondents had seen their food security and income (77.3 and 72 percent, respectively) negatively affected, which was emphasized in most of the narratives collected. Fewer respondents had seen changes in their housing conditions (12.9 percent) and still fewer in their employment opportunities (7.9%), and the direction of these changes was also perceived to be negative, especially in relation to employment opportunities. These findings have arisen from the vulnerable pathways that 94 percent of respondents followed, showing a strong association between the pathways followed and the resulting IHD outcomes.

Figure 27. Perceived changes in the elements of IHD’s personal dimension

The experience you shared generated changes (positive or negative) in your or your household’s ... N = 607
(all respondents)



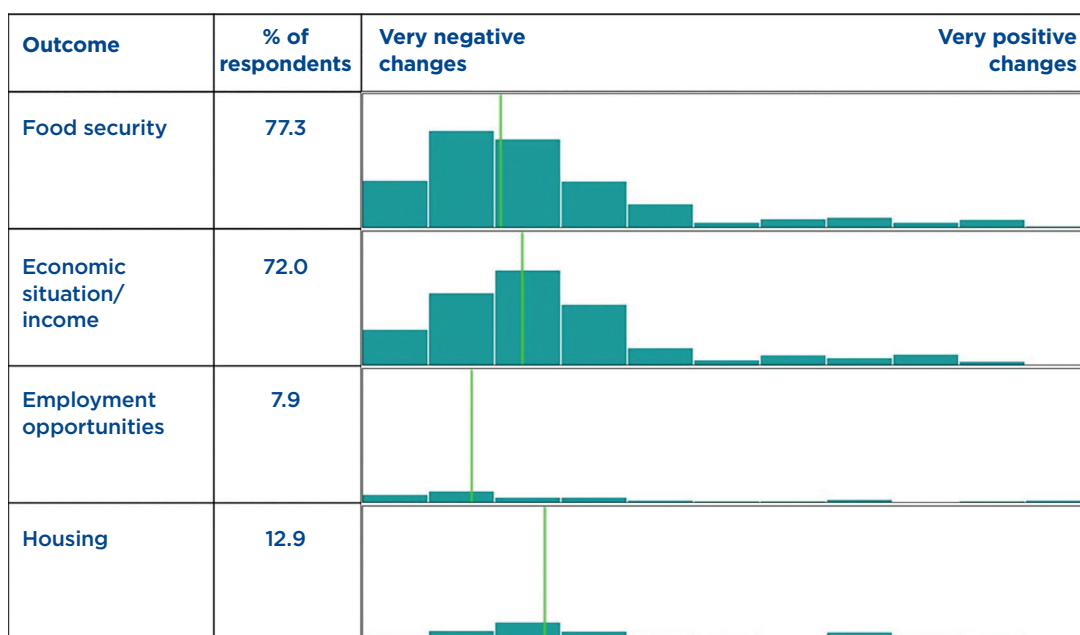
Respondents perceived that they had seen negative changes in their emotional well-being, physical health and social relations. *Photo by Sam Phelps for CRS*



Figure 28. Perceived changes in the elements of IHD’s livelihoods dimension

The experience you shared generated changes (positive or negative) in your or your household’s ...

N = 607
(all respondents)

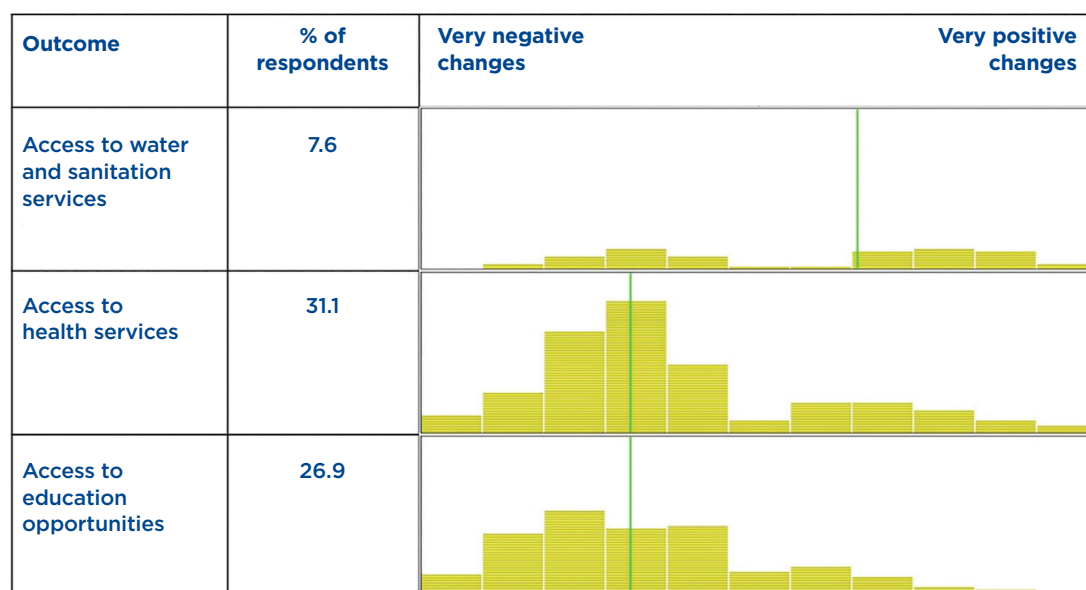


The negative effect on the elements of IHD’s livelihoods dimension, coupled with the lack of government support and services, also led to negative changes in access to health services and education opportunities, which were perceived by 31.1 and 26.9 percent of respondents, respectively (Figure 29). The limited access to these institutional services was broadly shared in the many narratives collected for this assessment. The negative changes in these two elements of IHD’s institutional services dimension drew people into a vicious cycle of poverty that explains the high levels of vulnerability found in the population. Reversing these trends requires a strong focus on improving institutional services that are fundamental to the sustainable development of the population, that will lead them onto a resilience pathway.

Figure 29. Perceived changes in the elements of IHD’s institutional services dimension

The experience you shared generated changes (positive or negative) in your or your household’s ...

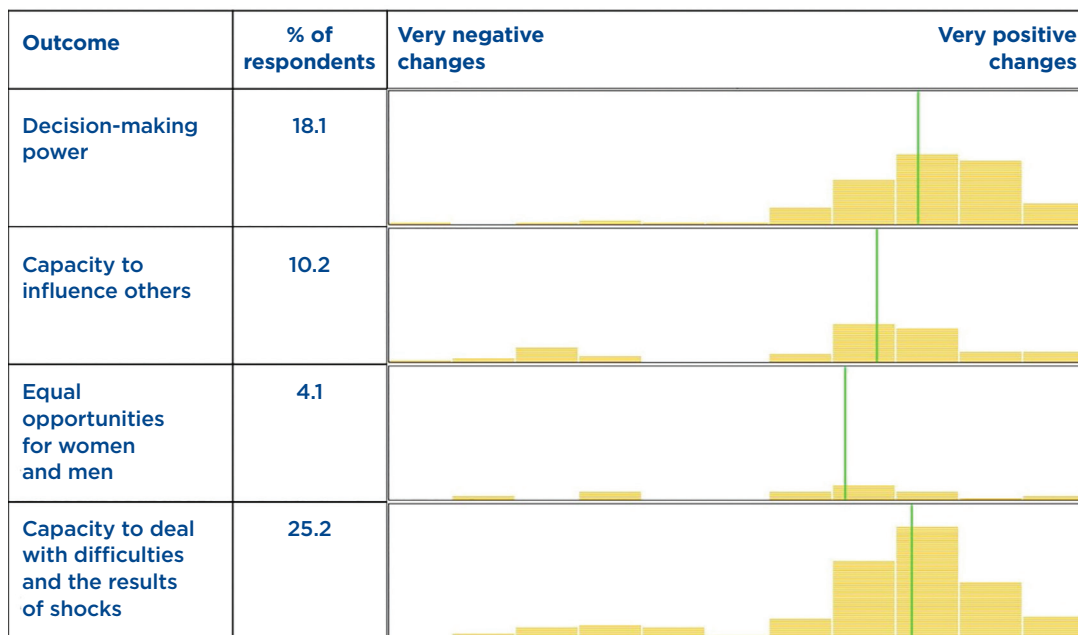
N = 607
(all respondents)



Fewer respondents reported changes in the elements of IHD’s empowerment dimension, with most respondents (25.2 percent) citing changes in their capacity to deal with difficulties and the results of shocks, followed by their decision-making power (18.1 percent). Fewer respondents perceived changes in their capacity to influence others (10.2 percent), and still fewer in creating equal opportunities for women and men (4.1 percent). Surprisingly, most respondents perceived positive changes in all these elements of IHD’s empowerment dimension. This reinforces the important role that human agency has in responding to shocks and stressors. With limited access to knowledge and information and a low focus on longer-term goals and objectives, people relied mainly on taking responsibility and acting for themselves (Figure 10), which empowered them.

Figure 30. Perceived changes in the elements of IHD’s empowerment dimension

The experience you shared generated changes (positive or negative) in your or your household’s ... N = 607
(all respondents)

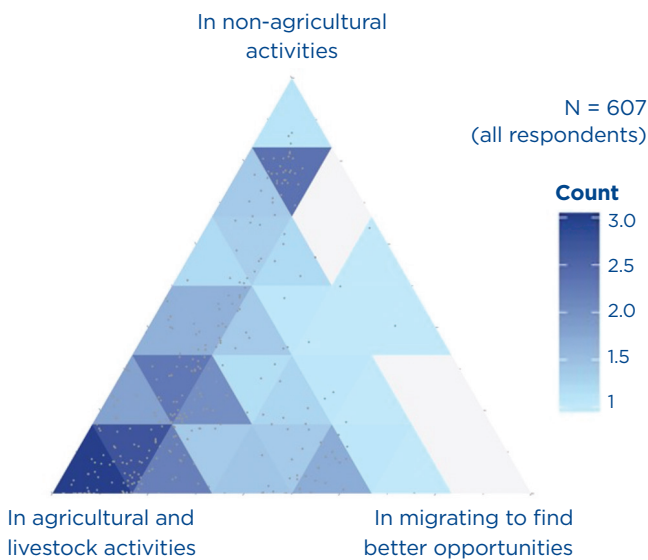


Perspectives for the future

When respondents were asked where they considered the opportunities for the well-being of their families to be, they gave greater relative importance to agricultural activities (Figure 31). This is not surprising given that, in the Budikadidi project target implementation zone, there are very few opportunities beyond agriculture for developing households' livelihoods. However, there is already a clear awareness that there is a need to complement these activities with off-farm and non-agricultural activities to ensure households' well-being and resilience, confirming the findings on the analysis of adaptive responses (Figure 18). Migrating to find better opportunities was seen as less important, but as most dots were inside the triad, respondents still considered migration an alternative.

Figure 31. Perception of the relative importance of livelihood activities

Based on the experience that you shared, you consider that the opportunities for the well-being of your family are ...



Conclusion and Recommendations

Through people’s own narratives, and their self-signification of those narratives, this study has highlighted the complexity of their continually evolving needs and interests, the insidious effects of unexpected shocks and long-term stressors, and the unpredictable influences of individual and collective action, adaptive responses and transformational change to deal with these situations.

Although 93.4 percent of respondents perceived the experience they shared as negative, the narratives told a collective story of tenacity and adaptability against great odds. Individuals persevered, using the limited resources they had and exploring the limited options available to them. They often, individually and collectively, embodied the concept of self-sufficiency—*budikadidi*. This is a strong foundation on which further interventions to enhance resilience can build.

.....
The narratives told a collective story of tenacity and adaptability against great odds. They often embodied the concept of self-sufficiency—*budikadidi*.
.....

Following the learning questions that informed the design of this assessment, the following conclusions were reached, and align with concrete programming design recommendations:

Main shocks and stressors

Most respondents (97 percent) cited a shock or stressor in the experiences shared, despite the prompt question having a neutral tone. Some 40.7 percent cited armed conflict; social, ethnic and religious conflict; and, to a lesser extent, insecurity or theft, and domestic violence as the key types of shocks. The effects of these are evident in the narratives as well as in the negative outcomes they had on emotional well-being, physical health and social relations. Local authorities said the conflict was over and that the region was peaceful again. However, after further discussion, participants in the various collective interpretation workshops agreed that the conflict was not over and, if old and new sources of conflict were not managed, there was a potential for it to escalate again. These experiences have also resulted in changes in individual behaviors that are negatively transforming people’s lives.

This finding highlights the need for **peacebuilding interventions**, which will be vital in order for the project to promote transformational change that will build long-term resilience capabilities. CRS has ample experience in peacebuilding that can be leveraged. Its A3B peacebuilding model—which involves *binding* activities to create space for individual self-transformation and trauma healing, *bonding* activities to strengthen relationships and mutual understanding within different identity groups, and *bridging* activities to develop trust among identity groups to foster dialogue in conflict resolution—has proven to be very effective. The project could also partner with organizations working in peacebuilding activities in the project target area.

Illness and death were cited by 30.7 percent of respondents as major stressors. Many narratives told of a respondent losing their savings, assets and even livelihoods when trying to pay for health care for themselves or a loved one. In the narratives, people tended to move between traditional healers and conventional health services, frequently with limited success. These findings show the urgent need for **health systems strengthening interventions**, which will be a transformational strategy to build resilience capabilities.

Some 8.5 percent of respondents said the main shock or stressor they faced was climate-related, 4.8 percent cited natural resource degradation, and 4.1 percent, animal and plant disease. As respondents were asked for only the main shock or stressor faced, they prioritized the armed conflict. People perceived a greater frequency of soil degradation and drought, which had a significant negative impact on food availability and income, as shared in many of the narratives and validated in the collective interpretation workshops. Therefore, the project needs to invest in **soil restoration and protection and climate change adaptation interventions**. This will require a strong focus on the development of natural resources management (NRM) and innovation skills among project participants.

Resilience capabilities

Actual resilience capabilities were low, as reflected in the high percentage of respondents who followed a vulnerable pathway (94 percent). Women not only started from a more vulnerable position, but were disproportionately affected by shocks and stressors, given their lower level of education and the effect of customary laws that discriminate against them and contribute to gender inequity, making it more difficult for them to recover.

.....
Actual resilience capabilities were low, as reflected in the 94 percent of respondents who followed a vulnerable pathway.
.....

Participants in collective interpretation workshops expressed their concern at the high percentage of respondents who followed vulnerable pathways. Having not recovered from the shocks and stressors faced and being exposed to new ones creates a high risk of people being drawn into a vicious circle that could lead them to a collapse of their livelihoods. This sets an extremely low baseline for the project and makes it vitally important for changes in these pathways to be periodically monitored. It will thus be important to replicate this assessment at project midterm to assess whether the situation is improving and, if not, to make the necessary adaptation to the approach and interventions.

An effective intervention strategy must augment resilience capabilities by:

- Scaling identified and proven **good practices** that people are already implementing to cope with shocks and stressors.
- Amplifying **emergent practices** that show promise for helping people adapt, to better respond to future shocks and stressors.
- Influencing **multi-level transformational change** in individual behaviors and collective beliefs and practices, organizational practices, private sector practices, and public policies, practices and services to reduce structural barriers to transformational change.

Good practices

This assessment helped to identify good practices that helped people cope with shocks and stressors that will be important to continue promoting at scale. These include:

- **Human agency:** The findings validate the importance of a focus on developing people's human agency, capabilities and livelihood opportunities, to enable them to focus on longer-term goals. This implies a greater emphasis on developing the necessary skills to successfully pursue livelihood opportunities. CRS has developed the SMART skills approach (Skills for Marketing and Rural Transformation) on the premise that the development of organizational, financial, marketing, NRM and innovation skills are fundamental to transforming rural livelihoods, and has recently generated evidence on their impact on people's lives.
- **Financial management and savings:** Using savings was perceived to be one of the best options for coping and was the second-most-used among respondents (26.7 percent). Selling assets was the coping mechanism used by most respondents (45.1 percent) but would be a less sustainable option. Households should be empowered to improve the management of their finances and save to better respond to and recover from future shocks and stressors.
- **Fair day-labor opportunities:** Taking day labor was used as a last resort but proved to be an effective coping mechanism that yielded even better results than selling assets or using savings. Developing the agricultural sector will be important for creating more labor opportunities, but it will also be important to work on labor rights, especially as they relate to access to health care and fair pay.

Emergent practices

This assessment helped to identify practices that are enabling people to adapt to be better prepared to respond to future shocks and stressors, that the project will need to amplify. These include:

- **Adoption of improved agricultural practices:** Within agriculture, the most promising adaptive responses included the use of improved seeds and the adoption of improved practices, especially those that contributed to restoring degraded soils and protecting them. Therefore, it will be important for the project to focus on the development of farming and natural resources management skills among farmers, so they can implement the adaptive responses essential for restoring and protecting crucial natural resources.
- **Off-farm and non-farm activities:** The assessment showed evidence of the risk that households face when they depend exclusively on agriculture to develop their livelihoods. Thus, livelihoods diversification is vital. Some 16 percent of respondents moved into off-farm or non-farm activities, and more respondents who followed a resilient pathway took these adaptive responses than those who followed a vulnerable pathway. It will be important for the project to identify opportunities for promoting off-farm and non-farm livelihoods diversification as these have the potential to be effective adaptive strategies to build resilience.
- **Education, training and employment:** As one-fifth of respondents could not read and write, and only 34.3 percent had education beyond primary school, it is vital that education and technical/vocational training forms part of future interventions, both to increase the likelihood of accessing available waged employment and to increase people's understandings of agricultural interventions they can employ (improved seeds, soil restoration and protection, use of improved cropping practices, and production systems diversification).

Multi-level transformational change

This assessment has also showed the need to influence transformational change at different levels:

- **Changes in individual behaviors and collective beliefs and practices:** The findings show that the armed conflict and domestic violence; criminal behavior such as theft, corruption and bribery; and an erosion of values that led to dishonesty, nepotism, hate and envy, created obstacles to transformational change. If the root causes of violence and conflict are not addressed, they could escalate, erasing any changes and impacts achieved by the project. During the collective interpretation workshops, participants highlighted the need to work on psychosocial support, conflict resolution and social cohesion.
- **Public policies, practices and services:** Respondents cited laws made without reference to the community, a lack of the rule of law, a poor policy environment for incentivizing job creation and weak public service delivery systems that limited access to quality health care and education. Improving these will require functional governance systems, collaboration between the authorities and the population, reducing corruption, enforcing laws and regulations, and supporting the implementation of community development plans.

IHD outcomes

Findings have shown a strong association between the pathways followed and the IHD outcomes in three of its four dimensions: personal, livelihoods, and institutional services. This confirms the importance of interventions aimed to develop resilience capabilities in order to promote sustained impacts on food security and nutrition, and the integral development of individuals, households and communities.

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