Baseline Evaluation of the Takunda Resilience Food Security Activity in Zimbabwe

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The Implementer-Led Evaluation & Learning Associate Award (IMPEL) works to improve the design and implementation of Bureau for Humanitarian Assistance (BHA)-funded resilience food security activities (RFSAs) through implementer-led evaluations and knowledge sharing. Funded by the United States Agency for International Development (USAID) BHA, IMPEL will gather information and knowledge in order to measure performance of RFSAs, strengthen accountability, and improve guidance and policy. This information will help the food security community of practice and USAID to design projects and modify existing projects in ways that bolster performance, efficiency, and effectiveness. IMPEL is a seven-year activity (2019–2026) implemented by Save the Children (lead), TANGO International, Tulane University, Causal Design, Innovations for Poverty Action, and International Food Policy Research Institute.

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ACRONYMS

BHA	Bureau for Humanitarian Assistance
CI	Confidence Interval
CPR	Contraceptive Prevalence Rate
F&M	Female and Male
FCS	Food Consumption Score
FIES	Food Insecurity Experience Scale
FNM	Female no Male
HFC	High-Frequency Checks
HH	Household
IE	Impact Evaluation
IMPEL	Implementer-Led Evaluation & Learning Associate Award
IPA	Innovations for Poverty Action
IPM	Integrated Pest Management
IRB	Institutional Review Board
MAD	Minimum Acceptable Diet
MDD-C	Minimum Dietary Diversity – children
MDD-W	Minimum Dietary Diversity – women
MNF	Male no Female
MRZ	Medical Research Council of Zimbabwe
NRM	Natural Resource Management
ORT	Oral Rehydration Therapy
PII	Personal Identifying Information
PPP	Purchasing Power Parity
QP	Q-Partnership
RCT	Randomized Controlled Trials
RCZ	Research Council of Zimbabwe
RFSA	Resilience Food Security Activity
SACCO	Savings and Credit Cooperative Society
SFECG	Supplementary Feeding and Expanded Care Groups
TVET	Technical Vocational Education Training
USAID	United State Agency for International Development
USD	United States dollar
VC	Village Cluster
VSLA	Village Savings and Loan Association
WASH	Water, Sanitation, and Hygiene
YSLA	Youth Savings and Loan Association

1. INTRODUCTION

Under the Implementer-Led Evaluation and Learning (IMPEL) Associate Award funded by the United States Agency for International Development (USAID) Bureau for Humanitarian Assistance (BHA), Innovations for Poverty Action (IPA) is conducting an impact evaluation of the Takunda resilience food security activity (RFSA) in Zimbabwe. CARE is implementing Takunda—"*we have overcome*" in Shona—that aims to achieve sustainable, equitable, and resilient food, nutrition, and income security in Masvingo and Manicaland Provinces by improving income, nutritional status, and resilience to shocks and stressors of vulnerable households (HH), women, and youth. The 5-year Takunda RFSA has three main purposes:

- Purpose 1: Gender-equitable income for poor and vulnerable households.
- Purpose 2: Health, nutrition, and sanitation for children, girls, and women.
- Purpose 3: Resilience to shocks for poor and vulnerable households.

Each purpose encompasses various interventions, which may be layered to provide customized assistance to individuals depending on the number of targeting criteria they fulfill. Takunda will be implemented until the end of 2025 and will include the following core interventions:

- Life skills and business training,
- Cash transfers,
- Weirs irrigation and solar-powered gardens,
- Farmer field business schools and producer groups strengthening,
- Expanded care groups,
- Village savings and loan associations (VSLAs) and youth savings and loan associations (YSLAs),
- Training on health, nutrition, life, and leadership skills for adolescents,
- Water, sanitation, and hygiene (WASH) interventions on infrastructure and community outreach,
- Technical vocational education training (TVET),
- Disaster risk management, and
- Natural resources management (NRM).

The target population for the Takunda activity is extremely poor, chronically vulnerable, and high malnutrition-risk households living across Chivi and Zaka Districts (Masvingo Province) and Buhera and Mutare Districts (Manicaland Province). At baseline, 60% of the population lived under the $1.90 United States Dollar (USD) Purchasing Power Parity (PPP) poverty line, and 24% of the children were stunted in Masvingo and 35% in Manicaland. The eligibility of households for the various interventions depends on demographic characteristics and socioeconomic status.

Innovations for Poverty Action (IPA) is conducting an impact evaluation to assess the overall impacts of the Takunda activity. The study's objective is to evaluate the cost-effectiveness of the Takunda activity interventions in Chivi and Zaka districts (Masvingo Province) and Buhera and Mutare districts (Manicaland) on outcomes such as poverty reduction and child nutrition.

IPA will measure the impact of the activity 36 months after baseline on the following primary outcomes:

- Consumption,
- Dietary diversity,
- Child growth and development based on anthropometric measures,
- Food security,
- Assets value, and
- Subjective well-being.

The purpose of this report is to summarize the findings from the baseline survey. Section 2 of this report describes the research methodology, including the research design and the sampling strategy. Section 3 of the report discusses the field organization activities, including data collection and the supervision and monitoring of fieldwork. Section 4 describes the key findings of the baseline. The last section presents the next steps of the RFSA.

2. METHODOLOGY

2.1 Study Area

The Takunda activity serves 301,636 individuals in 77,211 households, living in 92 wards spread across Chivi and Zaka Districts (Masvingo Province) and Buhera and Mutare Districts (Manicaland Province). Within the 92 activity wards, villages are grouped into 564 village clusters (VCs). In this context, the randomized control trial (RCT) focuses on a subset of 161 VCs; this translates to 3,348 households living in 87 wards in 207 villages in the Masvingo and Manicaland Provinces.

2.2 Baseline Sample Size

IPA field staff interviewed 3,348 households between April 30, 2022 and July 4, 2022. Enumerators conducted an average of 2.70 surveys per day. *Table 1* below shows the number of completed household surveys by province and district.

Table 1. Surveys by province and district

Province	Districts	Household Reached	Completed
Manicaland	Mutare	1,265	100%
	Buhera	1,007	100%
Masvingo	Chivi	543	100%
	Zaka	533	100%
	Total	**3,348**	**100%**

IPA's field team also collected anthropometric measurements and captured the weight and height of each child under 36 months. Of the 3,348 households surveyed, 1,646 (49%) had children eligible for anthropometric measurements. The anthropometric survey was not administered in 189 households because the eligible children were absent. In total, 1,678 children in 1,457 households were weighed and measured.

In addition, IPA randomly selected 42% of households to respond to the gender (cash), agriculture, sanitation and hygiene, and resilience modules; and 51% of households to answer the women's health module and the module on contraceptives.

2.3 Sampling Strategy

Takunda is a multi-faceted activity comprising various interventions targeting households in the selected communities. The total number of participants and cost per participant of each intervention vary widely. Therefore, IPA's survey strategy focused on the most "tightly" targeted[1] component of the Takunda

[1] Here, "tightly targeted" refers to the fact that interventions differ in how precisely the target group can be described *ex-ante* based on third-party easily verifiable characteristics.

activity: Supplementary Feeding and Expanded Care Groups (SFECGs), which focuses on maternal and child nutrition for pregnant and lactating women and households with children under the age of 5. The SFECG intervention targeted at the SFECG-eligible stratum comprises an estimated 36% of all spending through Takunda activities. IPA targeted a random sample of 2,000 households from the SFECG-eligible stratum and a random sample of 1,300 additional households from the "SFECG-ineligible" stratum. The SFECG-ineligible stratum refers to all other households eligible to participate in Takunda interventions but not eligible for the SFECG component, as described below.

To be SFECG-eligible, the household must have at least one pregnant or lactating woman or at least one child under 2 years old living in the household.

2.4 Random Assignment and Balance

In consultation with CARE Zimbabwe and BHA, IPA designed an RCT to evaluate the impact of the Takunda activity and performed randomization at the VC level. RCTs are a rigorous evaluation method that can provide strong causal statements about whether an activity is achieving its goals. In an RCT, some members of a target population are randomly assigned to participate in an activity (treatment group) or not to participate (control group) during the study period. Because the selection between the two groups is random, they should, on average, be similar before the activity starts. Therefore, any difference between the two groups after the activity can be attributed to the activity itself.

This design will allow measurement of the overall impact of the Takunda activity and determine which components are the most effective. For the impact evaluation and before the baseline, IPA assigned households to treatment and control groups by eligible and ineligible stratum, as indicated in *Table 2* below.

Table 2. Distribution of households by control and treatment group and disaggregated by SFECG-eligible and SFECG-ineligible stratum before baseline

	Total	Treatment	Control
Number of VCs	161	88	73
SFECG-eligible households	2,000	1,212	788
SFECG-ineligible households	1,300	788	512
TOTAL target households	3,300	2,000	1,300

After collecting baseline data, IPA adjusted the number of households in each stratum and treatment group, as shown in *Table 3*.

Table 3. Distribution of households by control and treatment group and disaggregated by SFECG-eligible and SFECG-ineligible stratum after baseline

	Total	Treatment	Control
Number of VCs	161	81	80
SFECG-eligible households	1,584	865	719

	Total	Treatment	Control
SFECG-ineligible households	1,764	966	798
TOTAL target households	3,348	1,831	1,517

The decrease in the proportion of SFECG-eligible households is due to an error in the sampling process that researchers addressed after they surveyed approximately 25% of the households. This led them to correctly label previously eligible households as ineligible. This process is explained more fully in section 3.6.

2.5 Baseline Questionnaire Development

In consultation with CARE International, BHA, and the principal investigators, IPA developed the baseline questionnaire for the baseline survey of the Takunda Impact Evaluation. The primary objectives of the baseline survey are: (1) to assess the status of key indicators based on USAID's "*Food for Peace Indicators Handbook*" and other demographic variables to gain a better understanding of the prevailing conditions of the study population, (2) to improve the precision of the impact estimates, and (3) to collect necessary baseline information to measure heterogeneous treatment effects at endline.

Enumerators administered the survey in Shona, the local language of Zimbabwe spoken in Masvingo and Manicaland. Responses were collected using the SurveyCTO data collection application. The baseline instrument had two parts: a household survey and an anthropometric survey. As per BHA guidelines, enumerators administered the household survey to the household head or a knowledgeable person in the household. In addition, specific survey modules were administered to selected household members, as shown in *Table 4*. The anthropometric survey was administered to children below 36 months.

2.5.1 Household Survey

The household survey was done through an in-person interview with an average duration of 1 hour and 50 minutes. The instrument included the following modules:

Table 4. Baseline instrument

Modules	Module's Respondent
Household Identification	Head of household or responsible adult household member if household head is absent
Household Screening	
Consent for the main survey, GPS, audio recording	
Verification and updating contacts	
Household members	
Cash for Asset	
Children's Nutritional Status & Feeding Practices	Primary caregivers of all children aged 0–59 months

Modules	Module's Respondent
Women's health, nutritional status, dietary diversity, and family planning	All women aged 18–49
Gender and cash	All men and women who earned cash. No substitutes
Women empowerment	Women in a relationship (married or living with a partner)
Household sources of income	Head of household or responsible adult household member if household head is absent
Household food access	Person in charge of food preparation, who decides what food items the household should buy, what to eat on a specific day, and what quantities
Asset ownership	Head of household or responsible adult household member if household head is absent
Consumption	
Livestock	
Financial health	
Basic farming	
Agriculture	All farmers with access to a plot of land and involved in the decision-making for that plot
Savings information	Head of household or responsible adult household member if household head is absent
Loan and savings	
Mental health	
Self-control	
Water, sanitation, and hygiene	
Resilience measurement	
Access to credit and group membership	
Housing quality	
Contraceptives	All women aged 18–49

The modules were administered to household members as indicated in *Table 4.* Additionally, IPA administered certain modules (women's health, gender, agriculture, sanitation and hygiene, resilience, and contraceptives) to a random subsample of 50% of the households to reduce overall survey length and respondent fatigue. See Annex 1 Baseline survey tools for a copy of the complete baseline survey.

2.5.2 Anthropometric Survey

The anthropometric survey was administered to all children aged between 0 and 36 months in sampled households. The anthropometric survey was administered by experienced nutritionists, one for each district team. The measurements were recorded on SurveyCTO at the end of the baseline questionnaire. The survey measurements included children's heights, weights, mid-upper arm circumference (MUAC), and edema; the measurements were recorded using SurveyCTO.

3. DATA COLLECTION

3.1 Team Composition

The Takunda baseline data collection was led by IPA's Senior Research Associate Daniele Barro. IPA's Senior Field Manager Patrick Simbewe led the training of the enumerators and the supervisors, and IPA Research Associate Monserrat Lara oversaw the data cleaning and programming of survey questionnaires. The principal investigators of this study are Emily Bream, Lasse Brune, Craig McIntosh, Dean Karlan, and Jessica Goldberg.

Q-Partnership (QP) International was contracted by IPA for the primary data collection. QP organized a team of 20 enumerators, four supervisors, eight anthropometric surveyors, one field manager, and two back checkers. The team was divided into four groups, with one group surveying each district. The baseline data was collected using the SurveyCTO application and uploaded to the SurveyCTO server every day of fieldwork.

3.2 Pilot Test Survey and Training

To ensure data quality and well-functioning of the survey instruments, survey instruments were bench-tested iteratively over more than two months before starting the data collection. IPA conducted a field pilot with 40 households in Mutare in April. The instrument was refined after debriefing with the field team after piloting.

Enumerator training took place before the field pilot, running from 11th to 28th April 2022. The objective of the surveyor training was to equip the enumerators with the necessary skills to perform their role as part of a survey team and to become familiar with the baseline survey instrument and the guidelines that regulated the execution of the fieldwork.

The training modules comprised theoretical, practical, and discussion-focused components. The theory component focused on fundamental principles and ethics of research, as well as fieldwork policies and protocols. The training facilitator went through the questionnaire, question by question, ensuring that each question was clearly understood and that enumerators could ask it the same way consistently in the language of the survey. The training agenda was designed to optimize discussions and to learn from previous personal experiences, as all the enumerators have previously been part of QP's field surveys in the recent past. In addition, the training was as practical as possible regarding the use of devices, including anthropometry and tablet-based data collection and tracking of households.

3.3 Research Ethics and Data Quality Protocols

To ensure research is conducted ethnically and that respondents' privacy is protected, IPA implemented the following actions: 1) Institutional Review Board (IRB) review and approval of the study, and 2) data encryption.

3.3.1 Ethics Review

IPA submitted the research protocol, the survey instruments, and the consent form to the IPA IRB, the Medical Research Council of Zimbabwe (MRZ), and the Research Council of Zimbabwe (RCZ) for review and approval. These research ethics committees monitor the respect for the rights of the human subjects participating in the research. The data collection activities complied with the data security protocol submitted to the IRB.

3.3.2 Data Security and Encryption

To ensure data security, IPA encrypted the data at all stages, and only researchers included in the IRB approval were granted permission to access personally identifiable information (PII). Completed surveys remained encrypted as soon as enumerators finished an interview. Once transferred from the SurveyCTO server to IPA computers, Boxcryptor was used to keep files encrypted and secure on IPA's institutional cloud account.

3.4 Data Quality Protocols

To ensure the high quality of the data collected, IPA implemented the following actions: 1) audio auditing, 2) high-frequency checks (HFC), and 3) backcheck surveys.

3.4.1 Audio Auditing

To ascertain data quality and with the authorization of the respondent, IPA randomly selected 10% of the surveys to be recorded and reviewed. The objective of audio auditing was to verify that interviews occurred and that none of the enumerators were fabricating data. Additionally, IPA used recordings to check the respondent's answers when there were discrepancies between the backcheck and the baseline survey.

3.4.2 High-Frequency Checks

IPA conducted daily high-frequency checks (HFC) to provide feedback to the field team and take corrective action when anomalies were found. IPA implemented HFCs to identify and resolve duplicate surveys, outliers in the data, logical inconsistencies, enumerators performing below or above average, and check compliance with protocols. When problems were detected, IPA research staff consulted with the survey team to clarify or correct the responses. HFCs were performed on incoming data using Stata, a statistical software program.

3.4.3 Backchecks

The backcheck questionnaire consisted of a short version of the baseline instrument; a highly qualified surveyor revisited a random 10% subsample of households to administer this backcheck questionnaire. The goal was to check if the interview occurred, if there were discrepancies with the household survey administered by the enumerators, and to verify that enumerators followed protocols as per IPA guidance. Whenever discrepancies arose, supervisors, back-checkers, and enumerators met to

understand the origin of the discrepancy and find the correct answer. With this input, the IPA research team corrected the verified answer in the dataset and retrained enumerators if necessary.

3.5 Challenges in Data Collection

3.5.1 General Background to the Survey

During the period of data collection, the COVID-19 pandemic was still ongoing. However, in the regions sampled, most of the COVID-19 policies had been rolled back, there were no lockdowns and mask usage was rare. However, the economic impacts of the pandemic were quite acute: inflation was 66% in February, when the listing survey began, increased to 96.4% in April, and reached 256.9% in July when fieldwork finished. Similarly, fuel costs rose by over 30% during the same period.

There was also a false start to the rainy season in November 2021, after which the rainfall was erratic. Anecdotally, many farmers encountered in the listing and baseline survey blamed this for causing a poor agricultural season.

3.5.2 Absence of Children in the Anthropometry Sample

Enumerators could not record the measurement of 262 children (14% of the 1,940 eligible children) because they were not present on the day of the interview. Some of the causes of absence reported by the households included travel to caregivers' places of business or work, family events, or health centers.

3.5.3 Suspicion of Respondents Trying to Include Additional Children in their Household

When administering anthropometric surveys, the field team encountered cases where children initially recorded as household members seemed to belong to a different household. The absence of a birth certificate made the verification difficult. Therefore, the field team probed households and asked follow-up questions about the children.

3.5.4 Poor Network Connectivity

Limited network connectivity slowed fieldwork, delaying form updates and household replacement updates. Teams had to travel tens of kilometers to obtain internet access needed to update forms, curtailing productivity. If a team could not access the internet in the field, replacement surveys could not proceed.

3.5.5 Rough Terrain

Teams were working in treacherous terrain, including in mountainous locations. In addition, the team in Zaka was warned of hyenas on the loose in the operating areas. This situation affected the movement plan and productivity.

3.5.6 Access to Buhera District

District's security agents denied access to the survey team in the Buhera district for 1 week. While negotiating access to Buhera with the District Development Coordinator and the head of the District Intelligence Officer, IPA deployed the Buhera research team to support the team working in Mutare. District authorities finally granted the authorization to access Buhera on May 4, 2022, and fieldwork started on May 6, 2022.

3.6 Challenges in the Sampling Strategy

The sampling objective of the impact evaluation initially targeted 2,000 households in the SFECG-eligible strata and 1,300 households in the SFECG-ineligible strata.[2] Deviations occurred during two separate phases of the research implementation: the listing exercise and the baseline survey. In the former case, the survey instruments were initially programmed to identify as eligible for the SFECG strata, households with children below *5* years old and not households with children below *2* years old. This divergence was addressed as soon as it was identified and affected roughly 25% of the listing sample. Therefore, the sampling strategy for the baseline was adjusted to account for this missing information.[3]

The second deviation happened during the implementation of the baseline survey. Some households selected for the baseline did not match with the listing households. This issue led to an 11% difference between the number of households expected to be in the eligible stratum and actual households belonging to this stratum. However, the final difference was not only due to the mismatch but, in some instances, also to households misreporting the eligibility questions asked during the listing exercise, as discussed in section 3.4.

The detour from the initial sampling plan may reduce the statistical power of the study to detect treatment impacts among the SFECG-eligible stratum,[4] but it does not affect the validity of estimates nor the overall power of the study.

[2] Section 1.2 and Section 2, IMPEL. (2022). *Sampling Plan and Pre-Analysis Plan: Takunda*. Washington, DC: The Implementer-Led Evaluation & Learning Associate Award.
[3] The baseline sampling plan was implemented following an updated sampling randomization strategy to select the final sample for the baseline.
[4] The sample size is lower for the CARE eligible stratum compared to the initial plan.

4. DESCRIPTIVE STATISTICS

This section offers a descriptive overview and findings for several key indicators of the 3,348 households interviewed in the study. The section covers demographics; housing; water, sanitation, and hygiene; sources of income; poverty levels; food security; children's and women's health; gender and women's empowerment; land and agriculture; assets; livestock; access to credit, savings and loans; mental health; and resilience.

The following tables present weighted means and their 95% confidence intervals (CI). Mean estimates are computed using sampling weights that reflect the probability of a given household being sampled and represent the population.[5]

4.1 Household Demographics

Table 5 shows descriptive statistics on household demographics. A minority of households are headed by women (37%), 69% of household heads are married and are aged 52 on average, and the average household size is five. Only half of the household heads have received some secondary school education or more, and their main occupation is farming (56%).

Table 5. Demographics

Description	Mean	CI Lower	CI Upper	N
Female HH head	37%	36%	39%	3,348
HH head age	52	51	52	3,348
HH head married or living together	69%	67%	70%	3,348
HH head education				
No formal schooling	6%	5%	7%	3,348
Primary school completed	73%	71%	74%	3,348
Secondary school completed	26%	25%	28%	3,348
HH head occupation				
Farming	56%	54%	58%	3,348
Self-employed non-farmer	25%	24%	27%	3,348
Unemployed	11%	10%	13%	3,348
Employed	3%	2%	3%	3,348
Other	5%	4%	5%	3,348
HH size	5.02	4.94	5.11	3,348

[5] For more detailed information on the construction of particular indicators, please see BHA's Indicator Handbook, Part I: Indicators for Baseline and Endline Surveys for Resilience Food Security Activities.

Description	Mean	CI Lower	CI Upper	N
Percentage of HH that have children …				
Under 6 months	6%	5%	7%	3,348
between 6 months to 24 months	20%	19%	21%	3,348
between 2 and 5 years old	47%	45%	49%	3,348
between 6 and 18 years old	77%	76%	79%	3,348
Under 18	88%	87%	90%	3,348

Notes: The category "Farmer" includes commercial farming and subsistence farming. The category "Self-employed non-farmers" includes business people, boda drivers or taxi drivers, brewers, repairmen, market vendors, shopkeepers, fishermen, gold panners, carpenters, builders, mechanics, hairdressers, and miners. The category "Employed" include teachers, government employees, engineers, catering, non-governmental organization workers, and community health workers.

4.2 Housing Quality

Most households own their house and live in mixed[6] dwellings, predominantly with cement floors (82%), iron sheet roofs (48%), brick walls (61%), and three rooms on average. In addition, only 9% of households have access to electricity, and most of those with electricity access it through solar home systems or solar lantern lighting systems.

Table 6. Housing quality

Description	Mean	CI Lower	CI Upper	N
Household's tenure status[7]				
Owner/purchaser without a title	58%	56%	60%	3,348
Owner/ purchaser with a title	36%	34%	38%	3,348
Other	6%	5%	7%	3,348
Type of dwelling				
Mixed	53%	51%	55%	3,348
Detached	25%	23%	27%	3,348
Traditional	17%	15%	18%	3,348
Other	5%	4%	6%	3,348

[6] A mixed dwelling is where a homestead has a combination of traditional (mud and thatch) and modern (brick wall with corrugated sheets, etc.) structures. The expectation is that most homesteads would classify as mixed because, for those with "modern" structures, there is often at least one dwelling/structure, usually the kitchen, which is mud and thatch/grass.

[7] The majority of respondents to the survey were in a customary tenure setting, where the State owns the land but local traditional leaders (Chiefs, village headmen/headwomen, etc.) manage it. For example, when someone settles in a village, they need to get a letter from the village head and/or be written in the village register. Those who responded as "Owner/purchaser with a title" are actually formally registered with the traditional authorities and usually expected to pay an annual tax. Others buy land or homesteads in the village, and these, too, have to be registered with the village head. Sometimes people register ("Owner/purchaser with a title"), and sometimes they do not (Owner/purchaser without a title), but very few do not register with the Village head.

Description	Mean	CI Lower	CI Upper	N
Main material for floor				
Cement	82%	80%	83%	3,348
Earth/sand	10%	9%	11%	3,348
Dung	6%	5%	6%	3,348
Other	2%	2%	3%	3,348
Main material for roof				
Metal/tin sheets	48%	46%	49%	3,348
Asbestos	36%	34%	37%	3,348
Thatch	15%	14%	16%	3,348
Other	2%	1%	2%	3,348
Main material for walls				
Bricks	61%	59%	63%	3,348
Cement	35%	33%	37%	3,348
Other	4%	3%	5%	3,348
No. rooms in the HH	3.33	3.26	3.39	3,348
Access to electricity	9%	8%	10%	3,348
Sources of electricity:				
Solar home system	39%	33%	45%	318
Solar lantern/Lighting system	37%	32%	43%	318
National grid	20%	14%	25%	318
Rechargeable battery	11%	7%	15%	318
Other	5%	3%	8%	318

Note: Households may have reported more than one source of electricity. Mixed includes detached and traditional.

4.3 Water, Sanitation, and Hygiene

To reduce overall survey length and respondent fatigue, the WASH section was administered to a random subsample of 1,420 households (42% of the sample). IPA collected data on four WASH indicators: (1) use of water treatment technologies, (2) practicing open defecation, (3) access to a basic sanitation service, and (3) availability of soap and water at a handwashing station on the premises. The WASH indicators are summarized below in Table 7.

Only 6% of households used recommended household water treatment technologies, while 31% of households practiced open defecation. Interviewers observed the presence of water, soap, detergent, or another cleansing agent at the handwashing station in 9% of households. For more details about those indicators' subcomponents, see *Table 42 in Annex A.*

Table 7. WASH indicators

Description	Mean	CI Lower	CI Upper	N
[BL18] HH in target areas practicing correct use of recommended household water treatment technologies	6%	5%	8%	1,420
Chlorination	5%	4%	7%	1,420
Flocculant/disinfectant	1%	1%	2%	1,420
Filtration	0%	0%	0%	1,420
Solar disinfection	0%	0%	0%	1,420
[BL27] HH with access to a basic sanitation service	45%	42%	48%	1,420
Female and Male Adults (F&M)	45%	42%	48%	1,104
Adult Female no Adult Male (FNM)	43%	36%	49%	277
Adult Male no Adult Female (MNF)	51%	34%	69%	39
[BL19] HH in target areas practicing open defecation	31%	28%	34%	1,420
Female and Male Adults (F&M)	31%	28%	35%	1,104
Adult Female no Adult Male (FNM)	30%	24%	36%	277
Adult Male no Adult Female (MNF)	30%	15%	46%	39
[BL17] HH with soap and water at a handwashing station on the premises	9%	7%	11%	1,420
Female and Male Adults (F&M)	9%	7%	11%	1,104
Adult Female no Adult Male (FNM)	10%	6%	14%	277
Adult Male no Adult Female (MNF)	7%	0%	15%	39

Note: For the WASH indicators, we used a random subsample; 1,420 households were selected (42% of the sample).

4.4 Sources of Income

Farming is the most important source of income or food for 40% of households. The most important sources of cash are non-agricultural self-employment (business) for 28% of the households and crop sales for 28%.

Table 8. Sources of income in the past 12 months

Description	Mean	CI Lower	CI Upper	N
Sources of food/income				
Crop production and sales	64%	62%	66%	2,814
Self-employment/own business (non-agricultural)	41%	39%	43%	2,814
Remittances	15%	14%	17%	2,814

Description	Mean	CI Lower	CI Upper	N
Agricultural wage labor	13%	12%	15%	2,814
Livestock production/fattening and sales	13%	12%	15%	2,814
Non-agricultural wage labor	11%	9%	12%	2,814
Gifts/inheritance	10%	8%	11%	2,814
Salaried work	6%	5%	7%	2,814
Self-employment/own business (agricultural)	6%	5%	7%	2,814
Other	16%	14%	17%	2,814
Most important source of income or food				
Crop production and sales	40%	38%	42%	2,814
Self-employment (non-ag.)	23%	22%	25%	2,814
Remittances	7%	6%	8%	2,814
Agricultural wage labor	6%	5%	6%	2,814
Non-agricultural wage labor	4%	3%	5%	2,814
Other	20%	18%	22%	2,814
Most important source of cash income				
Self-employment (non-ag.)	28%	26%	30%	2,814
Crop production and sales	28%	26%	30%	2,814
Remittances	8%	7%	9%	2,814
Agricultural wage labor	6%	5%	7%	2,814
Non-agricultural wage labor	5%	4%	6%	2,814
Livestock production/fattening and sales	5%	4%	6%	2,814
Other	19%	17%	20%	2,814

Notes: Note that the sources of food or income sum more than 100% because some households had more than one source of income. The number of observations is 2,814 instead of 3,348 due to an error in skip patterns that was corrected after 1 week of surveying.

4.5 Poverty Indicators

To assess the prevalence of poverty, IPA collected household-level consumption data to calculate three indicators: (1) daily per capita expenditures,[8] (2) the percentage of people living on less than $1.90 USD per day (at 2011 prices),[9] and (3) depth of poverty.[10]

The average daily per capita expenditure is $1.63. Households with at least one adult male but no adult female (MNF) reported more expenditures than other household types. Most households fall below the poverty line; 84% live below the $1.90/day 2011 poverty line. Refer to *Table 52 in Annex A* for details by province and district.

Table 9. Poverty indicators

Description	Mean	CI Lower	CI Upper	N
[BL40] Daily per capita expenditures (as a proxy for income) in USG-assisted areas	$1.63	$1.57	$1.70	3,348
Female and Male Adults (F&M)	$1.50	$1.44	$1.56	2,571
Adult Female no Adult Male (FNM)	$1.90	$1.73	$2.08	679
Adult Male no Adult Female (MNF)	$2.72	$1.95	$3.48	98
[BL01] Prevalence of Poverty: people living on less than $1.90/day 2011	84%	82%	85%	3,348
Female and Male Adults (F&M)	86%	85%	88%	2,571
Adult Female no Adult Male (FNM)	77%	74%	81%	679
Adult Male no Adult Female (MNF)	63%	52%	73%	98
[BL02] Depth of Poverty of the Poor: mean percentage shortfall of the poor relative to the $1.90/day 2011 poverty line	48%	46%	49%	2,837
Female and Male Adults (F&M)	52%	50%	53%	2,245
Adult Female no Adult Male (FNM)	36%	33%	38%	531
Adult Male no Adult Female (MNF)	22%	16%	29%	61

Note: The $1.90 threshold is inflated from 2011 to 2022 using the United States CPI to match the year of the data collection. No PPP adjustment factor was used, as the most recently available WB PPP deflator comes from 2018, before Zimbabwe instituted a new currency. The mean percentage shortfall of the poor indicates the percentage shortfall of the poor relative to the per capita PPP $1.90/day poverty line.

[8] Per capita expenditure accounts for household consumption expenditures on food in the last 7 days, assets, and durable goods in the last 30 days, 3 months, 6 months, and 12 months.
[9] PPP adjustment factor was not used. The most recent PPP deflator for Zimbabwe is from 2018, while a new currency was issued in 2019. This prevented an accurate PPP adjustment from being made.
[10] Depth of poverty indicates that, for households that lie below the poverty line, how far they fall on average. Households with per capita consumption greater than $1.90 per day are not included in calculating mean percentage shortfall indicator. For more information on the construction of consumption poverty indicators, please see BHA's Indicator Handbook, Part I: Indicators for Baseline and Endline Surveys for Resilience Food Security Activities.

4.6 Food Security

This section describes the findings for food security, measured using the Food Consumption Score (FCS) and Food Insecurity Scale (FIES). *Table 37 in Annex A* provides food security indicators details by household type. Additionally, IPA collected information on dietary diversity, see *Table 38 in Annex A.*

4.6.1 Food Consumption Score

The FCS is a weighted score measuring the diversity and frequency of the consumption of the different food groups ranging from 0 to 112, with higher scores indicating a higher degree of food security. The FCS is calculated by summing the household consumption of nine food groups (main staples, pulses, vegetables, fruit, meat and fish, milk and dairy, sugar, oil, and condiments) over the previous seven days.[11] Households are categorized into three groups: poor consumption (≤ 21), borderline consumption (≥ 21.5 and ≤ 35), and (3) acceptable consumption (> 35), based on their FCS score.

Households' FCS is 43.14 on average, as shown in *Table 11*. Most households (59%) have an "acceptable" FCS. The FCS indicates that 4% of households showed poor food consumption, and 36% showed borderline food consumption. Main staples, vegetables, condiments, and oil are the most consumed food groups over a 7-day period. Refer to *Table 37 in Annex A* for details by gendered household type.

Table 10. Food consumption in the past seven days

Description	Mean	CI Lower	CI Upper	N
[BL10] Food Consumption Score (FCS)	43.14	42.46	43.82	3,348
[BL10] HH with poor FCS (0–21)	4%	4%	5%	3,348
[BL10] HH with borderline FCS (21.5–35)	36%	34%	38%	3,348
[BL10] HH with acceptable FCS (> 35)	59%	57%	61%	3,348
Over the past seven days, number of days HH consumed ...				
Main staples	6.83	6.80	6.86	3,348
Vegetables	6.07	6.00	6.13	3,348
Condiments	5.72	5.62	5.81	3,348
Oil	4.94	4.83	5.04	3,348
Sugar	3.72	3.61	3.84	3,348
Fruit	2.45	2.34	2.56	3,348
Pulses	1.79	1.71	1.86	3,348
Meat and fish	1.63	1.56	1.71	3,348
Milk and dairy	1.18	1.09	1.28	3,348

[11] For more information on the FCS and FIES questionnaires and indicator construction, please see BHA's Indicator Handbook, Part I: Indicators for Baseline and Endline Surveys for Resilience Food Security Activities.

4.6.2 Food Insecurity Scale

The indicator for "moderate and severe food insecurity" measures the share of households that experienced food insecurity at moderate and severe levels in the past 12 months. The FIES comprises eight questions that record difficulty accessing food due to lack of money or other resources. The results of the FIES module show that there are high levels of food insecurity. Overall, 82% of households experienced moderate or severe food insecurity, as shown in Table 37 in Annex A.

Table 11. Food insecurity in the past 12 months

Description	Mean	CI Lower	CI Upper	N
[BL06] Moderate and severe food insecurity, based on the Food Insecurity Experience Scale (FIES)	82%	67%	98%	3,348
Raw FIES Score (0–8)	5.74	5.66	5.81	3,348
During the last 12 months, because of a lack of money or resources, you, or others in your HH...				
Ate only a few kinds of foods	90%	89%	91%	3,348
Were worried you would not have enough food to eat	89%	88%	90%	3,348
Were unable to eat healthy and nutritious food	89%	88%	90%	3,348
Ate less than you thought you should	88%	87%	89%	3,348
Had to skip a meal	70%	68%	71%	3,348
They were hungry but did not eat	57%	55%	59%	3,348
Did not have food	47%	46%	49%	3,348
Went without eating for a whole day	37%	35%	39%	3,348

Notes: The Raw FIES Score is a sum of the eight FIES binary questions (higher = more food insecure).

4.7 Children's Nutritional Status

To measure children's nutritional status, IPA collected child-level nutrition data to calculate four indicators: (1) exclusive breastfeeding, (2) minimum acceptable diet, (3) diet of minimum diversity, and (4) children treated with Oral Rehydration Therapy (ORT). IPA administered the children's nutrition module to the caregivers of all children under 59 months who were present at the time of the survey.

Table 13 shows that more than one-third (36%) of the children under 6 months are exclusively breastfed. The baseline study data indicate that, among children between 6 and 23 months, 8% received a minimum acceptable diet (MAD), an indicator that tracks whether children had both sufficient frequency of meals and diversity of nutrients. Only one in four children between 6 and 23 months consumed a diet of minimum diversity (MDD-C). Furthermore, 22% of children under 5 suffered diarrhea 2 weeks before the survey, and 69% of children with diarrhea were treated with ORT. See Table 39, Table 40, and Table 41 for further details on children's diet and health.

Table 12. Young children: diet and health

Description	Mean	CI Lower	CI Upper	N
[BL13] Exclusive breastfeeding of children under six months	36%	30%	42%	276
Female	38%	30%	47%	146
Male	33%	24%	41%	130
[BL12] Children 6–23 months receiving a minimum acceptable diet (MAD)	8%	6%	10%	977
Female	7%	4%	9%	485
Male	9%	6%	12%	492
[BL39] Children 6–23 months consuming a diet of minimum diversity (MDD-C)	25%	22%	28%	977
Female	26%	22%	30%	485
Male	24%	20%	28%	492
[BL14] Children under five (0–59 months) who had diarrhea in the prior two weeks	22%	21%	24%	2,891
Female	22%	19%	24%	1,491
Male	23%	20%	25%	1,400
[Bl15] Children under five (0–59 months) with diarrhea treated with Oral Rehydration Therapy (ORT)	69%	65%	73%	662
Female	67%	61%	73%	323
Male	70%	65%	76%	339

Notes: The number of observations corresponds to the number of children.

IPA recorded anthropometric measurements of all children in the household under 36 months who were present at the time of the survey; 1,678 children were measured. The children's heights and weights were recorded using standard anthropometric equipment (see *Annex D* for further details). *Table 14* presents the findings disaggregated by gender and age.

Table 13. Anthropometric measurements

Description	Mean	CI Lower	CI Upper	N
[BL03] Wasted children (WHZ < -2)	2%	1%	3%	1,672
Female	2%	1%	3%	851
0–5 months	3%	0%	6%	141
6–11 months	3%	0%	6%	126
12–23 months	2%	0%	3%	325
24–35 months	2%	0%	3%	259
Male	3%	1%	4%	821

Description	Mean	CI Lower	CI Upper	N
0–5 months	4%	0%	8%	125
6–11 months	4%	1%	6%	149
12–23 months	4%	0%	7%	314
24–35 months	1%	0%	3%	233
[BL04] Stunted children (HAZ <-2)	23%	20%	25%	1,674
Female	19%	16%	21%	853
0–5 months	6%	2%	9%	143
6–11 months	6%	2%	10%	126
12–23 months	19%	15%	23%	325
24–35 months	28%	22%	34%	259
Male	27%	23%	30%	821
0–5 months	7%	3%	11%	127
6–11 months	14%	8%	20%	148
12–23 months	28%	23%	34%	313
24–35 months	39%	32%	46%	233
[BL05] Healthy weight (WHZ ≤ 2 and ≥ -2)	92%	91%	94%	1,672
Female	94%	92%	95%	851
0–5 months	87%	81%	93%	141
6–11 months	93%	88%	98%	126
12–23 months	96%	94%	98%	325
24–35 months	95%	91%	98%	259
Male	91%	89%	93%	821
0–5 months	82%	75%	89%	125
6–11 months	90%	85%	95%	149
12–23 months	92%	87%	96%	314
24–35 months	95%	92%	98%	233

Notes: WHZ = weight-for-height z-score. HAZ = height-for-age z-score. Wasted is defined as having a WHZ less than -2. Stunted is defined as having a HAZ less than -2. Healthy weight is defined as having a WHZ greater than -2 and less than 2.

4.8 Women's Health and Family Planning

4.8.1 Women's Diet Diversity

To reduce the overall survey length, the women's health section was administered to a random subsample of households with at least one woman of reproductive age (between 18 and 49 years).[12] This section was administered to all women aged 18–49 within the selected households. In total, the data of 1,361 women from 1,061 households were recorded (32% of the sample).

As shown in *Table 15*, 31% of women attained a minimum dietary diversity (MDD-W), consuming at least 5 of 10 nutritionally diverse food groups during the previous day at the time of the survey. The primary food groups consumed were grains, white roots, tubers and plantains, dark green leafy vegetables, and other vegetables.

Table 14. Women's health

Description	Mean	CI Lower	CI Upper	N
[BL11] Women of reproductive age consuming a diet of minimum diversity (MDD-W)	31%	28%	34%	1,181
Group food:				
Grains, white roots, tubers, and plantains	98%	97%	99%	1,181
Dark green leafy vegetables	73%	70%	76%	1,181
Vegetable	53%	50%	56%	1,181
Fruits	39%	36%	42%	1,181
Pulses	39%	36%	42%	1,181
Other vitamin A-rich fruits and vegetables	28%	25%	31%	1,181
Meat, poultry, and fish	24%	21%	27%	1,181
Dairy	18%	15%	20%	1,181
Nuts and seeds	6%	5%	8%	1,181
Eggs	5%	3%	6%	1,181

Notes: For the MDD indicator, we used a random subsample of households with at least one woman of reproductive age; 1,361 household members of 1,061 households were selected (32% of the sample); the data is shown at the women's level.

4.8.2 Family Planning

For family planning indicators, IPA gathered data from a random subsample of households with at least one woman of reproductive age in a union;[13] 1,172 women were interviewed in 1,139 households (34% of the sample).

[12] Based on USAID's "Food for Peace Indicators Handbook," this section should have been administered to all women aged 15–49. However, following IRB rules, we are not allowed to interview individuals under 18.

[13] In union means currently married or living together with their partner.

Table 16 indicates high levels of knowledge about contraceptive methods, but only 50% of the respondents reported making decisions about contraceptive usage in the past 12 months. Family planning decision-making is lower for women between 18 and 29 years old (44%). The Contraceptive Prevalence Rate (CPR) is measured by the share of non-pregnant women of reproductive age (18–49 years)[14] who are married or in a union who are currently using (or whose sexual partner is using) at least one contraceptive method is 71%. More details can be found in *Table 44 in Annex A*. Among women using contraceptive methods, almost all of them used modern methods.

Table 15. Family planning

Description	Mean	CI Lower	CI Upper	N
[BL36] Women in a union who have knowledge of modern family planning methods that can be used to delay or avoid pregnancy	95%	93%	97%	951
Women ages 18–29	94%	91%	97%	367
Women ages 30–49	96%	94%	98%	584
[BL37] Women in a union who made decisions about modern family planning methods in the past 12 months	50%	46%	53%	951
Women ages 18–29	44%	38%	50%	367
Women ages 30–49	53%	48%	57%	584
[BL20] Contraceptive Prevalence Rate (CPR)	71%	67%	75%	797
Women using Modern Methods	99%	98%	100%	569
Women using Traditional methods	1%	0%	2%	569

Notes: Indicator BL20 was asked to non-pregnant women aged 18–49

4.9 Gender

The share of women and men in a union who earned cash in the past 12 months was measured for all women and men in a union; the other gender indicators were measured for a random subsample of households with at least one member in a union who earned cash in the last 12 months. In total, 391 household members in 352 households (11% of the sample) were interviewed, 227 women and 164 men.

Baseline data indicate a large gender gap in cash earned; more than half of men in a union reported earning cash in the past 12 months, compared to 28% of women. Among women in a union who earned cash, only 51% reported participating in decisions about using their partner's self-earned cash.

[14] Based on USAID's "Food for Peace Indicators Handbook," this section should have been administered to all women aged 15–49. However, following IRB rules, we are not allowed to interview individuals under the age of 18.

Table 16. Cash income and usage by gender

Description	Mean	CI Lower	CI Upper	N
[BL32] Women and men in a union who earned cash in the past 12 months	40%	38%	42%	5,280
Female	29%	27%	31%	2,855
Male	53%	51%	55%	2,425
[BL33] Women in a union and earning cash who report part. In decisions about the use of self-earned cash	84%	79%	90%	227
< = 29 years old	83%	74%	92%	69
30–49 years old	85%	78%	92%	126
> 49 years old	84%	69%	99%	32
[BL34] Women in a union and earning cash who report part. In decisions about the use of spouse/partner's self-earned cash	51%	44%	59%	227
< = 29 years old	51%	36%	65%	69
30–49 years old	53%	43%	64%	126
> 49 years old	44%	24%	64%	32
[BL35] Men in a union earning cash who report spouse/partner part. In decisions about the use of self-earned cash	88%	83%	94%	164
< = 29 years old	—	—	—	18
30–49 years old	89%	82%	95%	113
> 49 years old	92%	83%	100%	33

Notes: For the gender indicators, BL32 indicators were administered to each household member in a union. For the other gender indicators, we used a random subsample of households with at least one household member in a union who earned cash over 18 years of age; 391 household members were interviewed in 352 households (11% of the sample), 227 women, and 164 men. Part. = participation.

4.10 Women's Empowerment

The women's empowerment module was administered to every woman in a union over 18: 2,346 women answered the questions in this section, and *Table 17* shows summary statistics for this module. Almost half (44%) of women must ask permission to buy clothes for themselves, and only 30% of women are allowed to visit women from other villages without permission. Table 18 shows the same results but conditional on women who earned cash.

Table 17. Women empowerment

Description	Mean	CI Lower	CI Upper	N
When HH makes a major purchase, the wife's opinion is heard in deciding what to buy				
Yes, always	43%	41%	46%	2,346
Yes, usually	14%	12%	15%	2,346
Yes, sometimes	24%	22%	26%	2,346
Rarely	9%	8%	11%	2,346
Very rarely	1%	1%	2%	2,346
Never	8%	7%	9%	2,346
The wife has to ask other HH members for permission to buy clothes for herself				
Yes	52%	50%	54%	2,346
No	44%	42%	46%	2,346
Have never bought	4%	3%	5%	2,346
The wife is allowed to buy things in the market without asking permission				
Yes, always	51%	49%	54%	2,346
Yes, usually	10%	9%	12%	2,346
Yes, sometimes	14%	12%	15%	2,346
Rarely	6%	5%	7%	2,346
Very rarely	1%	1%	2%	2,346
Never	16%	15%	18%	2,346
The wife is allowed to visit women from other villages to talk to them without asking permission				
Yes, alone, do not need permission	31%	29%	33%	2,346
Yes, alone, with permission	48%	46%	51%	2,346
Yes, but never alone	2%	1%	2%	2,346
Never	16%	14%	18%	2,346

Notes: This section was administered to each married woman over 18 years of age; the data is shown at the women's level. Confidence intervals for binary indicators are based on Normal approximations; for very small samples and indicator values near 0 or 1, these confidence intervals can exceed 0 or 1, and in this table, confidence interval bounds are censored at 0 from below and 1 from above.

Table 18. Women empowerment, women who earned cash

Description	Mean	CI Lower	CI Upper	N
When HH makes a major purchase, the wife's opinion is heard in deciding what to buy				
Yes, always	38%	33%	42%	670
Yes, usually	17%	13%	20%	670

Description	Mean	CI Lower	CI Upper	N
Yes, sometimes	26%	22%	30%	670
Rarely	9%	7%	12%	670
Very rarely	1%	0%	2%	670
Never	9%	6%	12%	670
Wife has to ask other HH members for permission to buy clothes for her				
Yes	47%	43%	52%	670
No	51%	47%	56%	670
Have never bought	1%	0%	2%	670
Wife is allowed to buy things in the market w/o asking permission				
Yes, always	48%	44%	53%	670
Yes, usually	12%	10%	15%	670
Yes, sometimes	14%	11%	17%	670
Rarely	6%	4%	8%	670
Very rarely	1%	0%	2%	670
Never	18%	15%	21%	670
Wife is allowed to visit women from other villages to talk to them w/o asking permission				
Yes, alone, do not need permission	33%	29%	38%	670
Yes, alone, with permission	45%	41%	50%	670
Yes, but never alone	1%	0%	2%	670
Never	18%	14%	21%	670

Notes: Confidence intervals for binary indicators are based on Normal approximations; for very small samples and indicator values near 0 or 1, these confidence intervals can exceed 0 or 1, and in this table, confidence interval bounds are censored at 0 from below, and 1 from above.

4.11 Land and Agriculture

4.11.1 Cultivated Crops

IPA collected household-level information about basic farming practices, land ownership, and crop cultivation. A high percentage of households (82%) own land, and an even higher percentage (94%) report cultivating anything in the last 12 months. Among those households that engaged in cultivation, the most commonly cultivated crops are maize (76%), groundnuts (69%), roundnuts (54%), and sorghum/millet (53%).

Table 19. Crops cultivated

Description	Mean	CI Lower	CI Upper	N
HH owns the land, not including the plot where the house is	82%	81%	83%	3,348
Size of agricultural land (in acres)	4.80	4.65	4.96	2,723
HH cultivated anything in the last 12 months	94%	93%	95%	3,348
Crops cultivated during the last rainy season				
Maize	76%	75%	78%	3,158
Groundnuts	69%	68%	71%	3,158
Roundnuts	54%	52%	56%	3,158
Sorghum or millet	53%	51%	55%	3,158
Cowpeas	47%	45%	49%	3,158
Vegetables	18%	17%	20%	3,158
Sweet potatoes	17%	15%	18%	3,158
Tomatoes	10%	9%	11%	3,158
Bean	7%	6%	8%	3,158
Rapoko	6%	5%	7%	3,158
Sunflower	6%	5%	7%	3,158
Other	17%	15%	18%	3,158

4.11.2 Fruit Trees

Furthermore, IPA collected information on fruit-bearing trees. Among all households that reported cultivating something in the past 12 months, three-quarters have fruit-bearing trees. Mango (70%), guava (36%), and musau (33%) are the main fruit trees harvested.

Table 20. Fruit-bearing trees

Description	Mean	CI Lower	CI Upper	N
HH owns any fruit-bearing trees	78%	76%	79%	3,158
Kind of fruit trees:				
Mango	70%	68%	72%	2,396
Guava	36%	34%	38%	2,396
Musau	33%	31%	35%	2,396
Lemon	24%	22%	26%	2,396
Paw	19%	17%	21%	2,396

Description	Mean	CI Lower	CI Upper	N
Orange	19%	17%	21%	2,396
Mulberry tree	16%	15%	18%	2,396
Banana	14%	13%	16%	2,396
Mushuku	13%	12%	15%	2,396
Avocado	13%	11%	14%	2,396
Peach	7%	6%	8%	2,396
Nartjies	5%	4%	6%	2,396
Other	21%	19%	22%	2,396

Notes: This section was administered to HH, who cultivated anything in the last 12 months. Note that some households have more than one kind of tree.

4.11.3 Farming During the Dry Season

About half (58%) of households cultivated any land in the last dry season, with the three most common crops in the dry season being covo, tomatoes, and onions. Regarding the types of irrigation used, *Table 21* shows that 94% of the households used water cans to irrigate crops.

Table 21. Crops cultivated and type of irrigation used in the last dry season

Description	Mean	CI Lower	CI Upper	N
Cultivated any land in the last dry season	58%	57%	60%	3,158
Crops cultivated in the last dry season:				
Covo	68%	66%	71%	1,844
Tomatoes	61%	59%	64%	1,844
Onions	46%	43%	48%	1,844
Tsunga	44%	41%	47%	1,844
Rape	38%	36%	41%	1,844
Beans	26%	24%	28%	1,844
Green vegetables	12%	10%	14%	1,844
Sweet potatoes	11%	10%	13%	1,844
Green maize	10%	8%	11%	1,844
Cabbage	9%	7%	10%	1,844
Carrots	8%	7%	10%	1,844
Other	17%	15%	19%	1,844
Type of irrigation used last dry season:				
Water can	94%	93%	96%	1,844

Description	Mean	CI Lower	CI Upper	N
Other	4%	3%	6%	1,844
None	2%	1%	2%	1,844

Notes: This section was administered to HH who cultivated anything in the last 12 months.

4.11.4 Farming Inputs

Among households that cultivated something in the last 12 months, 13% hired any labor, 32% rented any farming equipment, and 44% rented any farming animals. Organic fertilizer is used by 74% of households, and inorganic fertilizer by 65%.

Table 22. Farming inputs during the last rainy season

Description	Mean	CI Lower	CI Upper	N
Hired any labor to help with any farming tasks	13%	11%	14%	3,158
Rented any farming equipment	32%	30%	33%	3,158
Rented any farming animals	44%	43%	46%	3,158
Used any inorganic fertilizer	65%	63%	67%	3,158
...bought any inorganic fertilizer	21%	19%	23%	2,067
Source of this purchase:				
Commercial provider	86%	83%	90%	408
Government outlet/extension services	8%	5%	11%	408
Cooperative	1%	0%	2%	408
Other	8%	5%	11%	408
Used any organic fertilizer	74%	72%	76%	3,158
...bought any organic fertilizer	4%	3%	4%	2,310
Source of this purchase:				
Commercial provider	12%	3%	21%	81
Government outlet/extension services	8%	1%	15%	81
Cooperative	4%	0%	9%	81
Other	76%	65%	87%	81
Used packaged seeds	65%	63%	67%	3,158
...bought packed seeds	35%	33%	38%	2,039
Source of this purchase:				
Commercial provider	91%	89%	93%	704
Government outlet/extension services	6%	4%	8%	704

Description	Mean	CI Lower	CI Upper	N
Cooperative	1%	0%	2%	704
Other	3%	2%	5%	704
Used any pesticides or herbicides	26%	24%	28%	3,158
...bought any pesticides or herbicides	26%	23%	29%	827
Source of this purchase:				
Commercial provider	84%	78%	90%	211
Government outlet/extension services	8%	4%	12%	211
Cooperative	1%	0%	3%	211
Other	7%	3%	11%	211

Notes: This section was administered to HH who cultivated anything in the last 12 months. Farming equipment includes ox carts, tractors, hand plows, ridgers, or other major farming equipment. Farming animals include cattle or donkeys. Confidence intervals for binary indicators are based on Normal approximations; for very small samples and indicator values near 0 or 1, these confidence intervals can exceed 0 or 1, and in this table, confidence interval bounds are censored at 0 from below 1 one from above.

4.11.5 Farmer Groups

IPA asked about membership in farmer groups, cooperatives, and other group activities to households that cultivated crops in the 12 months before the survey. About one-quarter of households (22%) are members of farmer groups or cooperatives, and only 6% of households met in the previous rainy season to organize the sale of farm products as a group.

Table 23. Farmer groups

Description	Mean	CI Lower	CI Upper	N
HH is a member of a farmer group/cooperative	22%	20%	23%	3,158
Met with other farmers last rainy season to organize some sales as a group	6%	5%	7%	3,158
Activities performed to organize sales as a group:				
Find markets or buyers with good prices	53%	45%	61%	187
Share transport to market	27%	20%	34%	187
Negotiate prices	15%	9%	20%	187
Call buyer to pick up the crops	12%	7%	17%	187
Other	14%	8%	20%	187

Notes: This section was administered to HH who cultivated anything in the last 12 months.

4.11.6 Agricultural Sales

Table 24 shows that a small share of the households (12%) sold any crops. The most common buyers of crops are relatives or friends (40%) and local traders that don't go to the market (33%).

Table 24. Agricultural sales

Description	Mean	CI Lower	CI Upper	N
HH sold any crops	12%	11%	14%	3,158
HH sold more than half of the total output	36%	31%	41%	389
Main buyer:				
Relative/Friend	40%	34%	45%	389
Local trader not at the market	33%	27%	38%	389
Local trader at the market	10%	6%	13%	389
Out-of-town mobile trader	8%	5%	11%	389
Other	10%	7%	14%	389

Notes: This section was administered to HH who cultivated anything in the last 12 months.

4.11.7 Off-Farm Business

In the off-farm business module, IPA asked households about their experiences with owning a business. "Off-farm business" refers to non-agricultural income-generating activities, including those that produce or trade goods or services. The baseline data indicate that business ownership was low (14%), and among those owning a business, only 38% had inventories worth more than $50 USD.

Table 25. Off-farm business

Description	Mean	CI Lower	CI Upper	N
Household operates a business	14%	13%	15%	3,348
Household operates more than one business	22%	17%	26%	468
Number. of years operating the main business	6.93	5.93	7.94	468
Value of business inventory is > $50 USD	38%	34%	43%	468

4.11.8 Agricultural Finance and Techniques

This section was administered to a random subsample of households with at least one farm worker in the household; 1,424 household members were interviewed in 1,227 households (37% of the sample). Access to financial services is limited; only 17% of farmers used any financial services in the past 12 months, as shown in *Table 26*. All the farmers use at least three agricultural improved management practices, and 76% use improved management practices or technologies for livestock.

Table 26. Agriculture indicators in the past 12 months

Description	Mean	CI Lower	CI Upper	N
[BL29] Farmers who used financial services (savings, agricultural credit, or agricultural insurance) in the past 12 months	17%	15%	19%	1,424
Female	18%	15%	21%	1,014

Description	Mean	CI Lower	CI Upper	N
Male	15%	11%	19%	410
[BL21] Producers who have applied targeted improved management practices or tech. on crops	100%	100%	100%	1,355
Female	100%	100%	100%	962
Male	100%	99%	100%	393
[BL21] Producers who have applied targeted improved management practices or technologies. on livestock	76%	72%	79%	721
Female	74%	69%	78%	497
Male	81%	74%	87%	224

Notes: For the Agriculture indicators, we used a random subsample of households with at least one farm worker in the household; 1,424 household members were interviewed in 1,227 households (37% of the sample); the data is shown at the farm worker level. The number of observations for the BL21 indicator on crops corresponds to the number of farm workers growing crops, while the number of observations for the BL21 livestock indicator corresponds to the number of farm workers engaged in livestock activities. Improved management practices includes: practices for cultivation ("Micro dosing," "Manure," "Compost," "Planting basins," "Mulching," "Weed control," "Dry planting," "Ripping into residues," "Clean ripping," "Tied ridges," "Pot-holing," "Crop rotations," "Intercropping," "Integrated Pest Management (IPM)", "Early planting or planting with first rains", "Use of improved crop varieties," "Dead level contours," "Ridging," "Double dug beds/fertility trenches"), natural resource management practices ("Management or protection of watersheds or water catchments," "Agro-forestry," "Management of forest plantation/woodlands," "Regeneration of natural landscapes," "Sustainable harvesting of forest products," "Development and implementation of NRM by laws"), and methods to store ("Locally made storage structures such as sheet metal silos," "Sealed/air tight bags," "Community storage facilities, including warehouse receipting," "Use of solar or fuel-powered dryers to reduce post-harvest moisture," "Seed or grain treatment techniques including botanical pest control agents or phytosanitary irradiation," "Grain treatment with agro-chemicals," "Other post-harvest practices that reduce pre-storage losses").

4.12 Asset Ownership

IPA asked households about asset ownership. Nearly all households own a cellphone (91%), and half of the households own a solar panel.

Table 27. Assets

Description	Mean	CI Lower	CI Upper	N
HH owns:				
Land	95%	94%	96%	3,348
Cellphone	91%	90%	92%	3,348
Hoe	80%	78%	81%	3,348
Ax	63%	61%	64%	3,348
Goat	54%	52%	56%	3,348
Solar panel	50%	48%	52%	3,348
Cattle	39%	37%	41%	3,348
Plough	38%	36%	40%	3,348

Description	Mean	CI Lower	CI Upper	N
Wheelbarrow	30%	28%	31%	3,348
Radio	25%	23%	27%	3,348
Lounge suite	19%	17%	20%	3,348
Scotch cart/Water cart	17%	16%	19%	3,348
Knapsack sprayer	13%	12%	15%	3,348
Bicycle	13%	12%	14%	3,348
Cultivator	8%	7%	9%	3,348
Plantation/Orchard	8%	7%	9%	3,348
Television	6%	5%	7%	3,348
Donkey	5%	4%	6%	3,348
Other	15%	14%	16%	3,348

4.13 Livestock

Most households (87%) reported owning some livestock in the past 12 months. The main types of livestock owned are poultry (91%), goats (62%), cattle (45%), and turkey (20%). Regarding livestock structure, 77% of households own a bird pen, 54% own a goat house, and 44% own a cow house.

Table 28. Livestock

Description	Mean	CI Lower	CI Upper	N
HH owned livestock in last 12 months	87%	86%	88%	3,348
Livestock owned by HH				
Poultry	91%	90%	92%	2,907
Goats	62%	60%	64%	2,907
Cattle	45%	43%	47%	2,907
Turkey	20%	18%	22%	2,907
Donkey/mule	6%	5%	7%	2,907
Other	15%	14%	17%	2,907

Table 29. Livestock structures

Description	Mean	CI Lower	CI Upper	N
HH owns livestock structures:				
Bird Pen/Coop	77%	76%	79%	3,348
Goat house/Goat pen	54%	52%	56%	3,348

Description	Mean	CI Lower	CI Upper	N
Cow house/kraal	44%	42%	46%	3,348
Turkey	11%	10%	12%	3,348
Pigeons	9%	8%	10%	3,348
Other	9%	7%	10%	3,348
None	13%	12%	14%	3,348

4.14 Resilience

To reduce overall survey length and respondent fatigue, the resilience section—except for the indicator BL31—was administered to a random subsample of 1,420 households (42% of the sample). IPA collected data on seven resilience indicators: (1) households' ability to recover from shocks, (2) households` belief in local government responsiveness, (3) household participation in group-based savings, (4) adaptive, (5) absorptive, (6) transformative and (7) social capital indices. The resilience indicators are summarized by gendered household type below in *Table 30*. See *Table 47*, *Table 48*, and *Table 49 in Annex A* for more details on the sub-components of each indicator.

Table 30. Resilience indicators

Description	Mean	CI Lower	CI Upper	N
[BL23] Ability to recover from shocks and stresses index (2–6)	2.67	2.61	2.74	1,390
Female and Male Adults (F&M)	2.64	2.56	2.71	1,082
Adult Female no Adult Male (FNM)	2.73	2.57	2.89	270
Adult Male no Adult Female (MNF)	3.18	2.65	3.70	38
[BL24] Percentage of HH believing that the local government. will respond effectively to future shocks and stresses	64%	61%	67%	1,420
Female and Male Adults (F&M)	63%	59%	66%	1,104
Adult Female no Adult Male (FNM)	68%	61%	74%	277
Adult Male no Adult Female (MNF)	73%	57%	89%	39
[BL31] HH participates in group-based savings, micro-finance, or lending programs	7%	6%	8%	3,348
Female and Male Adults (F&M)	8%	7%	9%	2,571
Adult Female no Adult Male (FNM)	6%	4%	7%	679
Adult Male no Adult Female (MNF)	2%	0%	5%	98
[BL08] Adaptive capacity index (0–100)	45.34	44.39	46.28	1,217
[BL09] Absorptive capacity index (0–100)	38.49	37.53	39.46	1,322
[BL25] Transformative capacity index (0–100)	38.54	37.45	39.64	1,267

Description	Mean	CI Lower	CI Upper	N
[BL38] Index of social capital (0–6)	2.61	2.50	2.71	1,420
Bridging social capital Index (0–6)	2.38	2.27	2.49	1,420
Bonding Social Capital Index (0–6)	2.84	2.73	2.95	1,420

Notes: This section—except for the indicator BL31—was administered to a random subsample of respondents; 1,420 households were selected (42% of the sample). BL08 has fewer observations because one of the subcomponents only applies to some respondents; see Table 47 in Annex A. BL23, BL25, and BL38 indicators have different subsamples due to skipping pattern issues corrected after a few days.

4.15 Access to Credit and Group Participation

The gender access to credit and group participation module was administered to a random subsample of households with at least one household member in a union; 1,361 household members were interviewed in 1,061 households (32% of the sample). One-third of the respondents had access to credit; of those, 90% made credit decisions.

Table 31. Gender access to credit and group participation

Description	Mean	CI Lower	CI Upper	N
[BL42] Women/men in a union with access to credit	33%	31%	36%	1,361
Female	34%	31%	38%	965
Male	32%	26%	37%	396
[BL43] Women/men in a union who make decisions about credit	90%	87%	93%	466
Female	89%	85%	93%	335
Male	93%	87%	98%	131
[BL41] Women/men in a union who are members of a community group	56%	53%	60%	1,014
Female	58%	54%	62%	715
Male	52%	46%	59%	299

Notes: For the Gender Access to Credit indicators, we used a random subsample of households with at least one household member in a union; 1,361 household members were interviewed in 1,061 households (32% of the sample).

4.16 Financial Health

The financial health module was included to determine household access to financial resources to deal with emergencies. IPA asked the households how difficult it would be to come up with USD 20 within 30 days and 7 days, as well as the source of this money. Three-quarters of households reported that it would be “very difficult” to come up with that amount of money in the next 30 days, and almost all households (94%) indicated it would be “very difficult” to come up with that amount of money in the next seven days. The main source of funds is family, relatives, or friends (27% of households).

Table 32. Financial health

Description	Mean	CI Lower	CI Upper	N
Difficulty coming up w/ USD 20 in the next 30 days				
Not difficult at all	3%	2%	3%	3,348
Somewhat difficult	25%	23%	26%	3,348
Very difficult	72%	71%	74%	3,348
Difficulty coming up w/ USD 20 in the next 7 days				
Not difficult at all	1%	1%	1%	3,348
Somewhat difficult	5%	4%	5%	3,348
Very difficult	94%	93%	95%	3,348
Main source of funds				
Family, relatives, or Friends	27%	25%	28%	3,348
Selling livestock	21%	19%	22%	3,348
Money from working	13%	12%	15%	3,348
Selling assets	7%	6%	8%	3,348
Bank, employer, or private lender (borrow)	5%	4%	5%	3,348
Other sources	11%	9%	12%	3,348
Could not come up with the money	21%	19%	22%	3,348

4.17 Savings and Loans

More than half (56%) of households did not save money in the 6 months before the survey. Those who saved mostly kept their savings informally, either in their pockets or clothes or in a secret place at home.

Table 33. Savings

Description	Mean	CI Lower	CI Upper	N
Has kept any savings in the past six months				
No savings	56%	54%	58%	3,348
In your pocket, your clothes, or in a bag that you carry	25%	24%	27%	3,348
A secret place in your home	18%	16%	19%	3,348
VSLA	11%	10%	13%	3,348
Mobile money	7%	6%	8%	3,348
Other	9%	8%	10%	3,348

Only 2% of households have obtained a loan from a bank, a microfinance institution, or a Savings and Credit Cooperative Society (SACCO) in the past 12 months, and just 27% of household members regularly save cash.

Table 34. Loans

Description	Mean	CI Lower	CI Upper	N
In the last 12 months, obtained a loan from:				
None	98%	97%	98%	3,348
SACCO	1%	1%	2%	3,348
Bank or microfinance institution	1%	1%	1%	3,348
Total loan (USD)	$122	$47	$196	78
Regularly save cash	27%	25%	29%	3,348

4.18 Mental Health and Well-Being

IPA collected information on respondents' levels of distress in the past 30 days using the Kessler Psychological Distress Scale (K6). The K6 score is calculated by summing the responses from six questions, ranging from 0 to 24, with higher scores indicating higher levels of psychological distress, such as anxiety and depression. *Table 35* and *Table 36* show summary statistics from the mental health module. The average Kessler 6 score is 8.88, and 39% of respondents reported that "everything was difficult all the time." In addition, half of the respondents felt "worried, tense, or anxious" most of the time for 30 days in the 12 months before the survey. Food shortage was a concern for more than half (55%) of the respondents.

Table 35. Kessler Score, in the last 30 days

Description	Mean	CI Lower	CI Upper	N
Kessler 6 (0–24)	8.88	8.70	9.06	3,348
The respondent felt ... all or most of the time				
That everything was difficult	39%	37%	41%	3,348
Restless or fidgety	33%	31%	35%	3,348
So depressed that nothing could cheer you up	23%	21%	24%	3,348
Worthless	23%	21%	25%	3,348
Hopeless	22%	21%	24%	3,348
Nervous	12%	10%	13%	3,348

Table 36. Mental health in the last 12 months

Description	Mean	CI Lower	CI Upper	N
Had a period lasting 30 days or longer when the respondent felt worried, tense, or anxious most of the time	51%	49%	53%	3,348
The period…				
Still going on	70%	67%	72%	1,740
Still going on, but reduced	19%	17%	21%	1,740
Ended	11%	10%	13%	1,740
These worries interfered with their ability to carry out normal activities				
A lot	62%	60%	65%	1,740
Some	18%	16%	20%	1,740
A Little	15%	13%	16%	1,740
Not at all	5%	4%	7%	1,740
Issues that sometimes are reasons for concern:				
Food shortage	55%	53%	57%	3,348
Financial constraints	42%	40%	44%	3,348
Living situation	30%	28%	32%	3,348
Children's education	28%	26%	29%	3,348
Health	28%	26%	29%	3,348
Clothing	16%	15%	18%	3,348
Employment	10%	9%	11%	3,348
Domestic issues	11%	10%	13%	3,348
Other	16%	14%	17%	3,348
Nothing	6%	5%	7%	3,348

5. NEXT STEPS

5.1 Process Evaluation

IPA will conduct a process evaluation to understand the extent to which the interventions are implemented as planned. Findings from this process evaluation will be critical for interpreting impact evaluation results. IPA will monitor Takunda's implementation throughout the delivery period. IPA's methodology for the process evaluation comprises a mix of site visits and observations, face-to-face interviews, discussion groups, desk-based research, and a review of existing reports and secondary data. The process evaluation will happen between April and September 2023.

5.2 Outcome Monitoring Survey

IPA will conduct an outcome monitoring survey 1 year after interventions begin, around August 2023. The outcome monitoring survey will be administered to 3,348 households in all treatment and control areas. The objective of the outcome monitoring survey is to evaluate the short-term impact of the Takunda RFSA on the participants.

5.3 Final Evaluation

IPA will conduct a final evaluation survey approximately 3 years after the beginning of the activity to evaluate Takunda's impact. It will happen around July 2025.

ANNEX A: ADDITIONAL DESCRIPTIVE STATISTICS

Food Security

Table 37. Food security

Description	Mean	CI Lower	CI Upper	N
[BL10] Food Consumption Score (FCS)	43.14	42.46	43.82	3,348
Female and Male Adults (F&M)	43.56	42.75	44.36	2,571
Adult Female no Adult Male (FNM)	41.97	40.59	43.35	679
Adult Male no Adult Female (MNF)	41.77	37.91	45.64	98
[BL10] HH with poor FCS (0–21)	4%	4%	5%	3,348
Female and Male Adults (F&M)	4%	3%	4%	2,571
Adult Female no Adult Male (FNM)	6%	4%	8%	679
Adult Male no Adult Female (MNF)	8%	2%	14%	98
[BL10] HH with borderline FCS (21.5–35)	36%	34%	38%	3,348
Female and Male Adults (F&M)	36%	34%	38%	2,571
Adult Female no Adult Male (FNM)	38%	34%	42%	679
Adult Male no Adult Female (MNF)	36%	26%	47%	98
[BL10] HH with acceptable FCS (> 35)	59%	57%	61%	3,348
Female and Male Adults (F&M)	60%	58%	63%	2,571
Adult Female no Adult Male (FNM)	56%	52%	60%	679
Adult Male no Adult Female (MNF)	55%	45%	66%	98
[BL06] Prevalence of moderate and severe food insecurity in the household, based on the Food Insecurity Experience Scale (FIES)	82%	67%	98%	3,348
Female and Male Adults (F&M)	83%	65%	100%	2,571
Adult Female no Adult Male (FNM)	82%	47%	100%	679
Adult Male no Adult Female (MNF)	73%	0%	100%	98
[BL06] Raw FIES Score (0–8)	5.67	5.59	5.75	3,348
Female and Male Adults (F&M)	5.70	5.61	5.80	2,571
Adult Female no Adult Male (FNM)	5.63	5.45	5.81	679
Adult Male no Adult Female (MNF)	5.25	4.68	5.82	98

Notes: FIES = Food Insecurity Experience Scale. The Raw FIES Score is a sum of the 8 FIES binary questions (higher = more food insecure).

Table 38. Dietary diversity

Description	Mean	CI Lower	CI Upper	N
Food groups consumed yesterday by any member of the household...				
Cereals	91%	89%	92%	3,348
Dark green leafy vegetables	78%	77%	80%	3,348
Oils and fats	78%	76%	80%	3,348
Spices, condiments, beverages	44%	42%	46%	3,348
Legumes, nuts, and seeds	37%	35%	39%	3,348
Fruits	33%	31%	35%	3,348
Vegetables	32%	31%	34%	3,348
White roots and tubers	23%	21%	25%	3,348
Sweets	21%	19%	23%	3,348
Rich vegetables and tubers	21%	20%	23%	3,348
Milk and milk products	21%	19%	22%	3,348
Vitamin-A-rich fruit	17%	16%	19%	3,348
Flesh meats	15%	14%	16%	3,348
Eat anything OUTSIDE the home	12%	11%	14%	3,348
Eggs	6%	5%	7%	3,348
Fish and seafood	5%	5%	6%	3,348
Organ meat	4%	3%	4%	3,348

Children Nutrition

Table 39. Minimum acceptable diet, disaggregated

Description	Mean	CI Lower	CI Upper	N
[BL12] Children 6–23 months receiving a minimum acceptable diet	8%	6%	10%	977
Minimum dietary diversity				
Breastfed	30%	26%	34%	592
Non-breastfed	2%	0%	3%	385
Minimum meal frequency				
Breastfed	32%	28%	36%	592
Non-breastfed	1%	0%	2%	385

Table 40. Diet of minimum diversity, disaggregated

Description	Mean	CI Lower	CI Upper	N
[BL39] Children 6–23 months consuming a diet of minimum diversity (MDD-C)	25%	22%	28%	977
Breastfed	30%	26%	34%	592
Non breastfed	18%	14%	22%	385

Table 41. Diet of minimum diversity, by food group

Description	Mean	CI Lower	CI Upper	N
[BL39] Children 6–23 months consuming a diet of minimum diversity (MDD-C)	25%	22%	28%	977
Food groups:				
Breast milk	89%	87%	91%	977
Eggs	64%	61%	67%	977
Other fruits and vegetables	58%	55%	61%	977
Vitamin-A-rich fruits and vegetables	55%	52%	59%	977
Legumes and nuts	34%	30%	37%	977
Grains, roots, and tubers	32%	29%	35%	977
Dairy products	17%	14%	19%	977
Flesh foods	6%	4%	7%	977

WASH

Table 42. WASH indicators full

Description	Mean	CI Lower	CI Upper	N
[BL19] HH in target areas practicing open defecation	31%	28%	34%	1,420
[BL27] HH with access to a basic sanitation service	45%	42%	48%	1,420
Kind of toilet:				
No facility/bush/field	31%	28%	34%	1,420
Ventilated improved pit latrine	30%	27%	32%	1,420
Pit latrine with slab	25%	22%	27%	1,420
Composting toilet	7%	5%	8%	1,420
Other	7%	6%	9%	1,420
Share toilet with other HH	29%	26%	32%	964

Description	Mean	CI Lower	CI Upper	N
[BL17] HH with soap and water at a handwashing station on the premises	9%	7%	11%	1,420
Handwashing station on the premises observed	41%	38%	44%	1,420
Presence of water at the place for handwashing	33%	29%	37%	601
Presence of soap:				
None	71%	67%	76%	601
Soap, ash, or detergent (bar, liquid, powder, paste)	27%	23%	31%	601
Other	0%	0%	1%	1,420
[BL18] HH in target areas practicing correct use of recommended household water	6%	5%	8%	1,420
Chlorination	5%	4%	7%	1,420
Flocculant/disinfectant	1%	1%	2%	1,420
The main source of drinking water:				
Unprotected well	36%	33%	39%	1,420
Protected well	28%	25%	31%	1,420
Protected spring	15%	12%	17%	1,420
Surface water	10%	8%	11%	1,420
Rainwater	5%	3%	6%	1,420
Other	7%	5%	8%	1,420

Notes: 'Share toilet with other HH' was administered only to households with any kind of toilet.

Consumption

Table 43. Consumption, durables goods

Description	Mean	CI Lower	CI Upper	N
In the past month, the household purchased any...				
Communication (such as airtime)	57%	56%	59%	3,348
Transport	36%	34%	38%	3,348
Tariffs on mobile money transfers	7%	6%	7%	3,348
Fuel (paraffin, charcoal, and firewood)	5%	4%	6%	3,348
No HH purchases of this type	33%	31%	35%	3348
In the past three months, the household purchased any...				
Personal care	50%	48%	52%	3,348

Description	Mean	CI Lower	CI Upper	N
Other clothing expenses	10%	9%	11%	3,348
No HH purchases of this type	47%	45%	49%	3,348
In the past six months, the household purchased any...				
Household operations (matches and soap)	79%	77%	80%	3,348
Education	54%	52%	56%	3,348
Clothing for children	25%	23%	26%	3,348
Footwear	22%	21%	24%	3,348
Medical care	19%	17%	20%	3,348
Clothing for ladies	13%	11%	14%	3,348
Clothing for men	11%	10%	13%	3,348
Household utensils	10%	9%	12%	3,348
No HH purchases of this type	11%	10%	13%	3,348
In the past 12 months, the household purchased any...				
Funerals	37%	35%	39%	3,348
Festivals such as New Year, Christmas, Easter, Ramadan, Eid	32%	31%	34%	3,348
Home improvements or repairs	17%	15%	18%	3,348
Birth of a child, excluding hospital bills when the child was born	10%	9%	12%	3,348
No HH purchases of this type	39%	38%	41%	3,348

Family Planning

Table 44. Family planning detailed

Description	Mean	CI Lower	CI Upper	N
[BL36] Women in a union who have knowledge of modern family planning methods that can be used to delay or avoid pregnancy	95%	93%	97%	951
Knowledge of modern family planning methods score (1–13)	7.62	7.42	7.81	951
Percentage of women who have heard about …				
Contraceptive pill	97%	96%	98%	951
Injectables	94%	92%	96%	951
Male condom	92%	90%	94%	951
Implants	91%	89%	93%	951

Description	Mean	CI Lower	CI Upper	N
Female condom	85%	82%	87%	951
IUD	77%	74%	80%	951
Female sterilization	66%	62%	69%	951
Lactational amenorrhea method (LAM)	50%	47%	54%	951
Male sterilization	38%	34%	41%	951
Standard days method	35%	32%	39%	951
Emergency contraception	18%	15%	20%	951
Diaphragm with spermicidal foam, cream, or gel	16%	13%	19%	951
Other modern methods	3%	2%	4%	951
[BL37] Women in a union who made decisions about modern family planning methods in the past 12 months	50%	46%	53%	951
Non-pregnant women	86%	84%	88%	951
[BL20] Contraceptive prevalence rate (CPR)	71%	67%	75%	797
Method used:				
Contraceptive pill	64%	59%	68%	569
Injectables	21%	17%	24%	569
Implants	8%	5%	10%	569
Other	8%	5%	10%	596

Notes: This section was administered to a random subsample of women in union aged 18 to 49 years. The indicator [BL20] Contraceptive Prevalence Rate was administered to non-pregnant women.

Agriculture

Table 45. Improved management practices or technologies on crops

Description	Mean	CI Lower	CI Upper	N
Practices/technologies for cultivation				
Weed control	92%	90%	93%	1,355
Manure	56%	53%	59%	1,355
Early planting or planting with first rains	55%	52%	58%	1,355
Ripping into residues	52%	49%	55%	1,355
Micro dosing	49%	46%	52%	1,355
Planting basins	46%	43%	49%	1,355
Use of improved crop varieties	43%	40%	46%	1,355

Description	Mean	CI Lower	CI Upper	N
Intercropping	42%	39%	45%	1,355
Crop rotations	38%	35%	41%	1,355
Pot-holing	35%	32%	38%	1,355
Compost	33%	30%	36%	1,355
Dry planting	26%	23%	29%	1,355
Ridging	22%	20%	25%	1,355
Clean ripping	16%	14%	18%	1,355
Tied ridges	16%	13%	18%	1,355
Mulching	14%	12%	16%	1,355
Dead level contours	12%	10%	14%	1,355
Integrated pest management (IPM)	11%	9%	13%	1,355
Double-dug beds/fertility trenches	7%	5%	8%	1,355
Methods to store				
Sealed/air-tight bags	46%	43%	49%	1,355
Grain treatment with agro-chemicals	8%	6%	9%	1,355
Other post-harvest practices that reduce pre-storage losses	7%	5%	8%	1,355
Seed or grain treatment techniques	6%	5%	8%	1,355
Locally made storage structures	2%	2%	3%	1,355
Use of solar or fuel-powered dryers	0%	0%	1%	1,355
Community storage facilities	0%	0%	0%	1,355
Natural resource management practices				
Management or protection of watersheds	15%	13%	18%	1,355
Regeneration of natural landscapes	15%	13%	17%	1,355
Management of forest plantation, woodlands	7%	5%	8%	1,355
Development and implementation of NRM bylaws	7%	5%	8%	1,355
Agro-forestry	1%	1%	2%	1,355
Sustainable harvesting of forest products	0%	0%	1%	1,355

Table 46. Improved management practices or technologies on livestock

Description	Mean	CI Lower	CI Upper	N
Practices/technologies for livestock				

Description	Mean	CI Lower	CI Upper	N
Vaccinations	42%	38%	46%	721
Homemade animal feeds	26%	22%	29%	721
Deworming	22%	19%	26%	721
Improved shelters	12%	9%	15%	721
Castration	9%	7%	11%	721
Fodder production, veld reinforcement with legumes	7%	5%	9%	721
Used the services of comm. animal health workers	7%	5%	9%	721
Animal feed supplied by stock feed manufacturer	7%	5%	8%	721
Dehorning	6%	5%	8%	721
Pen feeding	6%	4%	8%	721
The services of community animal health ext. worker	6%	4%	8%	721
Other	1%	0%	1%	721
Periodic replacement of male breeding stock	1%	0%	1%	721
Artificial insemination	0%	0%	0%	721
Natural resource management practices				
Management or protection of watersheds	16%	13%	19%	721
Regeneration of natural landscapes	15%	12%	18%	721
Development and implementation of NRM bylaws	10%	7%	12%	721
Management of forest plantation, woodlands	6%	4%	8%	721
Agro-forestry	2%	1%	2%	721
Sustainable harvesting of forest products	0%	0%	1%	721

Resilience

Table 47. Adaptive index

Description	Mean	CI Lower	CI Upper	N
[BL08] Adaptive capacity index (0–100)	45.34	44.39	46.28	1,217
Index of aspirations/confidence to adapt	10.14	10.02	10.25	1,420
Index for bridging social capital	2.38	2.27	2.49	1,420
Index for Linking social capital	0.66	0.59	0.73	1,420
Social networking index	2.19	2.13	2.25	1,419
Education and training index	1.59	1.52	1.65	1,420

Description	Mean	CI Lower	CI Upper	N
Livelihood diversification	1.86	1.80	1.93	1,420
Index for information exposure	7.08	6.78	7.37	1,411
Adoption of improved practices	0.95	0.94	0.97	1,227
Index of asset ownership	8.97	8.72	9.21	1,420
Index for access to financial institutions	0.80	0.75	0.85	1,420

Notes: This section was administered to a random subsample of respondents; 1,420 households were selected (42% of the sample). "Social networking index" and "Index for information exposure" has different sample because of a mistake in the flow of the survey. "Adoption of improved practices" have a different sample because not all households have farmers. Index of assets includes Land, Cultivator, Plough, Planter, Sheller, Harrow, Plantation/ Orchard, Incubator, Beehives, Scotch cart/Water cart, Wheelbarrow, Knapsack sprayer, Water pump, Donkey, Goat, Cattle, Generator, Solar Panel, Lounge suite, Bicycle, Television, Satellite Dish & components, Radio, Cell-phone, Refrigerator/Deep–freezer, Peanut Butter / Candle Making /Oil-pressing machine, Cattle, Goats, Sheep, Donkey/mule, and Poultry.

Table 48. Absorptive index

Description	Mean	CI Lower	CI Upper	N
[BL09] Absorptive capacity index (0–100)	38.49	37.53	39.46	1,322
Number of informal safety nets available in the community	1.97	1.89	2.05	1,322
Bonding Social Capital Index	2.84	2.73	2.95	1,420
Household regularly saves cash	0.28	0.26	0.31	1,420
Access to remittances	0.13	0.11	0.16	1,420
Index of asset ownership	8.97	8.72	9.21	1,420
Index of shock preparedness and mitigation	0.39	0.36	0.43	1,420
Household-acquired crop insurance	0.00	0.00	0.00	1,420
Availability of humanitarian assistance from the government or non-governmental organization	0.25	0.22	0.28	1,420

Notes: This section was administered to a random subsample of respondents; 1,420 households were selected (42% of the sample). "Number of informal safety nets available in community" has a different sample because of an incorrect skip pattern that was corrected after a few days.

Table 49. Transformative index

Description	Mean	CI Lower	CI Upper	N
[BL25] Transformative capacity index (0–100)	38.54	37.45	39.64	1,267
Availability of formal safety nets index	0.72	0.65	0.79	1,420
Availability of markets within 5km of a village index	0.54	0.48	0.59	1,420
Access to communal natural resources index	0.29	0.24	0.33	1,322
Index for access to basic services	1.00	0.95	1.05	1,420
Access to infrastructure index	1.31	1.26	1.36	1,420

Description	Mean	CI Lower	CI Upper	N
Access to agricultural extension services	0.59	0.55	0.62	1,420
Access to livestock services	0.34	0.31	0.37	1,420
Index for bridging social capital	2.38	2.27	2.49	1,420
Index for Linking social capital	0.66	0.59	0.73	1,420
Index of types of collection action	0.47	0.43	0.51	1,420
Community-level gender equitable decision-making index	0.29	0.28	0.30	1,419
Index for local government responsiveness	0.66	0.62	0.70	1,420
Gender index	0.39	0.34	0.43	1,420
Participation in local decision making	0.45	0.42	0.48	1,267

Notes: This section was administered to a random subsample of respondents; 1,420 households were selected (42% of the sample). "Access to communal natural resources index" has a different sample because not all the households selected have a least one farmer member. "Community-level gender equitable decision-making index" has a different sample because it applies to women and men in union. "Participation in local decision making" has a different sample because of an incorrect skip pattern that was corrected after a few days.

Table 50. Education and training

Description	Mean	CI Lower	CI Upper	N
Household ever received...				
any vocational (job) or skills training	19%	17%	21%	1,420
any business development training	9%	7%	10%	1,420
any early warning training	5%	4%	6%	1,420
any natural resource management training	18%	16%	20%	1,420
any adult education	8%	6%	9%	1,420
training in how to use your mobile phone to get market information	11%	9%	13%	1,420

Notes: This section was administered to a random subsample of respondents; 1,420 households were selected (42% of the sample).

Table 51. Collective action

Description	Mean	CI Lower	CI Upper	N
HH worked with others in the village to do something for the benefit of the community	37%	35%	40%	1,420
Activities:				
Road maintenance/construction	66%	61%	71%	532
Repaired/built schools	13%	10%	17%	532

Description	Mean	CI Lower	CI Upper	N
Repaired/built health posts or centers	12%	9%	15%	532
Improved community access to drinking water	11%	8%	14%	532
Other	22%	18%	26%	532

Notes: This section was administered to a random subsample of respondents; 1,420 households were selected (42% of the sample).

Perceived Economic Ladder

Table 52. Perceived economic ladder

Description	Mean	CI Lower	CI Upper	N
Rung where the HH…				
...would place on the ladder in terms of financial status	2.55	2.49	2.62	3,337
...thinks it will be in terms of financial status in five years	4.03	3.93	4.13	3,005
...would place on the ladder in terms of self-satisfaction	3.75	3.64	3.85	3,306
...thinks it will be in terms of self-satisfaction in five years	5.09	4.98	5.21	2,979

Notes: The rungs for financial status go from 1 (poorest) to 10 (richest). The rungs for self-satisfaction go from 1 (very dissatisfied) to 10 (very satisfied). The sample is different among the variables because some participants refused to answer the question.

Self-Control

Table 53. Self-control

Description	Mean	CI Lower	CI Upper	N
Find hard time breaking bad habits				
Not like me at all	74%	73%	76%	3,348
Not much like me	17%	16%	19%	3,348
Somewhat like me	3%	2%	3%	3,348
Mostly like me	4%	3%	4%	3,348
Very much like me	2%	1%	2%	3,348
Get distracted easily				
Not like me at all	55%	53%	57%	3,348
Not much like me	23%	21%	25%	3,348
Somewhat like me	11%	10%	13%	3,348
Mostly like me	7%	6%	8%	3,348
Very much like me	4%	3%	4%	3,348

Description	Mean	CI Lower	CI Upper	N
Say inappropriate things				
Not like me at all	60%	58%	61%	3,348
Not much like me	24%	22%	26%	3,348
Somewhat like me	14%	13%	16%	3,348
Mostly like me	2%	1%	2%	3,348
Very much like me	0%	0%	1%	3,348
Refuse things that are bad for me, even if they are fun				
Not like me at all	14%	13%	15%	3,348
Not much like me	8%	7%	9%	3,348
Somewhat like me	9%	8%	10%	3,348
Mostly like me	26%	25%	28%	3,348
Very much like me	43%	41%	45%	3,348
Good at resisting temptation				
Not like me at all	4%	3%	5%	3,348
Not much like me	6%	5%	7%	3,348
Somewhat like me	29%	28%	31%	3,348
Mostly like me	28%	26%	30%	3,348
Very much like me	33%	31%	34%	3,348
Have very strong self-discipline				
Not like me at all	3%	2%	3%	3,348
Not much like me	4%	3%	4%	3,348
Somewhat like me	21%	19%	23%	3,348
Mostly like me	36%	34%	38%	3,348
Very much like me	37%	35%	39%	3,348
Pleasure and fun sometimes keep me from getting work done				
Not like me at all	46%	44%	48%	3,348
Not much like me	24%	22%	25%	3,348
Somewhat like me	16%	14%	17%	3,348
Mostly like me	11%	10%	12%	3,348
Very much like me	3%	3%	4%	3,348
Do things that feel good in the moment but regret later				

Description	Mean	CI Lower	CI Upper	N
Not like me at all	50%	48%	52%	3,348
Not much like me	22%	21%	24%	3,348
Somewhat like me	18%	16%	19%	3,348
Mostly like me	8%	7%	9%	3,348
Very much like me	2%	1%	2%	3,348
Can't stop myself from doing something, even if I know it's wrong				
Not like me at all	56%	54%	58%	3,348
Not much like me	23%	21%	25%	3,348
Somewhat like me	15%	14%	16%	3,348
Mostly like me	5%	4%	6%	3,348
Very much like me	2%	1%	2%	3,348
Often act without thinking through all the alternatives				
Not like me at all	58%	56%	60%	3,348
Not much like me	25%	23%	26%	3,348
Somewhat like me	12%	11%	13%	3,348
Mostly like me	4%	3%	5%	3,348
Very much like me	1%	1%	1%	3,348

Table 54. Population lived under the poverty line, by province and district

Description	Mean	CI Lower	CI Upper	N
[BL01] Prevalence of poverty: Percentage of people living on less than $1.90/day 20	84%	82%	85%	3,348
Manicaland	87%	85%	88%	2,272
Buhera	90%	87%	92%	1,007
Mutare	84%	81%	86%	1,265
Masvingo	77%	74%	80%	1,076
Chivi	79%	75%	83%	543
Zaka	75%	71%	79%	533

ANNEX B: BALANCE TEST

Table 55. Balance test

	(1)	(2)	(1) – (2)
Description	Treatment	Control	Difference (P-Value)
	Mean	Mean	
Female head of household	0.37	0.38	-0.02 (0.45)
Age of household head	51.70	51.76	-0.07 (0.94)
Married household head	0.69	0.68	0.00 (0.87)
Number of household members	5.13	4.91	0.22 (0.02)
Number of children under 18 in household	2.87	2.69	0.19 (0.05)
Number of rooms in main house	3.33	3.32	0.02 (0.86)
Daily per capita expenditures ($USD)	1.61	1.66	-0.05 (0.55)
Food Consumption Score (FCS)	42.65	43.69	-1.04 (0.33)
Own agricultural land	0.81	0.83	-0.03 (0.29)
Households cultivate anything in last 12 months	0.94	0.95	-0.00 (0.83)
Index of durable assets	-0.03	0.00	-0.03 (0.18)
Own livestock	0.88	0.88	-0.01 (0.71)
N	1,831	1,517	
Joint Test P-Value: 0.41			