



LIVELIHOODS FOR RESILIENCE ACTIVITY

Year 5 INTERMEDIATE RESULT (IR) ASSESSMENT

Final Report

June, 2022

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ACRONYMS

ASE	Agri. Service Ethiopia
CCA	Climate Change Adaptation
CPR	Contraceptive Prevalence Rate
DHS	Demographic and Health Survey
ETB	Ethiopian birr
FHH	Female Headed Households
FIES	Food Insecurity Access Scale
GRAD	Graduation with Resilience to Achieve Sustainable Development
HH	Households
IR	Intermediate Result Assessment
MAD	Minimum Acceptable Diet
MDD	Minimum Dietary Diversity
MFI	Micro-Finance Institutions
MHH	Male Headed Households
MMF	Minimum Meal Frequency
ORDA	The Organization for Rehabilitation and Development in
PSNP	Productive Safety Net Program
REST	Relief Society of Tigray
RuSACCO	Rural Saving and Credit Cooperatives
SNNPR	Southern Nation Nationalities and People Region
SoW	Scope of Work
SPSS	Statistical Package for Social Studies
TVET	Technical and Vocational Education and Training
VC	Value Chain
VESA	Village Economic and Saving Association
WDD	Women dietary diversity
WEAI	Women empowerment in Agriculture Index

EXECUTIVE SUMMARY

In October 2019, CARE Ethiopia commissioned Care Plc. to conduct repeated annual intermediate result (IR) assessment of the Livelihoods for Resilience Activity over the coming three years, corresponding to the fiscal year of the project from 2019-2022. The study involves assessing project's intermediate result that have been achieved based on the key performance indicators using information collected randomly selected project participating households as well as conducting multiyear trend analysis of changes in the well-being of project participants based on panel data are collected from 400 households .

This report present endline IR assessment (FY2021) result of project achievements based the information collected from 649 households and 201 youth who were randomly selected from Amhara, SNNP and Sidama regions. Tigray region was not included in the household survey for this round, due to security issue. Summary of key findings of the assessment are as follows

I. Household wellbeing

- It was observed that 19% of households were food secured based on FIES analysis. There was no big difference between FHH and MHH in terms of food security status as the proportion of food secure FHH and MHH is almost similar.
- Average livestock assets (ETB 13,317) constituted the biggest portion of the overall household assets (ETB 16,978). The assessment confirmed that MHHs were much better off in terms of asset ownership as the value of asset owned by MHH exceeds the value of those owned by FHHs (ETB 19,326 and ETB 12,7487 respectively).
- Crops and livestock were found to be the highest net annual incomes source for the households interviewed (average ETB 9,581), followed by transfer (average ETB 7511), and off-farm activities (average ETB 6097),

II. Livelihoods pathways

- Two out of five households were found to be actively participating in prioritized value chain activities and earned income out of it with the project's support. Value chain engagement by MHHs was slightly higher than FHHs;
- Two out of 10 households interviewed participated in two or more value chain activities;
- More than 15% of households are actively engaged and earned income from off-farm activities, and there are slight differences between MHHs & FHHs in terms of earning income from multiple off-farm activities , as the percentage of FHH who earned income from multiple off-farm activities exceeds MHHs by 6 point.
- Wage employment was found to be an income source for 10% households and there was no major differences between MHHs& FHHs. Both regular wage employment and casual/irregular wage were equally most common type of employment that created income for FHHs & MHHs households across the regions.

III. Financial service

- 75% of HHs managed to save money in various formal and informal institutions in the last 12 months, with no significant difference in saving trends between FHHs and MHHs. VESA was the primary institutions where majority of households (74%) saved their money
- VESA found to be major source of financial loans for majority of households (46%), followed by MFIs (32%) over the last five years. This trend was similar for both FHHs and MHHs; and
- Overall, households were found in good position in terms of paying back loan taken from MFIs and their own VESAs on time. The assessment also indicates that FHH were in better position than MHH in terms of repaying MFI loans, while VESA loan repayment performance was almost similar for both group

IV. Gender equality and social norm

- Almost half of the interviewed women (45%) from the sample households had influence on decision making pertaining to different agriculture production issues and household expenditure;
- About 47% of women had inputs or could influence decisions on credit including when and how much money to borrow as well as how that money should be spent;
- Significant numbers of women (69%) had achieved empowerment in assets ownership. Women's sole ownership or joint ownership with their counterpart over large livestock or large consumer durables were attributed for positive achievement with this regard;
- Three out of five women were found to have sole or joint control over household income and expenditure. However, in general the limited role of women in decision making on use of income generated from food crop production and decision on major household expenditure were the bigger contributor for disempowerment;
- A total of 96% out of those interviewed women were found to be a member of least at one group. However, only 28% of women had leadership roles in these different groups.
- Overall, more than half of households were found to have more or less equitable chores shared between women and men members.

V. Nutrition

- 98% households were trained in perma-garden production, of this, 68% of households' have started production;
- Among the total households who received poultry voucher and trained, 77% were producing egg;
- Overall, 72% of households exclusively breast fed their infants, which is higher than to 58% figure from the national 2018 Demographic and Health Survey. FHHs were found to be better off in feeding their infant with only breastmilk than MHH as the percentage of FHH and MHH who exclusively breast fed were 85 and 67 respectively;
- 36% of households managed to feed their children according to minimum acceptable diet (MAD);
- About 76% of women consumed minimum dietary diversity and this assessment revealed no differences between women in MHH (78%) and FHH (72%) in terms of consuming minimum dietary diversity.

VI. Climate change and resilience

- An average 65% of households implemented multiple climate change adaptation mechanisms. Adoption of multiple CCA practice was more commonly practiced by MHHs (68%) than and FHHs (58%)
- Overall 42% of households received seasonal weather forecasts and advice, of these more than 95% of them implemented advisories they received
- Almost nine out of 10 households reported that they experienced at least one shock in the last 12 months since survey time. Households felt that they have more easily recovered from excessive rain, livestock death and illness of a household member than from food price inflation, increase in price of agricultural inputs and crop disease,

VII. Youth engagement

- More than 82% of interviewed youth were organized into VESA. The assessment revealed that VESA was the prominent institution where many number youth saved their money and got loan from .
- Out of the total trained youth in life skill, 84% of them got employment, be it as self-employed or salaried staff, with the project's support
- Among those who had been employed, 52% were engaged in non-farm on self-employed basis; and
- When reviewing income capacity, the average annual income of the project supported youth was ETB 6,560 and the men (ETB 8,019) in the group appear to be earning large amounts than their female counterparts (ETB 3,706).

1. INTRODUCTION

In October 2019, CARE Ethiopia commissioned Care Plc. to conduct repeated annual intermediate result assessments of Livelihoods for Resilience Activity over three years, corresponding to the fiscal year of the project from 2019-2022. This multi-year contract has two basic objectives. Firstly, to measure outcome indicators annually and assess progress, including against annual targets and secondly, to conduct a multiyear trend analysis to understand how households' characteristics on key wellbeing yardsticks change over time. The annual assessment of intermediate result (IR) indicators is based on information collected from new randomly selected project households each year, while the trend analysis is performed using panel data collected from 400 households interviewed during baseline assessment, and in each subsequent round of data collection

This report presents the findings of the FY2021 household assessment (here after called as end line assessment). The trend analysis report based on the panel information collected in four rounds was prepared and submitted separately.

The first section is an introduction, which is followed by a section that provides a brief overview of project background, including its theory of change and implementation modality. Thereafter, the third section will highlight key challenges of the study and the fourth section will detail study methods. The main section of the report that presents the findings of the study can found in section five.

2. PROJECT BACKGROUND

The Feed the Future Ethiopia - Livelihoods for Resilience Activity (hereafter refer to as Livelihoods for Resilience or L4R) is a multi-year USAID funded project running from December 5, 2016 until June 30, 2022. Building on the previously implemented project, Graduation with Resilience to Achieve Sustainable Development (GRAD), Livelihoods for Resilience supports Productive Safety Net Program (PSNP) households build resilient livelihoods with improved food and nutrition security, even in the face of shocks and stresses. The project works closely with the livelihood component of the PSNP and targets PSNP households in 37 Woredas of Amhara, SNNP and Tigray regions, with the aim of enabling 97,900 households to graduate from the PSNP with resilience.

The Livelihoods for Resilience Activity is implemented by a consortium of organizations led by CARE Ethiopia, which plays the overall leadership role and implements field activities in Sidama and Gedio Zones of SNNPR. The Organization for Rehabilitation and Development in Amhara (ORDA) implements activities in Amhara while the Relief Society of Tigray (REST) implements in Tigray and Agri Service Ethiopia (ASE) in Hadiya Zone of SNNPR. Additionally, SNV-Ethiopia provides technical support on value chain development, private sector engagement and agricultural extension for the overall programme.

Livelihoods for Resilience's theory of change

The Theory of Change for this program can be summarized as follows: If the investment increases economic growth in rural Ethiopia, households will graduate from PSNP with greater resilience. Progression from a situation of chronic food insecurity to greater resilience would be achieved if and only if:

- a) Women, men and youth have increased capacities for undertaking resilient livelihoods
- b) Households have stable and resilient livelihoods portfolios
- c) An enabling environment supports resilient livelihood for PSNP households

These three conditions are closely linked and mutually reinforcing; and they would be realized if the underlying preconditions are met.

Women, men and youth have increased capacities for undertaking resilient livelihoods. Chronic food insecurity can lead to a sense of hopelessness in PSNP households, particularly in the face of increasing risk and uncertainty. This is particularly true for women, who face social inequalities that represent additional barriers to accessing information, opportunities and resources. Although they are typically better educated than their parents, youth in PSNP households struggle to define their future pathways in a context of increasing pressure on resources and changing social and economic dynamics within their households and communities. If sustainable social networks and community institutions that facilitate learning and provide an opportunity for timely and equitable access to information are established, then households will build their capacity to make informed livelihood decisions.

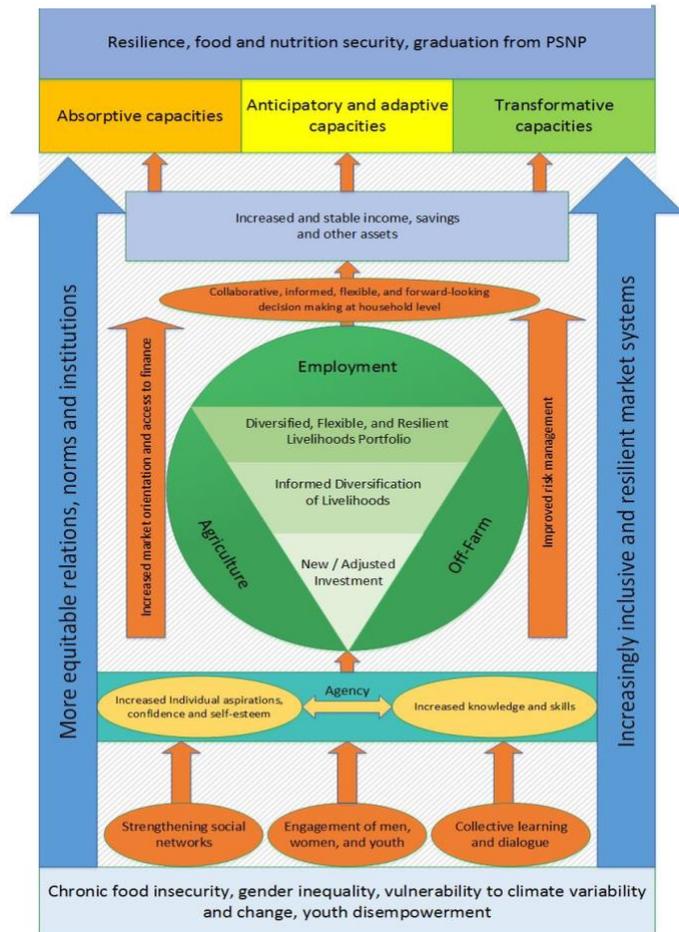
Households have stable and resilient livelihoods portfolios. Having a diversified and flexible livelihoods portfolio enables households to absorb or adapt their livelihoods in time of shocks and stresses. If households have an increased and diversified incomes from on-farm, off-farm activities or/and wage employment, then they will have stable and resilient livelihood portfolios.

An enabling environment support resilient livelihoods for PSNP households. A number of factors enable this transition including: market systems that are more inclusive and resilient that provide opportunities for women, men and youth to adapt and transform their livelihoods; changes in social norms, relations and institutions to create openings for vulnerable HHs, and particularly women, to have equitable access to information, resources and opportunities. If social, cultural and institutional barriers are removed, then, this will provide an enabling environment that allows households to graduate with resilience from the PSNP.

3. LIMITATIONS OF THE STUDY

Indeed, no study can be absolutely free from any limitations. In particular here, studies that make use of cross-sectional data might be significantly influenced by season of the data collection of the project context. In the case of this assessment, the nutrition outcomes to some extent will be influenced by data collection occurring during the fasting season¹. Additionally, the absence of a list of households who have children under the age of 2 years old and pregnant women made it difficult to conduct random sampling based on these characteristics, which would be appropriate to ensure sufficient representation of these groups for the nutrition sections relating to households with children under 2 and pregnant women.

Figure 1: Livelihoods for Resilience Activity's theory of change



¹ The data collection happened during Genet fasting season that run from late November to late December. The fasting is widely practiced by orthodox religion followers largely inhabited in Amhara and Tigray regions of the country. During this period, people tend to consume meals only one or two times per day and avoid eating meat and animal products.

To address these challenges, the research team in collaboration with project frontline staff was able to identify these groups of households in sampled kebeles and conducted sampling to maintain proportional representation. But the research team did not believe that all members of these household groups were exhaustively identified and included in the sampling frame and to some extent may undermine the outcomes, although the influence may not be critical. Likewise, other findings focusing on sub-groups such as households participating in poultry vouchers, perma-gardening participants, micro-franchise salesmen, etc might not be good enough number in a sample to have statistically significant result that represent the overall characteristics of these sub-population.

The study expected to cover all woredas of the projects in four regions: Amhara, Tigray, SNNP and Sidama region. Unfortunately, due continued travel restriction plus logistical constraints, data collection was not possible. Therefore, the report was generated based on information collected from the rest of regions and may not sufficiently represent the overall project performance. The inclusion of Tigray during the previous round and exclusion during this round may also influence the comparability of the data between the two rounds.

This endline collection happened in time when the project was closing grassroot level activities and community facilitators were no longer available in the field. The absence of their support made tracing sample households very difficult, as result all of the sample households were not be founded and interviewed.

Finally, the length of the questionnaire made the interview time very long and this might have created fatigue among respondents. In turn, they may have given random or meaningless responses later in the instrument which could add noise to the data or lead to poor response rates.

4. METHODOLOGY

4.1 Sampling and sample size

Most of the project indicators are general and assessed from data collected from all sampled households. However, nutrition indicators are analyzed from data collected from households with children less than 24 months old. In order to calculate statistical significance for these indicators, the sampling strategy should include data from HHs with children below 24 months, householdss that have given birth over the last 12 months, household with youth, etc. in sufficient numbers to measure differences. Employing single-stage sampling strategies would provide less representative data of these sub-group members in our sample. Thus, Care Consultancy implemented a multi-stage sampling approach to ensure all project groups of HHs were statistically represented as outlined below.

- i. **Sampling of households that include proportional number of households with 24 months children.** The endline assessment covered all project woredas of Amhara, SNNP and Sidama regions (excluding Tigray region)
 - **First Step:** Using probability proportional to the size techniques, 41 sample Kebeles were selected within the project coverage areas.
 - **Second step:** Thereafter, full project household lists with member types was generated for each of the 41 kebeles. These lists were then stratified into the following priority groups: households with children under the age of 24 months and those without children under 24 months².
 - **Last step:** The sample households from each stratum, as outlined above, were selected randomly and proportional to their size.

Table 1: Sample Kebeles and number of sample households interviewed

² Classification of households into groups (household with children under 24 months old and those with out children under 2 yrs. old) was carried out with assistances of project frontline staff (Community Facilitators) at Kebele levels.

Zone (Cluster)	Project Target	Project Woredas	Total number of sample Kebeles	Total number of sample HHs interviewed
Woldia	16,882	Gubalafto, Habru and Raya Kobo	12	196
Meket	10,683	Meket, Walda	7	122
Mehalmeda	8,573	Menze mama and Menze gera	6	94
Hadiya	8,832	Anlemu, Duna, Lemu, Soru	6	87
Gedio and Sidama	15,543	Aleta Chuko, Aleta Wondo, Boricha, Derara, Dilla Zuriya, Gara, Kochere, Wenage	10	150
Total	60,513³		41	649

ii. Project's youth sampling

The survey also looked at to what extent the capacity building packages were impactful in supporting the trainees to obtain employment opportunities. Based on the monitoring reports, the project has supported 4,201 youth so far, suggesting that less than 5% youth from overall households were took part in the youth program. This implies that the maximum number youth that could be found in the overall household sample surveyed for the sample to be proportional to size would be 32. This number is insufficient to see the impact of the project on youth and thus the research team employed a separate sampling strategy for the project supported youth. Accordingly, Care Consultancy sampled 201 youth⁴ from Amhara, SNNP and Sidama regions targeted for youth intervention through the following steps:

First step: Youth in the sample Kebeles⁵ were a sampling frame and it was stratified into female and male groups to ensure proportional gender representation

Last step: Thereafter, sample youth from each stratum were selected randomly and proportional to the size

Table 2: Sample kebeles and number of sample youth interviewed

Zone (Cluster)	Total # of Youth targeted	Total # of Sample Kebeles	Total sample size
Waldia	536	3	66
Meket	417	2	42
Mehalmeda	422	2	17
Hadiya	163	3	24
Gedio and Sidama	639	6	52
Total	2,177	16	201

4.2 Data collection and management plan

4.2.1 Quantitative data collection and quality assurance

CARE Ethiopia team revised IR tool that was used for the previous assessment and added new modules in order to assess new initiatives and also to capture the impact of new events/phenomena happened on households' wellbeing and overall project performance. After receiving a revised final tool, Care PLC revised the electronic tool accordingly and translated the tool into five local languages: Sidamagna, Gedeoffigna, Haddisasa, Amharic and Tigreña⁶

³ Total number of households enrolled into the program by the end of October, 2019

⁴ The sample size was estimated by applying 95% confidence level and 5% confidence interval

⁵ Sampling kebeles are those kebeles that were randomly selected for household sampling

⁶ The Tigray conflict erupted after the survey team finalized their preparation including translation of tool in Tigreña.

Before deployment to the survey area, all supervisors received a two days intensive training on both the content and the application and operation of the Kobocollect electronic survey tool. The training was provided by the associate consultant and the statistician. While the associate consultant provide training on the content of each survey questions, The statistician provide orientation on the application and operation of the electronic tool such as how to open the different survey forms (i.e. point estimates survey forms, youth survey forms), entering data into survey forms, recording, saving, retrieving and sending the data into the central server system

Thereafter, all trained supervisors were assigned in each project area, recruited the required enumerators and provided three days training for all enumerators. Many of these enumerators were involved in the previous data collection cycle. The trainings to enumerators were conducted in six clusters of Amhara, Sidama, and SNNP regions areas at different time. In each cluster three days training was conducted. During the training, IPs’ focal persons were also participated and supported the trainees in the provision of addition information and explanation that was useful to understand the context of the project and households as well as implementation modalities

Care plc implemented a conventional COVID 19 prevention mechanism to reduce a risk of transmission among field team and community during data collection process. This involves orientation to filed team on COVID 19 prevention mechanisms, limiting the number of field team member per vehicle, consistent use of face mask and sanitizer by field team during field work, maintain appropriate social distancing between data enumerators and respondent during interview time.

The survey team commenced the data collection in Hadiya zone of SNNPR region and completed the collection by end of third week of January. The enumerators kicked off the data collection in both Sidama and Gedio at the same time in the last week of January and completed the collection by end of second week of February, 2022. The collection in Amhara was commenced from Meket cluster in third week of February, 2022 and then completed the collection in woldiya and Mehal Meda first week of February and second week of March, 2022 respectively. The table below provide the detail data collection schedule.

Table 3: Data collection schedule

Zone (Cluster)	Data collection schedule
Hadiya	January 17-25, 2022
Gedio and Sidama	January 28,2022-February 5,2022
Meket cluster	February 10-20,2022
Woldiya cluster	February 11-25,2022
Mehal Meda cluster	February 28,2022-March 12,2022

The interview was conducted using local language, adult men and women existed in sample households were asked questions applicable for each of them (who should answer a question is specified above the each question in the survey tool). The study team had prepared a randomly selected reserve list of five households for each kebeles. Therefore, the field team replaced households who were not available during interview time from reserve list and as result the team managed to interview 649 household. The youth module of the questionnaire was used to collect information from randomly selected youth targeted by the project. Overall, field team interviewed 201 youth from Amhara , SNNP and Sidama regions targeted for youth intervention Table 3 below provides details on the number of households members interviewed.

Table 4: Men, women & youth interviewed to collect quantitative information

	Male	Female	Total number of respondents

Adult respondents	416	578	994
Youth respondents	133	68	201
Total	549	646	1195

Supervision and data management

Care Consultancy implemented close follow up and survey monitoring protocol at field level. A supervisor was assigned per cluster closely supporting and monitoring all enumerators in their zone. All enumerators met daily as a group with their supervisors in their cluster to submit their completed forms, share experiences, challenges and developed solutions together. Each supervisor then reviewed completed forms they received that day, check quality before sending them onto the central server. Once the data had been received, further clean up and merging was done by statisticians, and these were exported into CSV file (excel) and imported into to SPSS for analysis.

4.3 Analysis and presentation

Following the cleaning up of collected data; aggregation was carried out based on the protocols of each indicator. Thereafter, exporting and coding into SPSS tool for analysis was undertaken, Care Consultancy employed both descriptive and inferential analysis. Depending on the measurement, the values of each indicator was presented using percentage and mean to illustrate distribution/variation by geographic areas, sex of household head, entry time into the program. In addition, inferential analysis was carried out to investigate statistically significant differences between the groups and within groups across geographic regions. For example depending on the distribution of the scores, t-test or Mann-Whitney test was employed to identify if significant income or asset differences exists between various groups of households. Similarly, Chi-square test was applied to understand if there were significant differences in empowerment between women who have VESAs account and those who do not etc. And these types of analysis were carried out where it was found to be useful and relevant. The findings from the quantitative analysis were presented in section 5

5. FINDINGS

This section of the report discusses and interprets quantitative analysis results. In order to maintain the flow of the report, the findings are organized into nine sub-sections: Sample Households' key characteristics; household wellbeing status; livelihoods pathways; access to financial service; women empowerment and social norm; nutrition; hygiene, sanitation & family planning; climate change, resilience and graduation from PSNP and youth employment.

5.1. Sample Household characteristics

Key demographic characteristics of sampled households

Table 5 below summarize key demographic characteristics of the sampled households, accordingly, more than 64% of the interviewed households were headed by male. The highest average family size were observed in Hadiya (more than 7 person per a household) and followed by Sidama & Gedeo with the lowest average family size were found in Amhara region, which is 4.7. Overall, average family size of the sampled households was found to be 5.25, which is almost similar to Y4 IR assessment and national figure of 5.1⁷.

Table 5: Key demographic characteristics of sample households

Regions	Number of households interviewed by sex of household head				Average Family size	% of households having children under 2 Yr. old		
	MHH		FHH			%	n	N
	n	%	n	%				

⁷Ethiopia Rural Socioeconomic Survey report published in 2013

Amhara	265	64%	147	36%	4.7	11	44	412
SNNPR-Hadiya	60	69%	27	31%	7.07	32	28	87
Sidama & SNNPRs Gedeo	91	61%	59	39%	5.7	28	42	150
All	416	64%	233	36%	5.25	18	114	649

The assessment revealed the distribution of households with children under 2 Yrs. old in Amhara and SNNPR-Hadiya are quite similar, whereas the proportion of households with children of this age group in SNNPR-Sidama & Gedio is quite high, which is equal to 28%. The average proportion of households with children under 2 Yrs old was 18%.

VESA account ownership

This period assessment result indicated that, all households had at least one member who possessed VESA account, which was expected as VESA membership is requirement for participation in the project.. Further the study team conducted an analysis how many members from the same households have their own VESA account. The result revealed that seven out of nine households with adult women and men had two VESA account. Results by region indicated that Amhara and SNNPR-Sidama & Gedio has quite higher percentages than Hadiya region.

Table 6: Households having two VESA account

Indicators	% households with both adult woman & man having two VESA accounts	n	N
Amhara	82	195	239
SNNPR-Hadiya	52	35	67
SNNPR-Sidama&Gedio	81	93	108
All	78	323	414

5.2. Household wellbeing

The assessment collected and analyzed information on food security status, assets and income in order to assess the wellbeing of the sampled households and the findings on each indicator are as follows:

Food security status of households

This study assessed the food security status of the sampled households based on Food Insecurity Experience Scale (FIES) which is a measure of access to food at the individuals or households levels. It measures severity of food insecurity based on people's responses to questions about limitations in their ability to obtain adequate food. Women in the sample households were asked FIES questions that are intended to capture different intensity of food shortage experienced by household. Table 7 demonstrates our findings FIES based on households domain that disaggregated by sex of households' head and implementation areas. The assessment indicated 19.4% were food secured based on FIES analysis. SNNPR-Hadiya region had a lower proportion of food secure (13.8%) households, whereas both Amhara and Hadiya and Sidama & Gedeo, had quite similar proportions to one another, and were more food secure. Overall, proportion of MHHs against FHH is slightly higher, but the overall assessment shows that there is no major difference in the regions except in SNNPR-Hadiya regions. This implies, the likelihood of MHHs being food secure is greater than FHHs⁸ in Hadiya.

Table 7: Percentage of households who were found to be food secure based on FIES analysis

⁸ Significant at 0.05 level

Regions	MHH			FHH			Total		
	%	n	N	%	n	N	%	n	N
Amhara	20.8	55	265	20.4	30	147	20.6	85	412
SNNPR-Hadiya	15	9	60	11.1	3	27	13.8	12	87
Sidama & SNNPRs-Gedio	19.8	18	91	18.6	11	59	19.3	29	150
All	19.7	87	416	18.9	44	233	19.4	126	649

In addition to the above analysis, this assessment further analyzed household food security status categories into the following three scales: food secure, moderately food insecure and severely food insecure, as illustrated in the table 8 below. The result indicated among the total interviewed households about half of the respondents (50.8%) were severely food insecurity. The proportion of FHH and MHH were found quite similar. The distribution along the gradient of food insecurity between regions is a bit different, SNNPR-Hadiya exhibits the higher proportion of severely food insecure households, compared to the other implementation areas.

Table 8 Percentage of households who were in different level food security status based on FIES

Regions	MHH			FHH			Amhara			SNNP-Hadiya			Sidama & Gedo			Total		
	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N
Food secure	19.7	82	416	18.9	44	233	20.6	85	412	13.8	12	87	19.3	29	150	19.4	126	649
Moderately food insecure	28.4	117	416	32.6	76	233	28.4	117	412	29.9	26	87	33.3	50	150	29.7	193	649
Severely food insecure	52.2	217	416	48.5	113	233	51	210	412	56.3	49	87	47.3	71	150	50.8	330	649

Household assets

Asset is an important indicator to gauge the wellbeing of a household and is one of the key criteria for graduating from PSNP. The assessment conducted an inventory and valued all households' assets based on the respondents self-reporting on how much their assets with current condition would cost for someone to buy it. The value synthesizes and aggregated from their response to each item they had and the findings are presented in the below Table 9.

Livestock constituted the biggest portion of the overall household assets, which is average ETB 13,317. The assessment confirmed that MHHs were much better off in terms of asset ownership with the value of asset owned by MHH exceeding the value of those owned by FHHs. This difference in the average value of assets owned between MHH and FHH was found statistically significant ($P < 0.01$). Overall, asset ownership was highest in Amhara, but lower than the last IR assessment. Gedio and Sidama zones has the lowest asset value (ETB 9,304), which was less than half of the value of assets in Amhara region.

Table 9: Value of Asset owned by all sample household disaggregated by sex of HH (ETB)

Asset type	Sex of household head				Implementing areas							
	MHH		FHH		Amhara		SNNPR-Hadiya		Sidama & Gedo		Total	
	Value (ETB)	n	Value (ETB)	N	Value (ETB)	n	Value (ETB)	n	Value (ETB)	n	Value (ETB)	n
Productive asset	1351	416	598	233	1170	412	137	87	860	150	1,081	649

Source	Sex of household head						Implementation areas												
	MHH			FHH			Amhara			SNNPR-Hadiya			SNNPR-Sidama and Gedio			Total			
	Value (ETB)	N	(%)	Value (ETB)	N	(%)	Value (ETB)	N	(%)	Value (ETB)	N	(%)	Value (ETB)	N	(%)	Value (ETB)	N	(%)	
Crop & livestock production	10447	200	48	7787	100	43	13305	158	38	7277	59	68	4129	83	55	9581	300	46	
Off-farm activity	7840	52	13	4248	49	21	5665	52	13	6132	27	31	7143	21	14	6097	101	16	
Wage employment	13479	25	6	14874	16	7	15670	23	6	9733	12	14	16292	6	4	14024	41	6	
Transfer & other	9265	39	9	5612	36	15	5567	47	11	14663	19	22	2567	9	6	7511	75	12	
Livestock asset				15,372	416	9648	233	16,726	412	9129	87	6382	150	13,317	649				
Non-productive asset				2603	416	2541	233	2557	412	3588	87	2062	150	2581	649				
Overall asset				19,326	416	12,787	233	20,453	412	13,754	87	9,304	150	16,978	649				

Household income

Respondents were asked net annual income earned by all members of the households that includes both adult and young members. According, household income trends were found to be similar to asset ownership; MHHs earned more income than FHHs. And this difference is statistically significant (P=0.05). This result is not surprising, as MHH in most cases have two income earners while FHH have one. Crop and livestock constituted the biggest income share of the overall income of all surveyed households. And out of the total household income earned from crop and livestock, around 46% was generated from participation in prioritized value chain activities. Crop & livestock remained a major source of income for both MHHs and FHHs, though it constitutes a higher proportion of the total income for MHH than for FHH.

Table 10: Average net annual income for all interviewed households by source type (ETB)

Regions	MHH		FHH		Total	
	Value (ETB)	n	Value (ETB)	n	Value (ETB)	N
Crop & livestock	5023	416	3342	233	4419	649
Off-farm	980	416	893	233	949	649
Wage employment	810	416	1021	233	886	649
transfer and other*	869	416	867	233	868	649
All	7682	416	6124	233	7122	649

*This include various forms of gifts, such as remittance, except PSNP transfer which was excluded from the aggregation

The assessment performed further analysis to compare income earned by households participating in various pathways. As table 11, illustrate households participated in wage employment production earned higher income than those participated in the rest of pathways across all regions Crop & livestock was found a second most important activity in which households earned highest income next to wage employment.

Table 11: Average annual income for households participating in various livelihoods pathway

Further analysis by implementation areas is presented in the below table 12 showing households in SNNPR-Hadiya have generated better annual income than households found in other implementation areas through crop and livestock. Especially household's income in Amhara from Crop & livestock is exceptionally high compared to other regions. In fact, crop & livestock remained the prime source of income for households in all regions through which they earned biggest income compared other activities.

Table 12: Average net annual income for all interviewed households from various sources by implementation areas (ETB)

Regions	Crop & livestock		Off-farm		Wage		Transfer & other		Total	
	Value (ETB)	n	Value (ETB)	n	Value (ETB)	n	Value (ETB)	n	Value (ETB)	n
Amhara	5,070	412	729	412	875	412	635	412	7,309	412
SNNPR-Hadiya	5,019	87	1,903	87	1,343	87	3,202	87	11,467	87
SNNPR-Sidama and Gedio	2,285	150	1,000	150	652	150	154	150	4,090	150

The total number of income sources by individual HHs was also assessed as it is an important indicator for the level of income diversification by HHs which, in turn, is vital for resilience to shock. A maximum of eight income sources were identified during the assessment. These include off-farm activities, sale of crops, vegetable production, livestock production (small and big ruminant), poultry (egg & chicken), honey production, wage employment and support from any transfers. Respondents were asked whether they obtain income from these sources. Accordingly, households were found to have an average of 1.47 income sources over the last 12 months since interview time. MHH has higher number of income sources than FHH and across the region SNNPR-Hadiya has higher income source than other regions.

Table 13: Average number of income sources of households

Regions	MHH		FHH		Total average	
	# of income sources	n	# of income sources	n	# of income sources	N
Amhara	1.34	412	1.39	412	1.36	412
SNNPR-Hadiya	2.35	87	1.96	87	2.23	87
SNNPR-Sidama and Gedio	1.4	150	1.19	150	1.32	150
All	1.5	649	1.41	649	1.47	649

Further analysis result indicated in the table 14 below indicated that majority of households earned income from poultry production, followed by livestock production (shoat and cattle). Honey production, vegetable production and wage employment were the source of income for few households (5%)

Table 14. Percentage of households who earned income over the last 12 months by income category

Income categories	MHH		FHH		All	
	%	n	%	n	%	n
livestock production (small and big ruminant)	22	92	16	37	20	129
crop production	14	58	11	25	13	83

Poultry	23	95	23	54	23	149
Honey	7	27	2	4	5	31
vegetable production	6	25	4	10	5	35
Off-farm	13	52	21	49	15	101
wage employment	7	25	6	16	6	41
Transfer	9	36	14	32	11	68

5.3. Livelihoods pathways

The project supported target households in expanding and diversifying their livelihood portfolios along one or more of three livelihoods pathways: crop & livestock pathways, off-farm pathway and employment pathway. The assessment assessed the outcomes of this project support and key results are presented in this section sequentially.

Crop and livestock activity

The project prioritized 11 crop and livestock activities as being appropriate for the value chain development and provided support focusing on these activities. Table 15 reports percentage of households who engaged in and generated income from participation of at least one prioritized value chain. Accordingly, 39.1% households among the total households engaged in at least in one Value chain (VC) and earned income from crop and livestock activities promoted for Value chain (VC) intervention. Overall, the value chain engagement prevalence by MHH found to be quite higher than FHH. Further to this, the assessment across the regions shows that, SNNPR-Hadiya has the highest proportion.

Table 15: Percentage of households among total households who engage in and earned income from crop and livestock activities promoted for Value chain (VC) intervention

Indicators	Implementation areas			Type of HHs		Total
	Amhara	SNNPR-Hadiya	SNNPR-Sidama & Gedio	MHH	FHH	
% of households who engage in at least in one VC and earned income from it	31.8	59.8	47.3	40.4	36.9	39.1
N	412	87	150	416	233	649
% of household engaged in two or more prioritized VC and earned income from that	16.7	42.5	16.7	15.5	22.8	20.2
N	412	87	150	416	233	649

The assessment further looked in to what extent households diversified their livelihood portfolio through their participation in the multiple value chain and as presented in the table 15, one out of five households taking part in two or more value chain activities.

As indicated in the table 16 below, vast majority of households earned income from Poultry (chickens and egg) production and Shoat fattening. In contrast, only a small number of households took part and earned income from Pepper, onion and lentil value chain activities.

Table 16: Percentage of households among total households who participated in various value chain type

Value chain type	MHH	FHH	All
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	%	N	%	N	%	N
Cattle fattening	8.4	416	2.6	233	6.3	649
Shoat fattening	12.4	416	13.2	233	12.9	649
Goat Fattening	4.6	416	2.6	233	3.9	649
Poultry (chickens)	16.3	416	18	233	16.9	649
Poultry (egg)	14.9	416	12.9	233	14.2	649
Honey	6.5	416	1.7	233	4.7	649
Wheat	10.8	416	7.3	233	9.6	649
Lentil	0.5	416	1.3	233	0.8	649
Haricot bean	3.1	416	2.6	233	2.9	649
Pepper	1.0	416	00	233	0.6	649
Onion	1.2	416	00	233	0.8	649
Potato	4.6	416	4.7	233	4.6	649

Production and productivity

The project supported target households to improve production level and productivity through provision of training, promoting adaptation of improved practices and increasing access to small scale irrigation. Table 17 reports production level of households including quantity of sale and it reveals that the quantity of produce sold by households out of their total volume of production varies across the value chain types. For example, households who participated value chain activities except those involved in wheat production sold more than half of they produced. In fact, wheat is one of the household food used for household consumption.

Table 17: Average quantity production of households participated in different value chain activities by value chain type per year

Prioritized VC	Unit of measurement	Quantity of production			Total Quantity of sale			Proportion of quantity produce sold by household			
		MHH	FHH	All	MHH	FHH	All	MHH	FHH	All	N
Cattle fattening	Head	1.81	1.83	1.81	1.47	1.67	1.50	81%	91%	83%	42
Sheep fattening	Head	4.88	4.35	4.69	4.61	4.03	4.40	94%	93%	94%	87
Goat Fattening	Head	3.16	2.71	3.04	3.11	2.43	2.92	98%	90%	96%	26
Poultry (chickens)	Head	7.24	6.44	6.94	4.81	3.86	4.45	66%	60%	64%	132
Poultry (egg)	# of egg	458	406	438	359	353	357	78%	87%	82%	92
Honey	Kg	24.86	24.25	24.79	20.45	18.75	20.24	82%	77%	82%	33
Wheat	Quintal	4.78	3.04	3.57	1.69	1.57	1.66	35%	52%	46%	100
Lentil	Quintal	2.25	1.8	2.0	2.00	1.60	1.78	89%	89%	89%	5
Haricot bean	Quintal	1.17	1.00	1.11	0.79	1.00	0.86	68%	100%	77%	18
Pepper	Quintal	1.5	1.00	1.25	1.3	0.00	1.00	86%	0%	80%	3
Onion	Quintal	1.80		1.80	1.80		1.80	100%		100%	5
Potato	Quintal	4.96	4.77	4.90	3.41	3.38	3.40	69%	71%	69%	40

The above result in table 18 Further disaggregated by region as presented in the table below. The disaggregation result reflected that households in all regions sold majority of their produces. Households sold less proportion of wheat produces than the rest of the commodities as they consumed some of it. In Amhara, looks like households consumed all of the potato they produced as they did not sold any quantity of it.

Table 18: Average quantity production of households participated in different value chain activities by value chain type by region

Prioritized VC	Unit of measurement	Quantity of production			Total Quantity of sale			Proportion of quantity produce sold by household			
		Amhara	SNNPR-Hadiya	SNNPR-Sidama & Gedio	Amhara	SNNPR-Hadiya	SNNPR-Sidama & Gedio	Amhara	SNNPR-Hadiya	SNNPR-Sidama & Gedio	N
Cattle fattening	Head	1.67	1.69	2.18	1.39	1.62	1.55	83%	96%	71%	42
Sheep fattening	Head	5.80	2.10	2.06	5.62	1.70	1.44	97%	81%	70%	87
Goat Fattening	Head	3.13	3.27	1.67	3.13	3.13	1.33	100%	96%	80%	26
Poultry (chickens)	Head	7.32	8.47	5.65	4.23	6.33	3.38	58%	75%	60%	132
Poultry (egg)	# of egg	491	388	306	411	318	201	84%	82%	66%	92
Honey	Kg	14.60	34.20	25.38	14.20	24.60	21.54	97%	72%	85%	33
Wheat	Quintal	3.60	3.50		1.51	2.00	0.00	42%	57%		100
Lentil	Quintal	2			1.78		0.00	89%			5
Haricot bean	Quintal			1.11			0.86				18
Pepper	Quintal			1.25			1.00				3
Onion	Quintal	1.80			1.80			100%			5
Potato	Quintal	5.90	3.79		0.00	2.81	1.84	0%	74%	0%	40

As shown in the below table 19 below productivity among MHHs and FHHs slightly varies across different value chain activities, over all MHH who participated in the VC activities had relatively better productivity than their female counterparts whereas FHH performed better in honey production.

Table 19: Household productivity by commodity over the last 12 months since data collection time

Prioritized VC	Unit of measurement	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedio		Total	
		Qty	n	Qty	n	Qty	n	Qty	n	Qty	n	Qty	n
Poultry	# of egg per chicken	119	60	114	30	117	53	118	24	118	13	118	90
Honey	Kg per beehive	7	28	12	5	6	11	12	10	5	12	7	33
Wheat	Quintal per hectare	11	72	9	28	9	70	12	30	0	0	10	100
Lentil	Quintal per hectare	10	2	3	3	6	5	0	0	0	0	6	5
Haricot bean	Quintal per hectare	6	12	6	6	0	0	0	0	6	18	6	18
Pepper	Quintal per hectare	25	2	13	1	0	0	0	0	21	3	21	3
Onion	Quintal per hectare	8	5	0	0	8	5	0	0	0	0	8	5

Potato	Quintal per hectare	95	27	109	13	97	21	102	19	0	0	100	40
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Input access

The project sought to improve households' access to affordable and quality inputs through supporting and strengthening the capacity of suppliers such as agro-dealers and cooperatives. During the assessment households were asked about their accessibility to inputs relevant to their value chain activity. Table 20 looks at the percentage of households who accessed and applied various inputs. Overall, hand tools, crop Seed and fertilizer were found the most common input that was accessed by vast majority of households participated in crop production. The assessment revealed that few households accessed effective micro-organisms and molasses, is about 6 to7%. Respectively, total 68% and 61% of households -accessed hand tools and fertilizer.

Table 20: Percentage of household who accessed various inputs

Type of inputs	Amhara			SNNPR-Hadiya			SNNPR-Sidama/Gedio			Total		
	%	n	N	%	n	N	%	n	N	%	n	N
Vegetable Seed	37	13	35	35.3	12	34	44	24	54	40	49	123
Hand tools	58.5	55	94	96.4	53	55	60	53	88	67.9	161	237
Crop Seed	70.6	77	109	41.8	23	55	72	31	43	63	131	207
Fertilizer	66.4	83	125	40.6	26	64	73.5	50	68	61.2	159	257
Improved feeds for Livestock	6.8	7	103	14	8	57	24.4	22	90	14.8	37	250
Bee colony access	00	00	00	16.7	1	6	16.7	2	12	14.5	3	21
Pesticide	18.9	18	95	21.6	8	37	6.5	2	31	17.2	28	163
Herbicide	12.9	12	93	21.6	8	37	6.5	2	31	13.7	22	161
Effective Micro-Organisms	11.7	12	103	4.4	2	45	00	00	56	6.9	14	204
vet drug	45.6	47	93	31.1	14	45	28.6	16	56	37.7	37	204
Molasses	10.7	11	103	00	00	45	3.6	2	56	6.4	13	204
Pullet	27.7	18	65	13.2	5	38	4.3	2	46	16.8	25	149

Furthermore, households were asked to mention the primary sources of the input they accessed in the last 12 months and according to the findings outlined in table 21 below, cooperatives, unions and government organizations are the major suppliers of fertilizer, crop seeds and vegetable seed. Nearly, 72.3% of the households were getting fertilizer from governments, whereas agro-dealers are the main source of agro-chemicals (herbicide and pesticide). Agro-dealers were also the major supplier to concentrated feed whereas private actors are the main source of pullet.

Table 21: Percentage of household who accessed various inputs by sources

Type of inputs	Government organization			Agro-dealer			Cooperatives/unions			Private sector			NGO & civic society			Colony multiplier			Pullet growers		
	%	n	N	%	n	N	%	n	N	%	N	N	%	n	N	%	n	N	%	n	N
Vegetable Seed	49	24	49	51	25	49	12	6	49	10	5	49	6	3	49						
Crop Seed	62.6	82	131	9.9	13	131	48.1	64	131	9.9	13	131	6	8	131						
Fertilizer	72.3	115	159	1.3	2	159	38	63	159	12.6	20	159	0.6	1	159						
Concentrated feeds for Livestock	5.4	2	37	81.8	36	37	0	0	37	43.2	16	37	0	0	37						
Hand tool	41.6	67	161	32.3	52	161	3.1	5	161	35.4	57	161	5	8	161						
Pesticide	25	7	28	71.4	20	28	39.3	11	28	39.3	11	28	0	0	28						
Herbicide	4.5	1	22	95.5	21	22	22.7	5	22	28.6	6	22	0	0	22						
Effective Micro-Organisms	0	0	0	72.7	8	11	0	0	0	0	0	0	36.4	4	11						
vet drug	70.1	54	77	36.4	28	77	0	0	77	9.1	7	77	0	0	77						
Bee colony	0	0	0	0	0	0	0	0	0	33.3	1	3	66.7	2	3	33.3	1	3			
Molases	0	0	0	69	9	13	0	0	0	38.5	5	13	0	0	0	0	0	0			
Pullet	4	1	25	0	0	0	4	1	25	64	16	25	32	8	25				16	4	25

Video enabled extension

The project promoted adoption of improved agronomic practice through dissemination of video-enabled extension approaches among project targeted households. This IR assessment also looked into adoption rates of various promoted practices by households and the finding is presented below in the table 22. During interview, households were asked about the adoption of a particular topic if it was related to their value chain activity. Therefore, households who attended particular topics but not related to their activity were excluded from the calculation of adoption. Meaning, while calculating adoption of transitional beehives only households who participated in beekeeping and attended the session were considered, excluding other households who participated in other value chain activity even if they watched a video in ‘transitional beehive’ topic.

Quite similar and larger proportion of households, about 90%, adopted egg handling and storage (egg production) and seed bed preparation (crop and veg production). Overall, these techniques are the most widely adopted practices after attending video enabled extension. In fact, the assessment result proved that, overall quite large number proportion of households adopted the practices promoted by the project.

Table 22: Percentage households who adopted various promoted improved practices after attending video session

Promoted practice	Amhara			SNNPR-Hadiya			SNNPR-Sidama/Gedio			Total average		
	%	n	N	%	N	N	%	n	N	%	n	N
Seed bed preparation (only ask crop and veg production)	95	19	20	88.2	15	17	83.3	10	12	89.8	44	49
Animal health management (vaccination) (only for the livestock production)	90	93	103	64	25	39	78.6	44	56	81.8	162	198
Bio fertilizer application (Crop&Veg Production)	85.5	53	62	50	14	28	78.9	15	19	75.2	82	109

Egg handling and storage (egg production)	90.9	50	55	87.5	21	24	84.6	11	13	89	82	92
Line planting (crop & Veg production)	67.7	42	62	82	23	28	63	12	19	70.6	77	109
Improved shade for shoat and cattle (Livestock production)	87.4	90	103	77.8	35	45	75	42	56	81.9	167	204
Low cost improved poultry house (for poultry)	93.8	61	65	84.2	32	38	78.3	36	46	86.6	129	149
Transitional bee hives	100	10	10	70	7	10	90.9	10	11	87	27	31
Improved weeding (Crop and Veg production)	91.9	57	62	57	16	28	73.7	14	19	79.8	77	109
Improved trough (for livestock producer)	87.4	90	103	71	32	45	80.4	45	56	81.9	167	204
Improved feed feeding (concentrated feed, straw enriched with industrial by-products such as molasses, etc) (for livestock)	91.3	94	103	68.9	31	45	76.8	43	56	82.4	168	204

This assessment further explored the reasons why households did not adopt the different practices promoted through video extension. As it can be seen in the table 23 below, overall, access to input constraints was mentioned as main reason why many choose not to adopt promoted practices, for example 62.8% reported that access to input constraint was the major obstacle preventing them from adopting animal health management-biosecurity (vaccination).

Table 23: Percentage of households who mentioned various reasons for not adopting a different practice

Type of inputs	Couldn't get the inputs	It consumes labor	didn't get sufficient training	Do not feel it is useful	expensive/Sh ortage of money to buy inputs	N
Seed bed preparation (crop and veg production)	20	80	0	0	0	5
Animal health management-biosecurity (vaccination) (only for the livestock production)	62.8	18.6	16.3	0	13.6	43
Bio fertilizer application (Crop & Veg Production)	40.7	11.1	22.2	11.1	14.8	27
Egg handling and storage (egg production)	50	10	20	0	20	10
Line planting (crop & Veg production)	25	56.3	9.4	3.1	9.4	32
Improved shade for shoat and cattle (Livestock production)	51.4	16.2	16.2	2.7	18.9	37
Low-cost improved poultry house (for poultry)	55	15	10	5	25	20
Transitional beehive	75	25	25	0	0	4

Improved weeding (Crop and Veg production)	59	13.6	18.2	4.5	22.7	22
Improved trough (for livestock producer)	56.8	16.2	21.6	10.8	13.5	37
Improved livestock feeding (concentrated feed, straw enriched with industrial by-products such as molasses, etc) (for livestock)	41.7	13.9	33.3	16.7	16.7	36

Market linkage

The project worked to strengthen and at times establish inclusive market systems that can create opportunity for target households to sell their products at fair prices. The support included facilitating market information to let households make informed decisions as well as linking them to marketing collectives that offer market outlets at reasonable prices. Table 24 reports back on the household's access to market information access and their use of it make their decisions. Overall, 56% of the interviewed households reported accessing information on market prices and buyers of their product from various sources. Furthermore, 93% of them made marketing decisions on the basis of the information they accessed. Further breakdown of result by implementation areas revealed that households in Amhara (67%) had better access to market information in comparison to households in SNNPR-Hadiya (37%) and SNNPR-Sidama/Gedio (35%). Marketplace is the major source of information; 81% of the households made marketing decisions based on the information they accessed from traders.

Table 24: Households' access to market information

Indicators	Type of HHs		Amhara	SNNPR-Hadiya	SNNPR-Sidama/Gedio	All
	MHH	FHH				
% of households who accessed information on market price & buyers of products	58.2%	50.7%	67%	37.9%	34.7%	55.6%
Disaggregation by source of information						
Radio	18.9%	24.1%	18.5%	30.5%	25.5%	20.8%
Marketplace	82.8%	76.7%	81.5%	75.8%	80.8%	80.8%
Extension agent	39.8%	34.5%	34.5%	63.6%	40.4%	38.1%
Neighbors, friends	33.2%	44.8%	34.5%	36.4%	50%	36.9%
Traders	12.7%	14.7%	10.5%	33.3%	15.4%	13.3%
Broker	6.6%	3.4%	4.7%	18.2%	1.9%	5.6%
Project frontline experts	15.5%	21.7%	13.8%	57.6%	26.9%	19.7%
% of households who used price & other information to make their decisions	93.8%	90.4%	90.8%	100%	98.1	92.7%
N	215	243	274	33	52	358

Marketplace (80%) and extension agent (38%) were found to be the major sources of market information for all households. Interestingly, 77% of the interviewed households rated information from neighbors

or/and friends as very useful, while 54% rated information from marketplace as very useful. Even though marketplace is a major source of information, interviewed households were more likely to rate the information they get from neighbor or friends as very useful. Extension agents were also rated by 68% of households as being a very useful source of market information.

Table 25: Households who accessed market information and reported on usefulness of information

Source of information	Percentage of households who rated the usefulness of market information			N
	Very useful	Somewhat useful	Not useful at all	
Radio	45%	50%	5%	135
Marketplace	54%	40%	6%	524
Extension agent	68%	28%	4%	247
Neighbors, friends	77%	23%	0%	239
Traders	25%	75%	0%	86
Broker	20%	70%	10%	36
Project frontline experts	82%	18%	0%	128

Access to various market outlets:

Sample household heads were asked through which market outlets they sold most of their produce over the last 12 months and the result is presented in table 26 below. Regardless of the type of value chain, almost all of households (greater than 85%) sold their produce at the local market. Other market outlets (FEMA, Marketing cooperative, or private aggregators) were rarely used, with 5.3% or less of households reporting using these for any value chain sales.

Table 26: Percentage of households who sold majority of their products through one of the outlets in the last 12 months

Prioritized VCs	Market outlets				N
	FEMA	Marketing cooperative	Private aggregators	Local market	
Cattle fattening	2.30	0.00	0.00	97.7	43
Sheep fattening	1.2	1.2	0.00	97.7	86
Goat Fattening	0.00	0.00	0.00	100	26
Poultry (chickens)	0.00	0.00	0.00	100	55
Poultry (egg)	5.3	5.3	0.00	84.2	19
Honey	0.3	0.2	0.3	99.0	35
Wheat	0.00	0.20	0.30	95.0	95
Lentil	0.00	0.00	0.00	100	11
Haricot bean	0.00	9.10	0.00	90.9	55
Pepper	0.00	4.8	4.8	90.5	21
Onion	0.00	15.4	0.00	84.6	13
Potato	0.00	0.00	2.20	97.8	45

The IR assessment also collected and analyzed information on value of sales of prioritized value chain products by households who marketed their products and the result is summarized in table 27 below.

Overall, average value of sale per household per year was found to be much greater for cattle and sheep fattening participants than those households who participated in other value chains. Average sale from cattle fattening was Birr 22,026 and sheep fattening was Birr 12,627.

Table 27: Total average value of sales among those engaged in the value chain per year by value chain activity

Value chain Type	Type of HHs				Total	
	MHH		FHH		ETB	N
	ETB	N	ETB	N		
Cattle fattening	19,891	36	34,833	6	22,026	42
Sheep fattening	12,779	65	12,353	31	12,627	96
Goat Fattening	9926	19	7271	7	9211	26
Poultry (chickens)	1731	82	1244	50	1545	132
Poultry (egg)	2748	62	3138	30	2875	92
Honey	5378	29	2788	4	5044	33
Wheat	5185	72	4584	28	5017	100
Lentil	8370	4	7140	1	7689	5
Haricot bean	2517	12	2750	6	2594	18
Pepper	4315	3	0.00	0	4315	3
Onion	9500	5	0.00	0	9500	5
Potato	4809	27	2972	13	4212	40
Average total value	6453	416	4,341	176	5695	592

Marketing through collectives

The project encouraged households to be a member of marketing collective to increase their access to better markets. As table 28 above revealed, almost all households sold their products at local markets rather than through collectives. Therefore, the result on proportion of total value of sales executed by households through collectives reflects the above findings. The finding revealed that households sold a small proportion of their products (less than 8%) through marketing cooperatives.

Table 28: Sales of selected value chain commodities executed through collectives by region

Indicators	Type of HHs		Region			Total
	MH H	FHH	Amhara	SNNPR- Hadiya	SNNPR- Sidama &Gedio	
Average total value of sales per household from any market outlet (ETB)	6453	4341	5975	9544	2693	5695
Average value of sales through collectives per households (ETB)	500	400	503	230	493	464
Percentage share of sales through collectives	8%	9%	8%	2%	18%	8%
N	416	233	412	87	150	649

5.3.1. Off-farm activity

The project supports target households to engage in off-farm activities through technical advice and facilitating access to working capital. The project seeks to achieve all targeted households to have income from at least one off-farm activity. Table 29 presents the progress of the project in this regard.

The finding revealed that almost 16% of the households gained income from at least one off-farm activity. The percentage of FHHs with off-farm engagement exceeds MHHs. Further disaggregation of the results by implementation area reveals that SNNPR-Hadiya led in having the highest proportion of households reporting income generated from off-farm activities (31%).

Table 29: Household engagement in off-farm activity

Indicators	Type of HHs		Region			All
	MHH	FHH	Amhara	SNNPR-Hadiya	Sidama & SNNPR-Gedio	
Percentage of households having income from at least one off-farm activity	12.5%	21%	12.9%	31%	14%	15.6%
Percentage of household having income source from two or more off-farm activities	9.6%	6.1%	3.8%	14.8%	9.5%	7.9%
N	416	233	412	87	150	649

Petty trade (buying and reselling of agricultural and industrial produces- not including production and selling of agricultural produces) was the most common off-farm activity - 6.9% of all household engaged petty trade. A higher proportion of FHHs engaged in petty trade than MHH (9.4% and 5.5% respectively).

Table 30: Household participation in various off-farm activities

Off-farm activities	Type of HHs		Region			All
	MHH	FHH	Amhara	SNNPR-Hadiya	Sidama & SNNPR-Gedio	
Transportation (Donkey/horse cart Motorcycle/bajaj/etc)	1.7%	1.3%	1%	2.3%	2.7%	1.5%
Cobblestone and other construction activities (but not as wage employment)	0.2%	0.4%	0.5%	0	0	0.3%
Rental of equipment, machineries, land, house etc	0.2%	00	0	1.1%	0	0.2%
Off-farm activities that support value chains (cut and carry fodder, input supply, etc.)	0.5%	2.1%	0.7%	1.1%	2%	1.1%
Selling of forest products (firewood, charcoal, timber, etc)	1.4%	2.1%	1.2%	2.3%	2.7%	1.7%
making and selling of handicrafts						
Petty trade (buying and reselling of agricultural and industrial produces-	5.5%	9.4%	5.6%	13.8%	6.7%	6.9%

should not include production and selling of agricultural produces						
Micro-franchise (door-to-door sales of products provided by a private company)	1%	0.9%	00	6.9%	00	0.9%
Service provision (including salons, barber shop restaurants, hot beverages , local alcohol, etc)	0.2%	1.3%	0.7%	00	0.7%	0.6%
Others	1.9%	4.3%	2.2%	9.2%	0.7%	2.8%
N	416	233	412	87	150	649

5.3.2. Wage employment

Table 31 demonstrates the percentage of households who reported having generated income from various types of employment. Regular employment includes all types of employment that pay salary/wage on a permanent basis at a regular time. Examples of employment that belong to this group are drivers, government employment, etc. Casual or irregular employment include seasonal on-farm employment, daily laborer etc.

Wage employment was found to be an income source for -6% of households, with slight differences between MHHs & FHHs. Both regular wage employment and casual/irregular wages were equally common types of employment for FHH & MHH households across the regions.

Table 31: Percentage of households among total interviewed households who engage in various wage activities

Regions	Type of HH	Regular Wage	Casual/irregular wage	All (n) %	N
Amhara	Male	4.2%	4.0%	4.5%	265
	Female	6.1%	4.8%	7.5%	147
	Total	4.9%	4.4%	5.6%	412
SNNPR-Hadiya	Male	10.0%	9.9%	10.0%	60
	Female	11.1%	11.2%	11.1%	27
	Total	10.3%	10.3%	10.0%	87
SNNPR-Sidama and Gedio	Male	5.5%	2.2%	5.5%	91
	Female	1.7%	1.7%	1.7%	59
	Total	4.0%	2.0%	4.0%	150
Total	Male	5.3%	4.6%	6.4 %	416
	Female	5.6%	4.7%	5.5%	233
	Total	5.4%	4.6%	5.9%	649

5.4. Financial service

The project worked to expand inclusive financial services for target households by organizing them into VESAs and linking them with formal financial service such as Microfinance institutions (MFI), and Rural Saving and Credit Cooperatives (RusACCOs). This section presents the assessment findings on households' access to financial services based on saving and loan indicators.

A. Membership in formal and informal financial institutions

Since VESA membership is a key requirement to participate in the project, almost all households (96%) were found to be members of a VESA. - However, only 3.9% households were found to have membership in a RuSACCO.

Table 32: Percentage of household who are a member of VESA or RuSACCO

Type of collectives	Type of HHs		Region			All
	MHH	FHH	Amhara	SNNPR-Hadiya	Sidama and SNNPR-Gedio	
VESA	95.7%	97.6%	95.4%	95%	98%	96%
RUSACCO	4.3%	3%	4.4%	0.0%	20.7%	3.9%
N	416	233	412	87	150	649

B. Savings

Quite significant percentage of households (75.4%), saved in at least one financial institution in the last 12 months, with slight difference in saving trends observed between FHHs and MHHs. MHH were slightly more likely to save in a financial institution than FHH. VESA was the primary modality for households to save their money, (74.3%). Overall, among all households interviewed, 21% had saved money through MFIs, RuSACCOs or Banks over the last 12 months, as shown in table 33 below.

Table 33: Percentage of households who saved in various institutions over the last 12 months

Indicators	Type of HHs				All	
	MHH		FHH		%	N
	%	N	%	N		
Percentage of HHs who saved in at least one financial institution	76.4	416	71.2	233	75.4	649
Percentage of HHs who saved in both RuSACCO and VESA over the last 12 months	4.3	416	3	233	3.9	649
Percentage of HHs who saved in the formal financial institutions (RuSACCO, MFI & Bank)	23.8	416	17.2	233	21.2	649

The disaggregated data by implementation area demonstrates VESAs are the primary institution where project households save their money. MFI was found the second choices where many number of households save their money.

Table 34: Percentage of households who saved in various institutions by region over the last 12 months

Institutions	Type of HHs				Region							
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedio		Total	
	%	N	%	N	%	N	%	N	%	N	%	N
VESA	76.2	416	70.8	233	69.4	412	70.1	87	90	150	74.3	649
RUSACCO	4.3	416	3	233	4.4	412	0	87	4.7	150	3.9	649
MFI	17.8	416	12.9	233	23.5	412	2.3	87	3.3	150	16	649
Bank	7	416	3	233	7.3	412	5.7	87	0.7	150	5.5	649
Ikub	3.1	416	2.6	233	0.2	412	10.3	87	6	150	2.9	649
Others	0.2	416	0	233	0	412	1.1	87	0	150	0.2	649

Table 35 presents the average households' total savings and current saving balance during the assessment time period. The inferential statistical analysis revealed that there is difference in saving amount made over the year between MHH and FHH. MHH households saved relatively more than FHH and across the regions. Households in Amhara tended to save more than those in Hadiya, Sidama & Gedio zones of SNNPR regions.

Table 35: Amount of savings made by households

Regions	Total average saving in the last 12 months (ETB)			Current Average saving balance (ETB)		
	MHH	FHH	All	MHH	FHH	All
Amhara	1701	1109	1490	2079	1613	1913
SNNPR-Hadiya	672	462	607	704	769	724
Sidama & SNNPR-Gedio	915	980	940	1467	1242	1379
All	1381	1001	1245	1747	1421	1630
N	416	233	649	416	233	649

The assessment looked into households' reason for saving in various institutions. As the result presented in the table 36 shows, the primary reasons for saving was for business purpose, which is true regardless of where households saved. More households save money in VESAs than formal institutions (RuSACCO or MFI) to meet their expenses related to social obligation such as wedding, funeral, etc. In fact, quite significant percentages of households are also saving for emergency purposes.

Table 36: Households' reasons for saving money in various institutions

Purpose of saving	Type of institutions					
	VESA		RuSACCO		MFI	
	%	N	%	N	%	N
Emergencies (medical expenses, etc)	37	482	84	25	65	103
Business (Livestock & crop production, off-farm, etc)	71	482	40	25	100	103
Social obligation (wedding ,etc)	21	482	24	25	36	103
Others	1.9	482	0.00	25	2.7	103

C. Loan access

Members of sample households were asked if they took a loan from any source, including from informal sources (including VESAs), over the last five years since the interview time, summarized in the table 37. The finding revealed that 62.7% accessed loan from any institution over the last five years. The result further indicated that households in SNNPR-Sidama & Gedio were more likely to have accessed a loan (83.3%) compared to Amhara and SNNPR-Hadiya.

Table 37: Percentage of households who accessed loan from various institutions over the last five years

Type of HH		Region			Total average
MHH	FHH	Amhara	SNNPR-Hadiya	SNNPR-Sidama & Gedio	
64.4%	59.7%	55.8	59.8	83.3	62.7
N=416	N=233	N=412	N=87	N=150	N=649

Furthermore, households who managed to access loans were asked where they took the loan from over the last five years, and the result of their response is presented in the table 38. Accordingly, VESAs were found to be the most common source of financial loans for households (45.9%). This trend is similar for both FHHs and MHHs and on all implementation areas. Amhara led in having the largest proportion of households who accessed MFI loan over the last five years (38.3%). No households reported having taking a loan from a bank in the last 5 years.

Table 38: Percentage of households who accessed loans from various institutions over the last five years since survey time

Institutions	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama/Gedio			
	%	N	%	N	%	N	%	N	%	N	%	N
VESAs	44%	416	49%	233	33.5	412	55.2	87	74.1	150	45.9	649
RUSACCOs	2.2%	416	1.3%	233	2.2	412	0	87	2	150	1.8	649
MFIs	35%	416	27%	233	38.3	412	25.3	87	18	150	32	649
Banks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 39, presents the respondents reported reasons for not taking MFI loan. Accordingly, slightly number of respondent mentioned that they did not take loan because they are not interested to take loan. Consequently, as they reported, 55% of HHs reported not wanting a loan, 25% were concerned they would not be able to repay a loan, and 23% did not take loan because the loan repayment rate is very short.

Table 39. Reasons for not taking MFI loan

Reasons for not taking MFI loan	Type of HHs				Total	
	MHH		FHH		%	N
	%	N	%	N		
I did not want loan	53	132	57.8	83	54.9	215
Loan repayment rate is very short	26.5	132	18.1	83	23.3	215
I have outstanding loan	7.6	132	8.4	83	7.9	215
The loan size is small	14.4	132	3.6	83	10.2	215
No loan provided in my area	14.4	132	12	83	13.5	215
There's no loan product that is sharia compliant	15.9	132	2.4	83	10.7	215
I am concerned that I would not be able to repay the loan on time	26.5	132	22.9	83	25.1	215

As table 40 below illustrates, of loans taken, larger loans were taken from MFIs and smaller loans were taken from VESAs, while RuSACCO loan sizes were in the middle (but with few HHs accessing RuSACCO loans). The average loan size accessed from MFIs was 16,851 ETB. This is significantly higher compared to VESA loans, which were 2,445 ETB on average. Households in Amhara accessed much larger MFI loans than those in SNNP and Sidama regions.

Table 40: Average annual loan taken by households over the last five years

Type of Institutions	Regions			Total	N
	Amhara	SNNPR-Hadiya	Sidama and SNNPR-Gedeo		
VESAs	3606.10	1823.57	1085	2445.62	247
RUSACCOs	5388.89		3666.67	4958.33	12
MFI	18795.19	13318.18	8653.86	16850.71	208
All	8385	4248	2296	6423	649

The assessment further asked respondents whether they paid back their recent loan on time or not and the result is presented in the table 41. Overall, households were found to be in a good position in terms of paying back loans taken from their own VESA on time; nearly 90.4% reported repaying on time. The assessment also indicates that there was no big difference in loan repayment rates for MHH and FHH for RuSACCO loans and MFI loans. There was however a difference in MFI loan repayment rates between FHH and MHH with FHH loan repayment rates being much higher than MHH.

Table 41: Percentage of households who were repaying loans or fully repaid on schedule taken from various institutions

Institutions	Type of HHs				Region						All	
	MHH		FHH		Amhara		SNNPR-Hadiya		Sidama & SNNPR-Gedeo			
	%	N	%	N	%	N	%	N	%	N	%	N
VESAs	90.6	268	90.7	139	67.4	230	73.1	52	81.7	125	90.4	407
RUSACCOs	66.7	9	66.6	3	88.9	9	0	0	0	3	66.6	12
MFI	73.1	145	90.4	63	67	158	68.2	22	85.9	28	78	208

Table 42 below summarizes household’s purpose for taking loans from various institutions. The finding revealed that regardless of the source, households largely took loans for business (Livestock & crop production, off-farm, etc) either to expand their existing business or start new one.

Table 42: Household’s response on reasons for taking loan from various institutions

Purpose of loan	Type of institutions					
	MFI		RuSACCO		VESA	
	%	N	%	N	%	N
Emergencies (medical expenses, etc)	4.8	187	12.5	8	15.5	101
Business (Livestock & crop production, off-farm, etc)	66	187	33.7	8	56.6	101
Social obligation (wedding ,)etc	2.1	187	12.5	8	7.6	101
Others	14.4	187	0.00	8	18.7	101

Table 43 below summarizes data gathered from the interviewed households self-reporting on what proportion of their MFI loan was used for its intended purpose. More than half number of households used more than 70% of their loans for it’s intended purpose, FHH were being better than MHH terms of loan

utilization for investment. Likewise sizable regional variation exists - 39% of households in Amhara used more than 90% of loans taken for the intended purpose, while 25% of households in Sidama & Gedeo and only 10% of households in Hadiya used 90% or more of the loan for the intended purpose. In fact, significant number of households in Sidama and Gedeo (38%) used less than half the loan for the intended purpose.

Table 43: Proportion of MFI loan used for intended purpose (investment)

Institutions	Type of HHs				Region						All	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama and Gedio			
	%	N	%	N	%	N	%	N	%	N	%	N
Greater than 90%	28.2	412	48.3	233	39.9	412	10.0	87	25.0	150	30.6	649
71%-90%	21.8	412	22.4	233	20.3	412	55.0	87	4.2	150	22.0	649
50% - 70%	12.9	412	17.2	233	10.9	412	15	87	33.3	150	14.3	649
30% - 49%	18.5	412	5.2	233	13.8	412	20	87	12.5	150	14.3	649
below 30%	18.5	412	6.9	233	15.2	412	0.00	87	25.0	150	14.8	649

5.5. Gender equity and women's empowerment

The project worked to address gender inequalities through integrating gender in its activities to build women's agency and improve the enabling environment for women's empowerment. This section assesses the outcomes of these efforts using key gender indicators.

Women's empowerment assessment based on WEAI indicators

The assessment adopted a few modules from the abbreviated Women Empowerment in Agriculture Index (WEAI) and computed women's empowerment based on selected indicators of WEAI instead of administering the entire module and constructing of the index. The indicators are;

- input in production decisions,
- ownership of assets,
- access to and decision about credit, and
- control over use of income.
- Group membership

The responses of women in male-headed households were used to calculate achievement in the five empowerment domains based on WEAI aggregation protocol. (Please see annex 1 for technical detail to understand how IR assessment adopted key indicators of WEAI).

Input in production decisions: This indicator measures the extent to which women can influence households' decisions focusing on agriculture productions, including major household expenditure. Women are considered to have achieved adequate input in productive decisions if there are at least two types of decisions in which they have some input in decisions, make the decision, or feels they could make it to a medium extent if they wanted to.

Ownership of assets. The ownership indicator examines whether an individual has sole or joint asset ownership of land and other productive assets, based on a comprehensive list of asset types (see survey module). According to this indicator, a woman is considered adequately empowered on ownership if she reports having sole or joint ownership of any of the items, conditional on the household's owning those assets. Furthermore, for the woman to be considered adequately empowered in this domain, ownership cannot be limited to one minor asset only (poultry, non-mechanized equipment, or small consumer durables).

Access to and decisions about credit. This indicator examines decision making about credit: whether to obtain credit and how to use the credit obtained from various sources. To have adequacy in this indicator, a woman must belong to a household that has used a source of credit in the past year and must have participated in at least one decision about it. Women who live in households that do not use any source of credit are considered inadequate on access to credit and hence are assigned the value 0 for this indicator.

Control over use of income. The indicator assesses the level of women’s influence and participation in decisions pertaining to household income and expenditure. A woman is considered adequately empowered on control over use income if she has at least some input in decisions on at least one income generating activity of the households and if she feels she could participate in the decision making related to that activity at least to a medium extent.

Group membership. Recognizing the value of social capital as a resource, this shows whether the woman is an active member of at least one formal or informal group, including a VESA. A woman is considered adequately empowered if she is an active member of at least one group.

Based on respective specific criteria, women’s empowerment for each indicator was computed and the results are presented in table 44 below.

Input in production decisions

Almost half of the interviewed women (45%) in the sampled households had influence on decisions pertaining to different agriculture production issues, an improvement from the previous year (40%). There was low participation of women in decisions related to food crop production and cash crop production, in addition to non-farm economic activity (this include activities such as running a small business, self-employment, etc) which contributed to low achievement overall. The disaggregated results indicate that the percentage of women in Amhara who have attained empowerment in input into production decisions was far below the achievement of women in Hadiya and Sidama & Gedeo on this indicator. Women in Amhara in fact scored the lowest of all regions on every indicator of women’s empowerment other than membership in a group, in which they had near universal achievement (all regions performed very well on this indicator, likely at least in part due to VESA membership).

Access to credit and Decision about credit

Similar to input on production decisions, women were found to have a low level of access to credit and decisions about credit - 47% of women overall had acces to credit or could influence decisions on credit, including when and how much money to borrow and how to spend it. Generally, women had low involvement in decisions on credit that households took from informal lenders and MFIs. However, of women were more involved when it came to credit taken from VESAs. All in all, Sidama & Gedeo led in the proportion of women who were adequately empowered in access to and decisions on credit.

Table 44: Percentage of women in male-headed households who achieved empowerment adequacy

Regions	Input into production	Access to credit & Decision about credit	Asset ownership	Control over use of income	Membership in a group	N
Amhara	27	42	58	41	99	204
SNNPR – Hadiya	74	44	90	92	93	59
SNNPR – Sidama & Gedio	68	62	80	88	95	85
Total	45	47	69	61	96	348

Ownership of assets

Table 44 shows the percentage of women adequately empowered in asset ownership as significant at 69%. Hadiya achieved the highest asset ownership among women (90%), followed by Gedio & Sidama (80%), but achievement was lower in Amhara at 58%. Women having sole ownership or joint ownership with their counterpart over agricultural land and a house were attributed for positive achievement on this domain.

Control over use of income

Overall, 61% of women have sole or joint control over households' income and expenditure, with achievement in Hadiya and Gedeo & Sidama more than double that of Amhara (92%, 88%, and 41% respectively). The limited role of women in decision making on use of income generated from wage salary and cash crop production were the large contributors for low achievement in Amhara, whereas women in Sidama and SNNPR had better empowerment as they often involved in decision on use of income generated from crop production and on major household's expenditure.

Group membership

This is where women demonstrated the greatest empowerment achievement, as 96% of the interviewed women were found to be members to at least one group and this is similar across all project implementation areas. The large proportion of women being members of VESAs contributed to this high achievement.

The assessment further investigates to what extent women take up leadership roles in the groups they belong to. As table 45 reports, only 28% of women had a leadership role in the different groups. This is one area where women in Amhara achieved far higher than women in other implementation areas, with 38% of women in Amhara having a leadership role in a group they are part of.

Table 45. Percentage of women who had leadership role in a group

Indicators	Amhara	SNNPR-Hadiya	Sidama & Gedeo	All
Percentage of women in leadership position in collectives	38	16	19	28
N	113	49	72	234

The assessment investigated whether women having their own VESA saving account lead to attainment of empowerment adequacy. The result revealed that women who have their own VESA account are likely to have better empowerment adequacy in decision on credit and control over use of income than those who don't have their own VESA saving account

Table 46 The relationship between VESA account ownership and achievement in women's empowerment domains

VESA account ownership	Percentage of women in male-headed households who achieved empowerment adequacy			
	Input into production	Access to credit & Decision about credit	Asset ownership	Control over use of income
women who have their own VESA saving account	56%	72%	60%	74%
women who didn't have VESA saving account	44%	28%*	40%	26%*

Supplementary indicators to assess various aspects of women's empowerment

A. Equitable households' chores share between men and women

The project is working to bring about change in cultural norms to encourage men to share the workload of their spouse so that women have time to participate in economic and social activities that give rise to economic and social empowerment.

Women were asked if their spouse shared the households chores, the frequency of support they get from their spouse, and also when their spouse supports them. The results of their response regarding whether they are supported are presented in the tables below, 47 table.

Table 47: Women who reported that their spouse share their work load

Indicators	Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		All	
	%	N	%	N	%	N	%	N
Percentage of Women Supported by their husband on household chores	69	204	95	59	69	85	73	348

The study revealed that almost 3 out of 4 women reported that their husbands share their household's chores, though the frequency of support varies. Hadiya had the highest proportion of husbands participating in households' chores (95%). As table 46 indicates, most women (60%) report that their husband's support them sometimes, while 37% of women reported that their husbands support them most of the time. Only 3% of women reported that their husbands rarely participate in household chores. The report shows that men in in Amhara and Hadiya participate in household chores more often than those in Sidama and Gedeo, which is surprising given that for other domains of empowerment women in Amhara had lower levels of achievement.

Table 48: Frequency of participation of men in household chores

Frequency of participation of men in household's chores	Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		All	
	%	N	%	N	%	N	%	N
Most of the time	44	140	39	58	20	59	37	255
Some time	54	140	61	58	75	59	60	255
Rarely	3	140	0	58	5	59	3	255

Furthermore, the study assessed under what circumstances men support their spouse in doing household chores. Most women indicated that men share household chores when women faced difficulty to do tasks themselves, such as when they were sick or pregnant, in time of giving birth, or when the women were busy with other things. Otherwise, men's support was reportedly rare during normal circumstance.

Table 49: Women's perception on when their spouse supports them in doing household chores

situations	Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		Total	
	%	N	%	N	%	N	%	N
When I am pregnant	64	140	96	56	78	59	75	255
In time of giving birth	76	140	98	56	64	59	78	255
When I am sick	66	140	95	56	71	59	74	255

When he sees I am busy with other things	47	140	45	56	71	59	52	255
In normal circumstances	27	140	16	56	10	59	21	255

Table 50 outlines the results of the women’s responses regarding the level of household chores shared among women and men in the sampled households. Overall, about half of women (53%) feel the distribution of household chores between men and women is either almost or very fair, with men and women sharing household chores, while about half (47%) of women feel the distribution of work is either unfair or very unfair, with women doing most of the work. Equitable sharing of household workload was observed more in Hadiya (78% almost or very fair) than the other areas.

Table 50: Women’s opinion on level household chores shared between women and men in their households

Perception of women on level of household chores shared between female and male	Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		All	
	%	N	%	N	%	N	%	N
Very unfair, female do almost the entire work	13	204	7	59	22	85	14	348
Unfair, female do most of work	39	204	15	59	32	85	33	348
Almost Fair, there is no major significant difference in workload between female and male	19	204	73	59	40	85	33	348
Very fair, female and male the same level burden	29	204	5	59	6	85	20	348

B. Women’s confidence in speaking at VESA meetings

Table 51 explores women’s level of confidence in speaking in VESA meetings which is used as a proxy indicator to assess progress in women holding leadership roles and being in positions of influence in their community. Women in both MHH & FHH were asked about their confidence level in speaking in VESA meetings. 65% of women reported having some level of confidence (from somewhat to very confident), while 34% reported being only slightly confident, or not confident at all. The assessment found that more women in Amhara (43%) were less confident (not confident or slightly confident) compared to the other areas, while Sidama & Gedeo had the largest proportion of women who reported being “very confident” speaking in meetings (54%).

Table 51: Women’s level of confidence in speaking at VESAs meetings

Level of confidence	Amhara		SNNPR-Hadiya		SNNPR-Sidama and Gedio		Total	
	%	N	%	N	%	N	%	N
Not confident at all	22	412	5	87	3	150	15	649
Slightly confident	23	412	14	87	14	150	19	649
Somewhat Confident	20	412	41	87	12	150	21	649
Moderately confident	19	412	26	87	17	150	19	649
Very confident	6	412	14	87	54	150	25	649

C. Women’s mobility

The study assessed to what extent women have autonomy to their mobility. To this end, women living with their spouse were asked about their opinion on the degree of autonomy they have to go outside home for various purposes and the result of their opinion is presented in the table 52 below. Overall, the result revealed at least 60% women responded that they need their spouse permission to go outside home for any reason, implying that women have little autonomy on their mobility.

Table 52: Women mobility autonomy for different purposes

Questions	% of women in MHH who responded the following option									
	Strongly Agree		Agree		Neither agree nor disagree		Disagree		Strongly disagree	
	%	n	%	N	%	n	%	n	%	n
I need to ask permission from my spouse to meet my friend	13	45	63	219	7	24	14	49	3	10
I need to ask permission from my spouse to visit my family	14	49	65	226	4	14	13	45	3	10
I need to ask permission from my spouse to go to the market place or work place	14	49	60	209	8	28	16	56	3	10
I need to ask permission from my spouse to attend community activities (social gathering (wedding or funeral, public meetings, etc)	15	52	74	258	0	0	9	31	3	10

5.6. Nutrition

The project actively worked towards attaining household food and nutrition security by creating awareness on essential nutrition information and increasing availability of nutrient dense food at household level. This survey assessed the nutrition status of the sampled households based on the standard food and nutrition indicators (FNS) such as minimum acceptable diet , women dietary diversity, etc and investigated whether households' participation in production of nutrient dense food has created differences in their nutritional status.

Participation in perma-gardening production

The project promoted perma-gardening activities among households in order to increase vegetable consumption and improve dietary diversity of the households' members. This assessment indicated that 99% of respondents have received perma-garden/homestead gardening training, and among trained households, 68% have implemented the learning. As shown in table 53 below, uptake of perma garden in Amhara and Hadiya was better than in Sidama & Gedeo.

Table 53 Training and engagement in perma-gardening

Indicator	Type of HHs				Regions							
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedio		All	
	%	N	%	N	%	N	%	N	%	N	%	N
% of households trained in perma-garden/homestead gardening	98.5	416	96.2	233	97.9	412	95.5	87	100	150	97.8	649

% of Households among trained in perma-garden who commenced perma garden activity	65.5	65	73.9	25	75.6	46	63.2	21	55.6	23	67.9	90
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This assessment also further analyzed the main reasons for households not commencing perma-garden, and as can be seen in table 54 below, lack of money to buy seed stand as a main reason for many households not commencing production. Regarding region specific reasons, similarly, money to buy seed was reported as the main reason.

Table 54: Percentage of households who mentioned various reasons for not commencing perma-garden activity

Reasons	Type of HHs				Regions						All	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama and Gedio			
	%	n	%	n	%	n	%	n	%	n	%	n
Don't have money to buy seed	55.6	10	83.3	5	60	6	66.6	4	62.5	5	62.5	15
It is time and labor consuming	27.8	5	16.7	1	40	4	16.7	1	12.5	1	25	6
Lack of space to establish a garden	16.7	1	0	0	0	0	16.7	1	25	2	12.5	3

Participation in poultry voucher

The project implemented a poultry voucher scheme through which households can participate in production of eggs to increase the availability and consumption of protein by households. As demonstrated in table 55, 23% of sampled households received poultry vouchers. Of these households, 77% households who received the voucher started poultry production.

Table 55: Participation on poultry voucher activity

Indicators	Type of HHs				Regions						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedio			
	%	N	%	N	%	N	%	N	%	N	%	N
Percentage of households who received poultry voucher	24	416	21	233	18	412	34.5	87	28.7	150	23	649
Percentage of households who received the voucher who started production	81	72	70.2	33	77	51	86.2	25	70.7	29	77.2	105

Households' nutrition practice and behavior

This section presents the assessment results of the households' nutrition practices and behavior based on the standard indicators which focus on infant and child feeding practices and adult nutrition status. As mentioned above in the limitations section, the nutrition findings such as dietary diversity of women might be skewed due to data collection taking place during the fasting season, when many Ethiopian Orthodox are following a vegan diet and delaying the time of their first meal each day.

A. Exclusive breast feeding

It is recommended that children be exclusively breastfed during the first 6 months of their life. While promotion of exclusive breastfeeding was not an area of intervention under the project, table 56 presents the findings of exclusive breastfeed practices of the sampled households who have children under 6 months at the time of data collection. Of sampled households, the results show that 72% of these households exclusively breastfeed their infants, with very little variation by region. Female headed households were found to be more likely to exclusively breastfeed, at 85%, while 67% of MHHs reported exclusively breastfeeding infants under 6 months.

Table 56: Percentage of households who exclusively breastfeed their infants aged less than 6 months

Region	Type of HH						Total		
	MHH			FHH					
	%	n	N	%	n	N	%	n	N
Amhara	60	6	10	87.5	7	8	72	13	18
SNNPR-Hadiya	70	14	20	100	3	3	73.9	17	23
SNNPR-Sidama &Gedeo	68.2	15	22	77.8	7	9	71	22	31
All	67	35	52	85	17	20	72	52	72

B. Feeding infant with colostrum

Colostrum is often overlooked but remains a vitally important substance for infants. As babies' first food, it provides the nutrients and nourishment the infant needs and boosts their immune system. While feeding infants colostrum was not directly promoted by the project, the assessment collected data on households practices on colostrum feeding. As shown in Table 57 below, 83% of households fed their children colostrum, with respondents reporting giving infants colostrum soon after birth. The assessment detected no significant variation between FHHs and MHHs.

Table 57: Percentage of households who fed their infant colostrum

Region	Type of HH						Total		
	MHH			FHH					
	%	n	N	%	n	N	%	n	N
Amhara	74	17	23	100	11	11	82.4	28	34
SNNPR-Hadiya	87.5	21	24	100	4	4	89.3	25	28
SNNPR-Sidama &Gedeo	61.5	8	13	85.7	24	28	78.0	32	41
All	82.7	62	75	82.1	23	28	82.5	85	103

C. Minimum dietary diversity (MDD) for children (Age 6-23 months) per day

Dietary diversity is a proxy for adequate micronutrient density of foods. Minimum dietary diversity for children assesses food intake among children aged 6-23 months from at least four food groups. The cut-off of four food groups is associated with better-quality diets for both breastfed and non-breastfed children.

Consumption of food from at least four food groups means that the child has a high likelihood of consuming at least one animal source of food and at least one fruit or vegetable in addition to a staple food (grains, roots, or tubers) (WHO 2008). The four food groups should come from a list of seven food groups: grains, roots, and tubers; legumes and nuts; dairy products (milk yogurt, cheese); flesh foods (meat, fish, poultry, and liver/organ meat); eggs; vitamin A-rich fruits and vegetables; and other fruits and vegetables. Table 56 demonstrates that 36% of households met MDD for children aged between 6 and 23 months during the last day before interview date. Data presented by region revealed that Amhara region has fewer children meeting MDD (29%) as compared with Hadiya (41%) and Gedeo and Sidama (43%). The assessment found there is a fair amount of difference in achievement of minimum dietary diversity amongst children living in FHH (41%) and MHH (33%).

Table 58: Percentage of households who meet MDD for children aged between 6 and 23 months during the last day before interview date

Region	Type of HH						Total		
	MHH			FHH					
	%	n	N	%	n	N	%	n	N
Amhara	23	9	39	37	11	30	29	20	69
SNNPR-Hadiya	44	12	27	20	1	5	41	13	32
SNNPR-Sidama &Gedeo	36	10	19	53	10	28	43	20	47
All	33	31	94	41	22	54	36	53	148

D. Minimum meal frequency (MMF) for children (Age 6-23 months)

Minimum meal frequency, a proxy for a child's energy requirements, examines the number of times children 6-23 months received foods per day other than breast milk. The minimum number is specific to the age and breastfeeding status of the child. Breastfed children are considered to be consuming minimum meal frequency if they receive solid, semi-solid, or soft foods at least twice a day for infants aged 6-8 months and at least three times a day for children aged 9-23 months. Non-breastfed children 6-23 months old are considered to be fed with a minimum meal frequency if they receive solid, semi-solid, or soft foods at least four times a day. Accordingly, MMF was computed for children (age 6-23 months) and the output, reported in table 59, shows that 75.7% of households with children 6-23 month fed their children at the minimum frequency during the last day before interview date. The proportion fed according to the minimum meal frequency is slightly higher among MHHs (77.7%) than in FHH (72.2%). Some regional variations exist in the proportion of children who receive minimum meal frequency, with highest level at 91.5% in SNNPR-Sidama &Gedeo and lowest at 58% in Amhara region.

Table 59: Percentage of households with children 6-23 month who fed their children at the minimum frequency during the last day before interview date

Region	Type of HH						Total		
	MHH			FHH					
	%	n	N	%	N	N	%	n	N
Amhara	56.4	22	39	60	18	30	58	40	69
SNNPR-Hadiya	92.6	25	27	80	4	5	90.6	29	32
SNNPR-Sidama &Gedeo	92.8	26	28	89.5	19	17	91.5	43	47
All	77.7	73	94	72.2	39	54	75.7	112	148

E. Minimum acceptable diet (MAD) for children aged 6-23 months

Infants and young children should be fed a minimum acceptable diet (MAD) to ensure appropriate growth and development. The minimum acceptable diet (MAD) is a combination of the minimum dietary diversity (MDD) and minimum meal frequency (MMF). Based on WHO recommendation, minimum acceptable diet is met when children aged 6-23 months have at least the minimum dietary diversity **and** the minimum meal frequency per day. Table 60 indicates that 35.8% of households managed to feed their children according to MAD recommendations. The assessment detected slight variation between FHHs (40.7%) and MHHs (33%) and between regions, with Amhara having the lowest MAD (29%).

Table 60: Percentage of households who achieved MAD for their children aged between 6-23 months during the last day before interview date.

Region	Type of HH						Total		
	MHH			FHH			%	n	N
	%	n	N	%	N	N			
Amhara	23.1	9	39	36.7	11	30	29	20	69
SNNPR-Hadiya	44.4	12	27	20	1	5	40.6	13	32
SNNPR-Sidama &Gedeo	35.7	10	28	52.6	10	19	42.6	26	47
All	33	31	94	40.7	22	54	35.8	53	148

F. Women's dietary diversity (WDD)

Women's dietary diversity (WDD) is another key indicator that can help to assess household access to nutrition as well as nutrition behavior. A woman is considered to consume a diet of minimum diversity if she consumed at least five of ten specific food groups during the previous day and night. The ten food groups included in the WDD indicator are - grains, white roots, tubers, and plantains; pulses (beans, peas and lentils); nuts and seeds (including groundnut); dairy; meat, poultry and fish; eggs; dark green leafy vegetables; other vitamin A-rich fruits and vegetables; other vegetables; and other fruit. This assessment indicated that slightly more than half number of interviewed women consume a diet of minimum diversity. The assessment revealed that there are no significant differences between women in MHHs (39%) and FHHs (37%) in terms of consuming minimum dietary diversity. when comparing regions, Amhara had the highest percentage of women who met minimum WDD (57%) compared to Hadiya (45%) and Sidama & Gedio (46%)..

Table 61: Percentage of women who consumed minimum dietary diversity

Region	Type of HH						Total		
	MHH			FHH			%	n	N
	%	n	N	%	n	N			
Amhara	28%	191	265	29%	42	147	57%	233	412
SNNPR-Hadiya	60%	24	60	56%	15	27	45%	39	87
SNNPR-Sidama &Gedeo	57%	39	91	51%	30	59	46%	69	150
All	39%	254	416	37%	87	233	53%	341	649

5.7. Household hygiene and sanitation practice

A. Hand washing practice

The assessment reviewed hand washing practices of women and men members of households during critical times; after using the toilet, before preparing food, after cleaning a child after defecation, before eating food and after cleaning the toilet. Table 62 presents frequency of hand washing practices during all mentioned critical times by members of households. The result revealed that overall, 92% reported that they practiced hand washing during all critical times in the last 24 hours. The result revealed similar practices between women and men across all regions.

Table 62: Percentage of men and women who practice hand washing during all critical times in the last 24 hours

Region	Men		Women		Total	
	%	N	%	N	%	N
Amhara	92	265	95	147	93	412
SNNPR-Hadiya	82	60	82	27	82	87
SNNPR-Sidama &Gedeo	97	91	98	59	97	150
All	91	416	94	233	92	649

B. Open defecation practice

Respondents were asked where they defecated over the last 24 hours since the interview time to measure potential for transmission of hygiene-borne diseases. The analysis result of their responses is presented in the table 63 below. Overall, open defecation was more widely practiced in Amhara (46%) and Hadiya (39%), while it is not a common practice at all in Sidama and Gedeo (1%). The results indicate no difference between men and women respondents in practicing open defecation.

Table 63: Percentage of men and women who practice open defecation within last 24 hours

Region	Men		Women		Total	
	%	N	%	N	%	N
Amhara	49	265	47	147	48	412
SNNPR-Hadiya	38	60	41	27	39	87
SNNPR-Sidama &Gedeo	1	91	0	59	1	150
All	37	416	34	233	36	649

Family planning-use of contraceptive methods

Table 64 reports contraceptive prevalence rate (CPR) for interviewed women age 15-49. Overall CPR was found to be 45%, which is slightly higher than the national figure of 35%⁹. CPR was found slightly higher in MHHs (47%) than FHHs (41%). Modest variation also existed across regions, with the highest CPR being in Sidama & Gedeo (58%) and lowest in Hadiya (31%).

Table 64: Contraceptive prevalence rate (CPR)

Region	Type of HH				Total	
	MHH		FHH		%	N
	%	N	%	N		

⁹ Ethiopia's Health and Demographic report, 2016

Amhara	43	265	44	147	43	412
SNNPR-Hadiya	40	60	11	27	31	87
SNNPR-Sidama &Gedeo	64	91	49	59	58	150
All	47	416	41	233	45	649

5.8. Climate change and resilience

This section looks at households' awareness of climate change, adaptation mechanisms as well as their level of adoption of climate change adaptation practices.

Knowledge on climate change

Women and men who were head of sampled households were asked to mention at least two effects of climate change as a proxy to assess their level of knowledge on climate change. The majority of the respondents, 66%, were able to identify one effect, with more than half able to mention at least two climate change effects, signifying a modest level of awareness. The assessment detected no significant difference on knowledge levels between women and men. and similar pattern was observed in Hadiya and Sidama & Gedeo, indicating better level of awareness among households in these regions than Amhara across the

Table 65: Men and women awareness level on climate change issues

Sex	% of head of households who identified at least one effect of climate change								% of head of households who identified at least two effects of climate change							
	Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedio		Total		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedio		Total	
	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
Women	59	147	78	27	73	59	64	233	47	147	48.1	27	54.2	59	48.4	233
Men	63	265	85	60	68	91	68	416	51	265	60.0	60	61.5	91	54.3	416
Total	62	414	83	87	70	150	66	649	49.3	414	56.3	87	58.7	150	52.4	649

Adoption of climate change adaptation (CCA) practices

Over and above assessing knowledge on climate change, this assessment also collected information on adoption of climate change adaptation (CCA) practices by households interviewed. The project encouraged households to implement multiple adaptation mechanisms to increase their absorptive capacity for climate change related shocks. As table 66 illustrates, 65% of households have adopted multiple CCA practices, with MHH slightly more likely to have adopted multiple CCA practices compared to FHH across the regions.

Table 66: Percentage of households who adopted multiple climate change adaptation practices

Region	Type of HH				Total	
	MHH		FHH		%	N
	%	N	%	N		
Amhara	65%	269	51%	128	60%	414
SNNPR-Hadiya	80%	66	78%	27	79%	87
SNNPR-Sidama &Gedeo	70%	106	66%	56	69%	150
All	68%	441	58%	211	65%	649

Seasonal weather forecasts and advisories

The project facilitates dissemination and implementation of seasonal weather forecasts and advisories generated from participatory scenario planning exercises. This section assessed to what extent these seasonal weather forecasts were accessible to the target households, and to what extent the advisories were deemed useful and applied by households.

Almost three out of seven households received seasonal weather forecasts and advisories over the last 12 months. Further breakdown of the results reflects similar levels of households' access to weather forecasts and advisories between MHH & FHH, but varies across regions, with better access in Hadiya (76%) than Amhara (39%) and Sidama & Gedo (31%). There was no difference in receipt of forecasts and advisories between MHH and FHHs.

Table 67: Percentage of households who received seasonal weather forecasts and advisories over the last 12 months

Region	Type of HH				Total	
	MHH		FHH		%	N
	%	N	%	N		
Amhara	39	265	40	145	39	412
SNNPR-Hadiya	77	60	74	27	76	87
SNNPR-Sidama & Gedo	30	91	32	59	31	150
All	42	416	42	233	42	649

Table 68 shows the households' responses if they felt they received advisees at the right time; if they have implemented the suggested advice and if they felt what they have received was useful. The result shows almost all interviewed households implemented at least one advice they received. Furthermore the study indicated that the project managed to disseminate forecasts and advisories to considerable numbers of households at the right time. However, only 66% of households reported that the forecast and advisories were useful. In contrast to other regions, less number households found the forecasts and advisories useful in Hadiya zone of SNNPR.

Table 68: Seasonal advisories implementation by households and their opinion on advisories

Indicators	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedo			
	%	N	%	N	%	N	%	N	%	N	%	N
Percentage of HHs who implemented at least one advisory	95	176	95	98	93	162	99	66	98	46	95	274
Percentage of HHs who reported to have received seasonal forecast and advisories at the right time	92.	176	87	98	86	162	97	66	96	46	90	274
Percentage of HHs who reported that the seasonal forecast and advisories were useful	68	170	61	90	69	156	54	64	74	38	66	260

The use of short season or drought resistant varieties, water saving and water shade developments such as planting forage, erosion control structure, etc were found the most widely implemented advises.

Exposure to shocks and capacity to recover

This assessment also measured the number of shocks the households were to exposed to over the last 12 months, to what extent these shocks affected their wellbeing, and how well they coped, as presented in table 69. Accordingly, almost nine out of ten households (89%) reported that they had experienced at least one shock over the last 12 months, and out of these, 90% of households experienced multiple shocks. HH in Hadiya were slightly less likely to have experienced multiple shocks (83%) compared to Sidama & Gedeo (87%) and Amhara (93%).

Table 69: Household exposure to shocks

Indicators	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio			
	%	N	%	N	%	N	%	N	%	N	%	N
Percentage of households who experienced one shock	91	416	86	233	87	412	87	87	96	150	89	649
Percentage of households who experienced multiple shocks (two or more)	92	379	88	201	93	360	83	76	87	144	90	580

Table 70 presents the top seven shocks experienced by households across the regions. As is presented, food price inflation and increases in prices of agricultural inputs were found to be the most widely occurring shocks experienced by 70% and 47% households respectively across the regions. With the exception of illness of a household member, MHH were more likely that FHHs to report having experienced each type of shock.

Table 70: Percentage of HHs who experienced various types of shocks over the previous year

Types of shocks	Sex of HH		Region			Total
	MHH	FHH	Amhara	Hadiya	Sidama and Gedio	
Excessive rains	27.2	13.3	22.8	27.6	17.3	22.2
Food price inflation	72.8	64.8	68.9	65.5	75.3	70.0
Death of livestock	23.6	15	22.8	24.1	12.0	20.5
Crop disease	24.8	15	24.8	21.8	11.3	21.3
Livestock disease	20.4	9	17.5	20.7	10.7	16.3
Increase in price of agricultural inputs	54.1	33.5	44.4	39.1	57.3	46.7
Dessert Locust	16.1	5.2	17.7	1.1	3.3	12.2

Illness of a household member	11.3	12.2	36.6	37.9	16.7	11.2
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Furthermore, respondents were asked to what extent these various shocks have impacted their household food security and income. According to their answers, food price inflation and increase in price of agricultural inputs were the two shocks that severely affected their household's income and food security across all regions.

Table 71: Impact of shocks on food consumption and income of affected HHs (mean of scores on a scale of 0 to 4 levels. Zero score imply no impact while 4 being very high impact)

Indicators	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		Mean score	N
	Mean Score	N	Mean Score	N	Mean Score	N	Mean Score	N	Mean score	N		
Excessive rain	2.55	195	2.47	66	2.60	133	2.26	58	2.63	70	2.53	261
Food price inflation	3.05	264	3.12	135	3.07	185	2.84	74	3.20	140	3.07	399
Death of livestock	2.53	89	2.75	42	2.44	81	3.04	24	2.69	26	2.60	131
Crop disease	2.74	125	3.00	50	2.90	103	2.76	44	2.57	28	2.81	175
Increase in price of agricultural inputs	2.94	161	2.90	82	2.91	95	2.97	57	2.91	91	2.92	243
Illness of household member	2.52	77	2.70	55	2.45	57	2.83	42	2.55	33	2.60	132

When household members were asked to what extent they were able to recover from the above-mentioned shocks, households felt that they have more easily recovered from excessive rain, livestock death and illness of a household member than from food price inflation, increase in price of agricultural inputs and crop disease, though capacity to recovery was low for all types of shocks. Results can be found table 72 below. Table 72: Household capacity to recover from shocks (mean score on a scale from 0 to 3. Zero imply no capacity at all whereas 3 being strong capacity to recover)

Indicators	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		Mean Score	N
	Mean Score	N	Mean Score	N	Mean Score	N	Mean Score	N	Mean Score	N		
Excessive rain	1.16	195	1.27	66	1.09	133	1.19	58	1.35	70	1.19	261
Death of livestock	1.13	89	1.09	42	1.20	81	0.88	24	1.11	26	1.10	131
Crop disease	1.15	125	0.57	50	0.99	103	0.81	44	1.21	28	0.97	175
Increase in price of agricultural inputs	0.85	161	0.92	82	0.72	95	1.00	57	0.95	91	0.87	243
Illness of household member	1.24	77	1.04	55	1.25	57	1.05	42	1.13	33	1.16	132
Food price inflation	0.78	264	0.62	135	0.68	185	0.86	74	0.73	140	0.72	399

Contribution of VESA participation to cope with shock

Sample households were asked whether or not their participation in their VESA helped them to cope with difficult times and were also asked to rate the contribution of VESA components/aspects in helping them to cope with shocks/difficult times. The result is presented in the table 73 below. Overall, more than 90% of respondents confirmed that VESA participation is useful to help cope with difficult times, but they had different views on which aspects of VESA functions were more useful than the rest to cope with difficult times. The majority of VESA members (66%) felt that the financial services of their VESA (savings & share out and loans) has the highest contribution in coping with difficult times than the rest of VESA functions (non-financial). VESA loan was the prominent contributor followed by saving and VESA share out. The VESA discussions and other learnings at VESA was considered as less important to cope with difficult times.

Table 73 Level of VESA contribution to cope with difficult times

VESA aspects/component	The contribution of VESA aspects to cope with difficult times				N
	Very High contribution	High Contribution	Moderate contribution	Less contribution	
	%	%	%	%	
VESA saving & share out	29	25	18	8	649
VESA loan	37	41	15	18	649
The relationship with neighbor	21	19	42	32	649
The discussions and other things learnt at VESA	13	15	25	42	649

5.9. Household graduation from PSNP

Table 74 presents the results of the information collected on household graduation from the Productive Safety Net Program (PSNP). Overall, 23% of sampled households reported having graduated from the PSNP, while an additional 15% of households reported not being re-targeted for PSNP 5 (also considered as a proxy for graduation). The remainin 62% of households reported still being in the PSNP. The incidence of graduation was higher in MHH than FHH (28.1% and 14.6% respectively). Hadiya was behind the rest of the regions with very low proportion of graduated households (10%) and households not re-targeted for PSNP 5 (9.2%).

Table 74: Household graduation from PSNP within the last three years by implementation areas

Indicators	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio			
	%	N	%	N	%	N	%	N	%	N	%	N
Percentage of HHs graduated from PSNP	28.1	416	14.6	233	26.9	412	10.3	87	20.75	150	23.3	649
Percentage of household who did not re-targeted for PSNP	15.4	416	13.7	233	14.8	412	9.2	87	18.0	150	14.8	649

Percentage of household who are still in PSNP	56.5	416	71.7	233	58.3	412	80.5	87	61.3	150	62	649
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Households who were still in the PSNP were asked their opinion on their capacity to feed their members sufficiently without having PSNP support. According to their result only one out of three households (33%) believed they can provide sufficient food to their household members without PSNP support, which varied from 49% in Gedeo & Sidama to 24% in Hadiya.

Table 75: Percentage of household ability to meet household food need

Region	Type of HHs				Total	
	MHH		FHH		%	N
	%	N	%	N		
Amhara	31	130	30	110	30	240
SNNPR-Hadiya	32	50	0	18	24	68
SNNPR-Gedeo & Sidama	48	54	50	38	49	92
All	35	234	31.3	166	33	400

Additionally, PSNP households were asked about their willingness and readiness to graduate from PSNP, and their responses were analyzed and are reported in the table 76 below. Overall, only 15% of households want to graduate from the PSNP with no significant difference between MHH and FHH across the regions except in Sidama and Gedeo where more number MHH than FHH had the desire to graduate from PSNP.

Table 76: Percentage of household who want to graduate from PSNP

Region	Type of HHs				Total	
	MHH		FHH		%	N
	%	N	%	N		
Amhara	14	130	15	110	14	240
SNNPR-Hadiya	18	50	11	18	16	68
SNNPR-Gedeo & Sidama	22	54	5	38	15	92
All	17	234	12	166	15	400

Among those who want to graduate, desire to spend more time on livelihood activities was the most common reasons for many households in general and for many households in Hadiya wanted to graduate as public works are too hard/take too much time. Significant number of households in Sidama & Gedeo and Amhara want to graduate as they consider themselves food secure without PSNP

Table 77: Percentage of households and their reasons for wanting to graduate

Indicators	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedeo			
	%	N	%	N	%	N	%	N	%	N	%	N
I don't need it anymore	54.4	39	42.5	20	58.7	34	38.6	11	32	14	49.3	59
My family is food secure now	46.2	39	55.0	20	58.8	34	0.00	11	64.3	14	49.2	59

I want to spend more time on livelihoods activities,	76.9	39	70.0	20	85.0	34	54.0	11	64.0	14	74.6	59
Public works are too hard/take too much time	51.0	39	50.0	20	55.9	34	63.6	11	28.6	14	50.8	59
Transfer value is too low	30.8	39	40.0	20	38.2	34	54.5	11	7.10	14	33.9	59

Of the 85% of households who reported that they do not want to graduate, a vast majority of households (76%), do not want the graduate as they worry that they will not be able to feed their family without the program. Lack of other options, and a desire to stay in the PSNP in case there is a shock were also reported as the second most cited reasons for many households wanting to stay in PSNP program.

Table 78: Percentage of households and their reasons for not wanting to graduate

Indicators	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedio			
	%	N	%	N	%	N	%	N	%	N	%	N
I am worried that I will not be able to feed my family	71.3	195	81.5	146	67.5	206	82.5	57	92.3	78	75.7	341
I do not have any other choice	54.4	195	42.5	146	58.7	206	38.6	57	32.0	78	49.3	341
I get better access to credit because I am a PSNP member	18.5	195	14.4	146	17.5	206	14.0	57	16.7	78	16.7	341
I would rather stay in the PSNP just in case of a shock	45.6	195	26.0	146	38.8	206	17.5	57	47.4	78	37.2	341
If I graduate, I may miss out on opportunities for other support that come through the PSNP	16.9	195	6.80	146	10.2	206	26.3	57	9.0	78	12.6	341

Household Confidence to graduate

The study assessed the confidence level of households to graduate from the PSNP within the coming two years. Overall, only 20% of households reported that they are somewhat or very confident to graduate from PSNP within the 2 years, while 27% were not confident at all. Households' confidence data exhibits variation across the areas. Households in Amhara were found to be more confident than those in SNNPR.

Table 79: Percentage of households who are confident to graduate from PSNP within next two years

Confidence level	Type of HHs				Region						Total	
	MHH		FHH		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedio			
	%	n	%	n	%	n	%	n	%	n	%	n
Neutral/not sure	11%	46	11%	23	11%	41	16%	13	9%	15	11%	69
Not confident at all	25%	108	32%	65	25%	99	30%	25	30%	49	27%	173
Somewhat confident	14%	60	7%	15	14%	53	10%	8	9%	14	12%	75
Very confident	9%	40	4%	9	12%	46	2%	2	1%	1	8%	49
No answer	14%	60	7%	15	14%	53	10%	8	9%	14	12%	75

5.10. Youth engagement

This section of the report presents findings from information collected from youth that were separately sampled from list of youth. The project provided life-skill training for the youth and linking them to TVETs for vocational skill training that can prepare them to pursue self-employment or employment, in addition to facilitating financial services to help youth get capital for their business investment. Therefore information about financial access, provision of training, employment opportunity and income were collected and the results were presented in the subsequent tables below.

Youth VESA

In addition to the adult VESAs, the project organized youth into VESAs to create financial access to youth and improve their culture of saving and financial management practices. The assessment result indicated that 83% of youth were a member of VESA; out of these, 10% of them had stopped their participation in their VESA at the interview time. Many numbers of defaulters were found in Amhara than the rest of the regions.

Table 80: Percentages of Youth who joined VESA

Regions	Percentage of youth who joined VESA						Percentage of youth who were still in VESA during interview time					
	Male		Female		All		Male		Female		All	
	%	N	%	N	%	N	%	N	%	N	%	N
Amhara	73.6	87	78.9	38	75.2	125	81	64	87	30	83	94
SNNPR-Hadiya	100	15	100	9	100	24	100	15	100	9	100	24
SNNPR-Sidama/Gedio	90	31	95	21	92.3	52	100	28	95	20	98	48
All	81.5	133	86.8	68	82.6	201	89	107	92	59	90	166

The reasons of stopping participation were collected from youth who were no longer participating in the VESA. According to the result, the main reason for many numbers of youth stopping their participation as their VESA stopped their activities/meeting. The military conflict happened in the North wollo of Amhara region caused many VESAs to stop their activities.

Table. Percentage of youth's reason for stopping VESA participation

Resons	Sex of youth						Region											
	Male			Female			Amhara			SNNPR-Hadiya			SNNPR-Sidama&Gedio			All		
	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N
I did not find youth VESA useful	18.2	2	11	20	1	5	13.3	2	15	0.0	0	0	100	1	1	18.8	3	16
VESA stopped the meeting	72.7	8	11	80	4	5	80	12	15	0	0	0	0	0	0	75	12	16
I am moved out from the village	9.1	1	11	0	0	0	6.7	1	15	0	0	0	0	0	0	6.3	1	16

Financial access to youth

Saving

The disaggregated data by implementation area demonstrates VESAs are the primary institution where youth save their money, followed by Bank. Among the formal institutions, MFI was the preferred institution

where many number of youth save their money while Bank was found the most preferred place by many number of youth in Sidama Gedeo and Hadiya.

Table 81 Percentage of youth who saved in various financial institutions

Institutions	Sex of youth						Region											
	Male			Female			Amhara			SNNPR-Hadiya			SNNPR-Sidama&Gedio			All		
	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N
VESA	89.9	89	99	93	53	57	88.5	77	87	95	20	21	93.8	45	48	91	142	156
RuSACCOs	3.0	3	99	3.5	2	57	2.3	2	87	14.3	3	21	0	0	48	3.2	5.0	156
MFI	18.2	18	99	14	8	57	26.4	23	87	4.8	1	21	4.2	2	48	16.7	26	156
Bank	33.3	33	99	28.1	16	57	20.7	18	87	38.1	8	21	47.9	23	48	31.4	49	156
Iqub	12.1	12	99	5.3	3	57	0	1	87	23.8	5	21	18.8	9	48	9.6	15	156

Even if many numbers of youth saved in VESA, the average saving amount is very low compared to the rest of institutions. There was no big difference in average saving amount between female and male youth, while a sizeable difference exists across the regions. Youth in Hadiya were saving large amount of money, followed by youth in Sidama and Gedeo. The average saving amount in Amhara was almost one -third - of saving made by youth in Hadiya and half of saving made by youth in Sidama & Gedeo. Interestingly, on average, youth were saving bigger amount of money in *Iqub* than any other formal and informal financial institutions, with male youth more likely to save in *iqub* and more likely to save higher amounts. Overall, male and female youth had similar average saving amounts (1901 ETB and 1737 ETB respectively).

Table 82. Average savings in various financial institutions (ETB)

Institutions	Sex of youth				Region									
	Male		Female		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		All			
	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n	Mean	n		
VESA	908.8	89	1046.8	53	885.1	77	839	20	1137	45	960	142		
RuSACCOs	353	3	3000	2	600	2	1953	3	0	0	1,412	5.0		
MFI	1694	18	6517	8	3613	23	3000	1	1017	2	3302	26		
Bank	3484	33	3207	16	3880	18	4763	8	2520	23	3396	49		
Iqub	5622	12	1433	3	0	1	550	5	4113	9	4575	15		
Overall	1901	133	1737	68	1152	125	3448	24	2775	52	1846	201		

Access to working capital

The assessment collected information to assess youth' access to working capital both as a form of grant and/or loan. The result revealed that only 38% of youth had access to financial capital either in the form of loan or grant. Table 83 below reflected out of the total youth who accessed working capital, with the majority of them (30%) received it as form of loan.

Table 83: Percentage of youth who accessed finance from various financial initiations

Access type	Sex of youth		Region	
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	Male		Female		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		All	
	%	n	%	n	%	n	%	n	%	n	%	n
Loan only	27%	36	34%	23	31%	38	25%	6	29%	15	30%	59
Grant only	2%	3	3%	2	1%	1	0%	0	8%	4	3%	5
Both	7%	9	4%	3	0%	0	13%	3	17%	9	6%	12
All (access to at least one form of finance)	36%	48	41%	28	31%	39	38%	9	54%	28	38%	76

VESAs were found to be the most common source of financial loans for many youth in all regions, except in Amhara where the proportion of youth who accessed MFI loan slightly bigger than those borrowed from VESA.

Table 84 Percentage of youth who accessed loan from different institutions

Institutions	Sex of youth				Region							
	Male		Female		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		All	
	%	N	%	N	%	N	%	N	%	N	%	N
VESA	32.3	45	39.4	26	21	38	50	9	62.5	24	34.7	71
RuSACCOs	1.5	45	1.5	26	0.8	38	8.3	9	0	24	1.5	71
MFI	19.2	45	12.1	26	25.8	38	0	9	2.1	24	16.8	71
Bank	6.2	45	6.1	26	1.6	38	16.7	9	12.5	24	6.1	71

Youth training

The project provided life-skill training for youth and linking them to TVETs for vocational skill training that can prepare them to pursue self-employment or employment. Table 83 below reports progress on youth training, overall 30% and 66% of those interviewed trained in Be Your Own Boss (BOB) topic and vocational skills respectively.

Table 85: Youth who took various trainings by regions

Training type	Sex of youth				Region							
	Male		Female		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		Total	
	%	N	%	N	%	N	%	N	%	N	%	N
Percent of youth who took BYoB training	25	133	41	68	11	125	46	24	69	52	30	201
Percent of youth who trained in technical and vocational training	68	133	63	68	71	125	83	24	46	52	66	201

Out of the total youth trained, in work ready now, 84% had found self or paid employment at the time of the interview. The employment rate was pretty similar between male and female youth. Youth in Hadiya and

Sidama & Gedeo had greater success in getting a job than those residing in Amhara, likely due to the conflict.

Table 86: Trained youth who were employed by regions

Regions	Percentage of youth who were found employee (self or paid) during interview time.					
	Male		Female		All	
	%	N	%	N	%	N
Amhara	77	87	71	38	75	125
SNNPR-Hadiya	100	15	89	9	96	24
SNNPR-Sidama/Gedio	100	31	100	21	100	52
All	85	133	82	68	84	201

Among those youth who were employed, more than half of them engaged in non-farm activity –petty trade, barber shop etc. As per the result in the table 87, more youth in Hadiya succeeded to get permanent wage employment than youth in any other regions. Overall, seasonal employment and wage employment opportunity were limited in Amhara as few number youth engaged in these employment.

Table 87: Youth engagement in various types of employment

Indicators	Sex of youth				Region							
	Male		Female		Amhara		SNNPR-Hadiya		SNNPR-Sidama&Gedio		All	
	%	N	%	N	%	N	%	N	%	N	%	N
Youth who are self-employed (non-farm activity –petty trade, barber shop, etc.	47	133	62	68	39	125	50	24	83	52	52	201
Youth who are self-employed (crop and livestock production	29	133	15	68	23	125	25	24	25	52	24	201
Youth engaged in seasonal/Casual wage laborer (both off-farm and on-farm)	23	133	9	68	14	125	42	25	17	52	18	201
Youth engaged in Permanent employment	11	133	12	68	7	125	58	25	0	0	11	201

Furthermore, the study assessed to what extent the training helped youth to get employment. Accordingly, majority of youth (60%) who took training on livestock production reported that they self employment due to the training. In addition significant number youth got employment Hair dressing and wood/metal because of the training they received.

Table 88: Percentage of youth who reported that got employment due to the training support by the project

Indicators	Sex of youth						Region											
	Male			Female			Amhara			SNNPR-Hadiya			SNNPR-Sidama&Gedio			All		
	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N	%	n	N
Cobble stone and stone concrete paving activities	17.6	6	34	22	2	9	21.7	5	23	50	1	2	11	2	18	18.6	8	43
Garment or Tailor activities	29.7	11	37	38.5	5	13	41.9	13	31	0	0	1	16.7	3	18	32	16	50

Information and communication technology activities	3.7	1	27	40	4	10	19	4	21	0	0	2	7.1	1	14	13.5	5	37
Food preparation or catering	0	0	29	60	12	20	28.0	5	24	71.4	5	7	11	2	18	24.5	12	49
Hair dressing or barbering activities	18.8	6	32	54.5	12	22	33.3	10	30	80	4	5	21	4	19	33.3	18	54
Livestock production (sheep, cattle) activity	61.9	26	42	55.6	10	18	52.8	19	36	75	6	8	68.8	11	16	60	36	60
Wood or metal work activity	35.6	16	45	12.5	1	8	41.9	13	31	50	2	4	11	2	18	32	17	53
Automotive activities	14.3	4	28	12.5	1	3	13.6	3	22	0.0	00	1.0	15.4	2	13	13.9	5	36
Mobile Maintenance activities	24	7	29	0	0	8	25	5	20	50	1	2	6.7	1	15	18.9	7	37

Table 89 outlines youth's annual income of those who have successfully managed to find employment. According to the table below, male youth appear to earn a higher income than their female counterparts, which was shown to be statistically significant. As shown in the table below, the youth in Amhara & Hadiya earned higher income than those Sidama & Gedeo.

Table 89: Total number youth's annual income from various sources (ETB)

Region	Male		Female			
	Value in ETB	N	Value in ETB	N	Value in ETB	N
Amhara	8601.00	133	4221.00	68	7269.85	201
SNNPR-Hadiya	9276.67	133	4166.67	68	7360	201
SNNPR-Sidama/Gedeo	5777	133	2576	68	4485	201
All	8019	133	3706	68	6560	201

Further disaggregation of youth income by source type was carried out and the result is presented in table 90 below. Accordingly, youth in SNNPR-Hadiya and Sidama & Gedeo earned their highest income from self-employment -non-farm activities, whereas crop & livestock production was main source of income for youth in Amhara.

Table 90: Annual youth income disaggregated by source (ETB)

Indicators	Sex of youth				Region						Total	
	Male		Female		Amhara		SNNPR-Hadiya		SNNPR-Sidama & Gedeo			
	Value in ETB	N	Value in ETB	N	Value in ETB	N	Value in ETB	N	Value in ETB	N	Vale in ETB	N
Self-employment (non-farm activity-petty)	5569	133	2735	68	4667	42	5038	12	4005	43	4424	201

trade, barbershop etc)												
self-employment - crop and livestock production	15193	133	5405	68	19921	10	1733	6	3331	13	13154	201
Seasonal/casual wage laborer	3075	133	11479	68	5136	6	5200	10	1967	9	4402	201
Permanent employment	4785	133	2463	68	414	8	3843	14	0.00	0	3900	201

Annexes

Annex 1. Technical note on adoption of WEAI indicators for IR assessment

The Women Empowerment in Agricultural Index (WEAI) was developed to track the change in women’s empowerment levels that occurs as a direct or indirect result of interventions under Feed the Future. The Index will be used for performance monitoring and impact evaluations of Feed the Future programs. The WEAI is also a useful tool for policymakers, development organizations, and academics seeking to inform efforts to increase women’s empowerment.

The Women’s Empowerment in Agriculture Index is an innovative new tool composed of two sub-indexes: one measures the five domains of empowerment for women (5DE), and the other measures gender parity in empowerment within the household. It is an aggregate index reported at the country or regional level that is based on individual-level data on men and women within the same households.

Five domains of empowerment (5DE): This sub-index assesses whether women are empowered across the five domains examined in the WEAI. For the women who are disempowered, it also shows the percentage of domains in which they meet the required threshold and thus experience “sufficiency.” The 5DE sub-index captures women’s empowerment within their households and communities. The five domains are production, Resource, Income, leadership and Time.

The formula to calculate the sub-index on 5DE is,

$$5DE = H_e + H_n(A_a)$$

Where,

5DE is a sub-index based on the five domains of empowerment

H_e is percentage of women who are empowered

H_n is percentage of women who are not empowered

A_a is percentage of dimensions in which disempowered women have adequate achievement

Table 1. WEAI domains indicators and their definitions

Domain	Domain Indicators	Definition /criteria of indicators
Production	Input in production decisions	This indicator measures the extent to which women can influence households’ decisions focusing on agriculture productions, including major household expenditure. The women are considered adequate on input in productive decisions if there are at least two types of decisions in which they have some input in decisions, makes the decision, or feels she could make it to a medium extent if she wanted to.
	Autonomy in production	The Relative Autonomy Indicator (RAI) measures the ability of a person to act on what he or she values, to have his or her own intrinsic motivations prevail over motivations to please others or avoid punishment, for example. This indicator probes the person’s own understanding of the situation and enables the respondent to easily explain the different motivations that influence activities (Alkire 2007)If the motivation related to the person’s own values is relatively stronger than the

		motivations related to coercion or trying to please others, then the person has adequacy in autonomy.
Resource	Ownership of assets	The ownership indicator examines whether an individual has sole or joint asset ownership of land and other productive assets, based on a comprehensive list of asset types (see survey module).According to this indicator, a women is considered adequately empowered on ownership if she reports having sole or joint ownership of any of the items, conditional on the household’s owning those assets Furthermore, for the individual to be considered adequate in this domain, ownership cannot be limited to one minor asset only (poultry, non-mechanized equipment, or small consumer durables).
	Purchase, sale or transfer of assets	A person has adequacy in this area if the household owns any of those assets and if he or she participates in decisions to buy, sell, or transfer the asset, conditional on the household’s owning it. Although the ownership indicator covers all types of assets, this indicator refers only to agricultural productive assets, namely, agricultural land; large livestock; small livestock; chickens, ducks, turkeys, and pigeons; fish ponds or fishing equipment; non-mechanized farm equipment; and mechanized farm equipment
	Access to and decisions on credit	This indicator examines decision making about credit: whether to obtain credit and how to use the credit obtained from various sources. To have adequacy in this indicator, a woman must belong to a household that has used a source of credit in the past year and must have participated in at least one decision about it. Women who live in households that do not use any source of credit are considered inadequate on access to credit and hence are assigned the value 0 for this indicator
Income	Control over use of income	The indicator assesses the level of women’s influence and participation in decision pertained to household income and expenditure. A woman considered adequately empowered on control over use income if she has at least some inputs in decision on at least one income generating activity of the households and if she feels she could participate in the decision making related to that activity at least to a medium extent.
Leadership	Group member	Recognizing the value of social capital as a resource, this shows whether the person is an active member of at least one formal or informal group, including VESA. A woman is considered adequately empowered if she is an active member of at least one group
	Speaking in public	The indicator for whether the individual is comfortable speaking up in public is constructed based on responses to questions regarding the individual’s ease in speaking up in public for three reasons: (1) to help decide on infrastructure (such as small wells, roads) to be built, (2) to ensure proper payment of wages for public work or other similar programs, and (3) to protest the misbehavior of authorities or elected officials. For each of the three reasons, an indicator of the individual’s comfort in speaking for that specific reason was created. The three reason-specific indicators are aggregated into the indicator “speaking in public.” The respondent is considered adequate in speaking in public if he or she is comfortable speaking in public for at least one of the three reasons listed above
Time	workload	The productive and domestic workload is derived from a detailed 24-hour time allocation module in which respondents are asked to recall the time spent on primary and secondary activities in the 24 hours prior to the interview, starting at 4:00 a.m. on the day before the interview. The amount of hours worked is defined

		as the sum of the time the individual reported spending on work-related tasks as the primary activity plus 50 percent of the time she or he reported spending on work-related tasks as the secondary activity. The individual is defined as adequate on workload if the number of hours he or she worked per day was less than the time poverty line of 10.5 hours in the previous 24 hours. This cut-off was based on a methodology similar to that of Bardasi and Wodon (2006), who used a lower threshold equal to 1.5 times the median of the total individual working hours distribution and a higher threshold equal to 2 times the median, which was equivalent to 10.07 hours per day and 13.4 hours per day for the lower and the higher thresholds, respectively, using data from Guinea.
	Leisure	Respondents were asked to rank their level of satisfaction with the time available for leisure activities such as visiting neighbors, watching TV, listening to the radio, seeing movies, or doing sports from 1 = not satisfied to 10 = very satisfied . The indicator “leisure time” considers the respondent adequate if he or she ranks his or her level of satisfaction equal to or higher than 5, which means he or she is indifferent to or satisfied with the time available for leisure

Gender parity index (GPI): This sub-index reflects the percentage of women who are as empowered as the men in their households. For those households that have not achieved gender parity, the GPI sub-index shows the gap that needs to be closed for women to reach the same level of empowerment as men. Using a survey method that goes beyond the traditional practice of interviewing only a household “head” (often a male) to interview both a principal male and a principal female.

The formula to calculate the sub-index on 5DE is,

$$GPI = 1 - H_w(R_p)$$

Where,

- GPI is Gender parity index (GPI)
- H_w is percentage of women without gender parity
- R_p is average empowerment gap between women compared with men in their household

Women Empowerment in Agriculture Index (WEAI) is thus an aggregate index that shows the degree to which women are empowered in their households and communities and the degree of inequality between women and men within the household. Therefore, progress toward empowering women in agriculture will be achieved by empowering them in the five domains and achieving gender parity within the household.

The formula for calculating WEAI is

$$WEAI = 0.9 (5DE) + 0.1 (GPI)$$

Or

$$WEAI = 0.9 \{H_e + H_n(A_a)\} + \{1 - H_w(R_p)\}$$

The Y3 IR assessment adopted few indicators that are used to synthesis index on Five Domain Empowerments (5DE). However, it did not compute the overall index on 5DEs, rather it compute the percentage of women who achieved adequate empowerment based on individual indicators selected. Nevertheless, IR assessment adopted the entire WEAI criteria to decide whether a women achieved empowerment or not based a specific indicator. As IR assessment neither involve calculation of GPI nor

WEAI, only women in male-headed households were asked a questions pertained to selected indicators. The comparison between WEAI and IR indicators is summarized in the table below.

Comparison of WEAI and IR indicators

Domain	Indicators in WEAI	Indicators adopted in IR assessment
Production	Input in production decisions	Input in production decisions
	Autonomy in production	
Resource	Ownership of assets	Ownership of assets
	Purchase, sale or transfer of assets	Access to and decisions on credit
	Access to and decisions on credit	
Income	Control over use of income	Control over use of income
Leadership	Group member	Group member
	Speaking in public	
Time	workload	
	Leisure	

