Impact Evaluation Endline Study of UNDP Zimbabwe Resilience Building Fund Programme

Final Evaluation Report

21 December 2022

development solutions

Acknowledgements

The evaluation team is grateful for the tremendous support, technical inputs, and overall direction provided by UNDP Zimbabwe (The ZRBF PMU). The team acknowledges the significant contributions of the GOZ through the Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (MLAFWRD) for supporting the execution of this assessment. We further acknowledge the inputs provided by numerous other stakeholders, including funding partners; The European Union (EU), The Embassy of Sweden (SIDA), The United Nations Development Programme (UNDP), and the Foreign, Commonwealth & Development Office (FCDO); consortia partners who generously contributed to this process. We are grateful for the team of research assistants who collected the data we used in this evaluation.

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Abbreviations

BRACT	Building Resilience through improving the Absorptive and Adaptive Capacity for Transformation
CoBRA	Community-Based Resilience Analysis
COVID-19	Corona Virus Identified in 2019
DFID	Department For International Development
DID	Difference-in-Difference
ECRAS	Enhancing Community Resilience & Sustainability
ECRIMS	Enhancing Community Resilience and Inclusive Market Systems
ER	Evaluation Report
EU	European Union
FCDO	Foreign, Commonwealth and Development Office
FCS	Food Consumption Score
FCSI	Food Coping Strategy Index
FGD	Focus Group Discussions
GoZ	Government of Zimbabwe
HHS	Household Hunger Scale
IDs	Household Identification Numbers
KII	Key Informant Interviews
LCSI	Livelihood Coping Strategy Index
MELANA	Matabeleland Enhanced Livelihoods, Agriculture and Nutrition Adaptation
MLAFWRD	Ministry of Lands, Agriculture, Fisheries, Water and Rural Development
OMS	Outcome Monitoring Survey
PMU	Programme Management Unit
PROGRESS	Program for Growth and Resilience
RCI	Resilience Capacity Index
RCT	Randomized Controlled Trial
RKH	Resilience Knowledge Hub
SIDA	Swedish International Development Cooperation Agency
SIZIMELE	Sizimele Action for Building Resilience in Zimbabwe
SLF	Sustainable livelihoods framework
SPSS	Statistical Package for the Social Sciences
ToC	Theory of change
UNDP	United Nations Development Fund
VFM	Value for Money
WHO	World Health Organisation
ZimVAC	Zimbabwe Vulnerability Assessment Committee
ZRBF	Zimbabwe Resilience Building Fund
ZRBF PMU	Zimbabwe Resilience Building Fund Programme Management Unit
ZVA	Zambezi Valley Alliance for Building Community

Executive Summary

The impact evaluation endline study (**the evaluation**) of the Zimbabwe Resilience Building Fund (ZRBF) program was commissioned by the Ministry of Lands, Agriculture, Fisheries, Water, and Rural Development (MLAFWRD) and the United Nations Development Programme (UNDP).

The evaluation covers the period from January 2015 to September 2022 and its purpose is to assess the endline status of key indicators; to understand what works in resilience programming in Zimbabwe, how, and why; and to do this by achieving five interrelated objectives:[1]

- Conduct a robust final impact evaluation for the ZRBF programme.
- Test the program and projects Theory of Change (ToC) through quasi-experimental or experimental methods to determine its validity in light of contributory evidence related to impact on resilience outcomes at community, household, and individual levels.
- Investigate the relationships between household outcomes, shock exposure, and resilience capacities in communities targeted by the ZRBF and selected projects.
- Assess the use of evidence generated by the programme under component 1, which is expected to be used to improve resilience programming and inform policy-making within Zimbabwe.
- Assess the extent to which component 3 (crisis modifier) has enabled response to humanitarian shocks and protection of development gains.

The findings will inform future program design and implementation of resilience-building activities. The primary users of the evaluation will be UNDP and its development partners: European Union (EU), Foreign, Commonwealth and Development Office (FCDO) and Swedish International Development Cooperation Agency (SIDA), the ZRBF implementing partners, the Government of Zimbabwe, and the grantee recipients.

Description of the ZRBF programme

The ZRBF is a 5-year government-integrated resilience programme implemented by the MLAWRD and the UNDP. ZRBF is implemented in 18 districts experiencing chronic food insecurity due to recurring climatic shocks and underlying poverty.

With support from the UNDP Programme Management Unit (PMU), the ZRBF is implemented through seven consortia led by: Christian Aid, Care International, International Rescue Committee (IRC), Dan Church Aid (DCA), Welthungerhilfe, and ActionAid International. The Resilience Knowledge Hub (RKH) led by Mercy Corps works with consortia members to support the building of resilience capacities and nurture professional and social capital across all stakeholders.

The overall objective of the ZRBF is to contribute to the increased capacities of communities to protect development gains and achieve improved well-being outcomes in the face of shocks and stresses enabling them to contribute to the economic growth of Zimbabwe. A core focus of ZRBF is to build the resilience of individuals, households, communities and systems.

The ZRBF is comprised of three components:

[1] Syntax slightly adapted.

1*:* Increase effective evidence-based institutional, legislative and policy frameworks in place at national and sub-national levels for resilience. The component focuses on capacity building and the generation of evidence and ensures its utilization in policy and programming decisions.

2: Increase the absorptive, adaptive, and transformative capacities (by supporting a combination of interventions) to face shocks and the effects of climate change for approximately 830, 000 people, in vulnerable communities frequently exposed to multiple hazards.

3: Crisis Modifier is an innovative approach to responding to development challenges, including Climate Change and Natural /socio-economic Disasters, during long-term development programmes to protect developmental gains. A crisis modifier provides early warning, and early action to reduce the impact of climate-induced shocks for the fund in ZRBF programme areas.

Methodology

The evaluation relied on multiple methodological approaches using a mixed-method design which integrated social science disciplines that use quantitative and qualitative approaches to theory, data collection, data analysis, and interpretation – harnessing 'The Rashomon Effect' to ensure robust, valid, and structured triangulation of evidence.

Evaluation approach

The evaluation adopted a quasi-experimental design that aimed to quantify the contribution of the ZRBF to observed outcomes. The baseline survey matched treatment (ZRBF beneficiaries) and control (non-beneficiaries of ZRBF) – enabling endline difference-in-difference (DiD) statistical analysis of outcome and impact performance based on longitudinal panel data.

The ZRBF program conducted three annual Outcome Monitoring Survey (OMS) rounds to track the performance of the program on key outcomes. The OMS rounds used a different sample panel than those used at baseline and did not include a comparator. Because of these differences in methodology, the dataset from this longitudinal panel study could not be matched with the baseline sample panel. As a result, the evaluation limited use of OMS for cross-sectional comparison of results with the endline; it is a key source of data that was used in triangulation.

To measure these four factors and calculate the Resilience Capacity Index (RCI) the baseline used an adapted version of the Food and Agriculture Organization's (FAO) Resilience Index Measurement and Analysis – II4 (RIMA–II) methodology. The RCI was used to measure the outcome indicator 1: number of women and men whose resilience has been improved as a result of ZRBF support. Data for calculating the RCI was generated from the household questionnaire.

In designing the endline study, the evaluation recognized the diversity that exists in societies on gender, age, disability status, ethnicity, religion, resource accessibility, and other social identifiers. Further, the evaluation sought to investigate and report on how these differences produced access and entitlement to resources and assets that increase resilience to shocks and stressors.

Data collection methods and analysis

The evaluation used quantitative and qualitative data collection techniques.

Quantitative component: The quantitative assessment adopted a blended approach: (1) quasi-experimental longitudinal design to track progress and project performance between the baseline and

endline surveys; (2) cross-sectional comparative assessment of control and treatment at endline; and (3) cross-sectional comparative assessment of the OMS and the endline survey.

For the quasi-experimental longitudinal design element, only treatment and control-matched cases were followed through during this study. The primary sampling unit was the household. Data was collected from a total of 3,379 households – of these, 1,941 (57%) were ZRBF beneficiaries and 1,438 (43%) non-beneficiaries.

Quantitative data from both primary and secondary data sources were analyzed using STATA and SPSS. Quantitative data collected using mobile devices were converted to STATA.dta format for cleaning and analysis purposes. A total of 5 datasets: baseline, OMS1, OMS 2, OMS 3, and endline were analyzed. OMS datasets were analyzed independently. Crosstabulations, association tests, regression analysis, and difference-in-difference analyses were performed.

Qualitative component: In addition to using the design adopted at baseline, the endline used the **Community Based Resilience Analysis** (CoBRA) approach. CoBRA provided specific advantages of combining several resilience approaches, allowing for multi-dimensional resilience analysis using community-based measures of resilience (which complemented the quantitative approach to resilience measurement). CoBRA enabled analysis of contributions of the ZRBF and its projects to identified resilience outcomes.

Qualitative methods included Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs). FGDs were conducted with randomly selected households from the target communities participating in ZRBF consortiums.

At least two households identified by communities during FGDs as partially or fully resilient were included in the KIIs at the community level. Interviews with resilient households aimed to understand their **unique pathway to resilience** and factors that enhanced resilience capacities.

The CoBRA methodology was complemented by additional KIIs with ZRBF partners, governmental stakeholders, and community leaders (as layers of triangulation and validation of project effects on resilience capacities – as well as explaining the unique paths to resilience of ZRBF beneficiaries.

All data collected from KIIs and FGDs was entered into standard excel spreadsheet formats for compilation, aggregation, and analysis. We systematically used open, axial, and thematic coding steps to usefully orgainize the evidence to respond to the needs of the evaluation's lines of inquery and questions regarding the contribution of the ZRBF to impact-level results.

Limitations of the evaluation

During implementation, the program adopted a high and medium-intensity implementation approach. The sample for the baseline did not make this distinction and it was difficult to do so for the endline. Thus, the impact of ZRBF may be understated for areas where the high intensity approach was implemented. The evaluation is also unable to make a comparative analysis of the impact of ZRBF between these two approaches to implementation.

The baseline study data was collected in January and February 2018 while the endline survey was conducted during the period from June to August 2022. This will lead to understating of the actual impact of ZRBF on food security indicators. Given that the treatment and control groups are exposed to the same conditions (interview at the same time) this is likely to offset any effect on the internal validity of results. The baseline and OMS used different approaches to measuring the resilience capacity index. The baseline used an adapted version of the Food and Agriculture Organization's (FAO)

Resilience Index Measurement and Analysis – II4 (RIMA–II) methodology. While the baseline-endline and OMS studies used two different approaches to measure resilience, these were complimentary and the findings are consistent.

Findings

Objective 1: Assess the impact of ZRBF interventions on community, household and individual resilience

Key highlights: ZRBF interventions increased the resilience capacity of households and individuals. On aggregate, a majority of households among ZRBF beneficiaries experienced increased resilience, a trend observed throughout the monitoring rounds in the project. The Resilience index among beneficiary households increased by 30% from baseline compared to a negligible 0.3% for control households.

There was no difference in resilience capacity by age; however, male-headed households had higher resilience capacity compared to female-headed households – attributed to a difference in **asset capacity utilisation**. Developing a deeper understanding this difference may help to come up with gender-responsive strategies that increase equity and resilience capacity building.

Programmatically, ZRBF interventions supported asset accumulation, diversification of livelihoods, commercialisation of productivity, market development, improved extension services, and access to early warning information systems – all with the effect of increasing absorptive and adaptive capacities. Transformative capacities were undermined by several contextual factors including economic stressors such as currency depreciation and high inflation – resulting in declining capacity among households.

The growth in resilience capacity is commendable and the absorptive and adaptive capacity build sustainability. However, the prolonged impact of economic shocks may reverse the sustainability of the observed changes requiring further investments in transformative capacities while strengthening absorptive and adaptive capacities**.**

Impact of ZRBF on resilience: The difference-in-difference analysis of the impact of ZRBF on resilience capacity shows that the programme had a contribution of 27 more units to the resilience capacity of beneficiary households with respect to non-beneficiary households; this represents about 23% of observed resilient capacity among beneficiary households.

Individual components (absorptive, adaptive and transformative capacities) that make up the resilience index also show a significant improvement between baseline and endline. About 85% of ZRBF beneficiary households had improved resilience compared to 62% (p= 0.0000) among the control group. Using the total population of beneficiaries (1,114,532 people), ZRBF managed to increase resilience for 945,458 individuals. This represents an 11% overachievement on the target of 830,000 individuals. Resilience capacity has also been increasing as the programme matures.
The number of households with improved resilience also more than doubled from the first OMS round to the endline. This trend may demonstrate the effectiveness of the gradual layering approach of the programme; as more interventions are added and mature, the resilience of beneficiaries increases.

A higher proportion of male-headed vs. female-headed households had improved resilience. ZRBF managed to increase youth resilience with 83% of youth-led households in ZRBF having improved their resilience capacity. Compared to the middle-aged and elderly, the youth-headed households participating in the ZRBF had lower chances mainly because of their mobility, and the appropriateness

of interventions. Qualitative findings show youth interest in entrepreneurship, and vocational skills across all five districts visited. While the ZRBF did invest in entrepreneurship, there was an opinion among the youth that the interventions in many cases were biased towards agriculture, meaning **beneficiaries needed to own productive assets such as land**. The baseline survey showed that youth were less likely to own these assets.

Resilience Components: Evidence from the quantitative and qualitative survey shows large and significant positive shifts among ZRBF beneficiaries in the adaptive and absorptive capacities. ZRBF interventions supported asset accumulation, diversification of livelihoods, commercialisation of productivity, market development, improved extension services, access to early warning information systems, etc. – all with the effect of increasing these two capacities.

Multiple livelihood options (that include on and off-farm enterprises), asset accumulation, and good water and sanitation access were observed by communities as the most important household resilience characteristics across the five districts visited. In general, resilient households in the five districts of the qualitative survey had multiple sources of livelihood (usually including livestock production), used inputs and climate-smart agriculture techniques, practised some form of irrigated farming, and had off-farm sources of income. In all districts except Mberengwa, they had received some humanitarian support in their life course.

The ZRBF made a significant investment in transformative capacities through support of legislation, strategy documents, and policy work. The rehabilitation and construction of infrastructure intended to build adaptive capacities also created an enabling environment for implementation of policy strategies (such as the provision of threshers to facilitate production and processing of small grains – promoted through the small grain commercialization strategy) which helped to strengthen community resilience.

However, transformative capacities were undermined by the unstable economic environment and high inflation which constrained the effectiveness of formal market linkages and led to limited investment in basic services (water, health, education) and rural infrastructure (e.g., roads, dams, dip tanks etc.) by the government.

At the project level, ZVA resilience index data shows the largest impact contribution – 50% or 47 units on the observed resilience index. While the ZVA project has the largest contribution to resilience among beneficiaries it has the least proportion of beneficiaries that have improved resilience (84%). In contrast, ECRIMS makes a 32% (or 41 points) difference to the resilience capacity of beneficiary households and does so for 97% of their beneficiaries (while also covering a larger number of beneficiary households).

Results also show that location influences the efficacy of ZRBF interventions. Remoteness introduces operational challenges that undermine the use of ZRBF interventions.
In ZVA implementing areas, the major issues were to do with its remoteness, lack of other supportive infrastructures such as roads and high dependence on humanitarian assistance that is almost guaranteed annually. Human-wildlife conflict is very high and significant, food insecurity was very prevalent. This analysis speaks to the importance of supporting local-level resource allocation by local government; supporting household mental preparedness to change their lives – the role of exchange visits, greater coordination between humanitarian actions, and resilience programmes to ensure the latter does not undermine the shift to building livelihood systems.

Coping capacities**:** ZRBF households showed better coping capacities than non ZRBF households. Less treatment than control households were employing negative coping strategies to meet their food gap

(medium and high coping). The difference between the two groups is not significant (p=0.8557). Nonetheless coping capacity has improved for treatment groups with the proportion of households using medium to high coping strategies declining by about 50% (72% at baseline and 39% at endline). Youth-headed households cope better than other age groups. Women-headed households are slightly more likely to use negative coping strategies than their male counterparts. At the project level, ECRIMS had the highest proportion of households with low coping strategies (that is, not adopting pervasive coping strategies for food deficit) and had no households taking on crisis-level coping strategies. ZVA at 48% has the least proportion of households that use low coping strategies. About 10% of the beneficiaries of ZVA were employing extreme coping strategies that may be very difficult for them to reverse.

Food security: ZRBF managed to protect the food consumption of households. While food consumption worsened in control households between baseline and endline (those with acceptable consumption declining from 53% to 46%), more treatment households improved their food consumption (47% at baseline to 52% at endline). While the difference between control and treatment is significant, attribution analysis using the DiD approach shows that ZRBF has made a small contribution of 0.78% or 0.313 units to the average Food Consumption Score (FCS) for beneficiary households. This contribution is not statistically significant.

At the project level, consortia made small contributions to food consumption ranging from 0.18% (SIZIMELE) to 6.02% (ZVA). However, no ZRBF project has been able to make a significant difference in the food consumption score.

The Household Hunger Scale (HHS) – a measure of household food security – shows ZRBF contribution to improved food security. At the project level, the results show that two to three times more beneficiaries of ZVA are likely to face moderate to severe hunger when compared to other ZRBF projects. The difference-in-difference analysis shows that ZRBF increased by 6.4% the number of households that are in the little or no hunger group. This change is highly significant demonstrating that this would not have been achieved without ZRBF support. At the project level, PROGRESS with a 13% contribution (p=0.000), has the highest contribution to HHS. MELANA (0.092 units; p=0.005) and ZVA (0.093; p=0.023) have an almost similar contribution, while SIZIMELE had no significant contribution to the HHS (p=0.324). ZRBF, therefore, does contribute to reducing the worst forms of food insecurity. More control (25%) than treatment (23%) households are food insecure showing that the programme is reducing the prevalence of food insecurity in programme areas.

Nutrition**:** The results show that while food consumption is improving it is not translating to significant shifts in dietary diversity. Treatment households had high dietary diversity than those in the control group, however, the difference is not significant (p=0.1728). While this is the case at the endline, OMS rounds 1 to 3 show the proportion of households with acceptable dietary diversity increased between each round – from 73% in OMS1 to 83% in OMS3.
The ZRBF programme engaged UNICEF in 2019 to strengthen the nutrition integration component in community resilience building. This may have contributed to improvements in nutrition-sensitive programming. However, the nutrition focus of the programme needs to be enhanced by making it an integral part of programme performance reporting.

Achievements at the output level: Despite not achieving the ambitious target on income of $130 the programme almost doubled the monthly income of households from US$54 at baseline to US$103 at the endline. This indicator also showed a progressing increase during the programme implementation as documented in the OMS rounds from US$65.50 (OMS1), US$67.30 (OMS2) and US$118 (OMS3). Access to formal financial services was low in the programme. Formal financial services were limited and inaccessible with beneficiaries facing several barriers to accessing them as noted in the OMS

rounds 2 and 3. The informal savings group promoted by the project provided the programme with the best opportunity to increase this indicator. However, the uptake of programme investments in formal financial services was low and varied between projects due to the prevailing economic conditions and is an area for strengthening in a future programme.

Objective 2: Test the program and projects Theory of Change (ToC) through quasi-experimental or experimental methods to determine their impact on resilience outcomes at the community, household and individual levels

Key highlights: The evaluation found that ZRBF interventions are strategic in the resilience-building pathway; evidence shows that value-added practices and value chain strengthening had the highest contribution, followed by improved crop practices, improved livestock practices, and improved water and soil practices. In addition, improved livestock, water, and soil management practices were more likely to improve households' ability to prepare for – and mitigate – shocks.

A sequenced and layered approach is best suited to deliver better household outcomes (resilience capacity, capacity to mitigate effects of shocks, recovery from drought, etc.). This was confirmed by the OMS round 3 and both end-line quantitative and qualitative studies. The more interventions a household participated in, the more income and expenditure they would likely experience. The implementation of activities in isolation is likely to produce less impact (especially of a transformative nature).

When resilience increases, households are less likely to engage in crisis (low cost) and emergency coping strategies (this finding is statistically significant at a 99% confidence interval). The influence is particularly large for use of emergency-related coping strategies which are also known as medium-cost coping strategies where a one-unit change in resilience leads to 23 units decline in the use of emergency coping strategies. A unit change in the resilience index results in about 11 units in the use of stress-related coping strategies which are reversible in the short term.

Contributions of interventions: Value-added practices and value chain practices have the highest contribution to resilience. A unit change in value-added practices and value chain practices leads to approximately 7 units (significant at 99%) and 5 units (significant at 95%) change to the resilience index respectively. Similarly, a unit change in improved crop practices yields approximately 4 units of change in the resilience index. A unit change in improved livestock practices leads to about 2 units change (significant at 95%) in the resilience index and is statistically significant at 99%. Improved water and soil practices have an insignificant contribution to resilience capacity.

Improvements in the CSA practices are likely to improve the food security situation of households by a small margin of about 0.1%. However, their contribution is not statistically significant.

A sequenced and layered approach is best suited to deliver better household outcomes (resilience capacity, capacity to mitigate effects of shocks, recovery from drought etc.). Households participating in at least three activities (small grains, livestock, water infrastructure, value chain activities, and collective action) were less likely to face moderate to severe food insecurity and were likely to increase their resilience capacity. The programme progressively layered interventions (gradually increasing the number of households involved in three or more activities). However, the layering was varied across projects. High layering in ECRIMS (94% of households in three or more activities) can explain its better performance across key outcomes.

The resilience pathway as envisaged by ZRBF is strong. However, the links are affected by the strength of different stages along the pathway. This is influenced by the targeting approach, contribution of

resilience capacity components to the observed adaptive and absorptive capacities, and the idiosyncrasies of the livelihood zone in which each ZRBF household is located.

Qualitative data from key informant interviews with community-identified resilient households benefiting from ZRBF was also analysed to determine which interventions of ZRBF were contributing the most to resilience and how. In general, interventions focused on building adaptive capacities were viewed as the most effective. However, it is important to note that while market linkages were not prominent, the fact that resilient households were finding markets for promoted value chains may point to the **importance of market development**, a transformative capacity.

Objective 3: Investigate the relationships between household, shock exposure, and resilience capacities in the ZRBF and selected projects

Key highlights: Covariate shocks were more common than idiosyncratic shocks. Households over the course of the implementation period have faced multiple shocks with high severity. The most common covariate shocks included: dry spells, increase in food prices, crop diseases/pests, and livestock damage/death from wildlife.

Shock recovery: Over 40% of ZRBF beneficiaries experienced a severe decline in income and food consumption as a result of the main shocks with food price increases leading to the largest proportion of households that experienced a severe decline. Significant differences between control and treatment groups only exist for crop diseases and pests and increases in food prices. Despite this context, the proportion of households within ZRBF who perceived having fully recovered was high and increased during the programme implementation and at the endline.

Coping strategy analysis revealed a high number of ZRBF beneficiaries at the endline (32%) that use detrimental livelihood coping strategies (emergency and crisis). This may point to waning resilience capacity and ability to recover from shocks as a result of more frequent and overlaid shocks. The early onset of severe shocks (drought, COVID-19, livestock diseases, crop diseases, etc.) in the programme implementation may have slowed the intervention's affect on resilience.

Communities appreciated the **huge benefits** which were brought about by the **acaricide model**[2] in terms of curbing livestock diseases and both the qualitative and quantitative data showed that the model was a positive contributor to resilience building as it did not only save the lives of livestock but also assisted in improving both the herd size and quality.
Relationship between shock exposure, coping strategies, resilience and food security: The evaluation undertook a series of correlation analyses focusing on the effects of shocks on coping strategies and various coping strategies on resilience capacities and food insecurity. The results show a high correlation (99% confidence interval) **across all outcomes**.

The use of emergency coping strategies was associated with declining absorptive capacity (shown elsewhere in the report as important for resilience building). The use of crisis livelihood coping strategies is associated with decreasing adaptive resilience capacity by 1.62 times more than those using stress-related strategies. The likelihood of households using stress-related coping strategies to reduce adaptive capacities is less than emergency and crisis by a factor of 13 and 7 respectively. Furthermore, the use of any coping strategies increases the food insecurity experience of households although this is more than double for those using emergency strategies. When the relationship between total shocks and livelihood coping strategies is considered, the more shocks the more likely households will employ emergency and crisis-related coping mechanisms. There is no relationship

[2] Acaricides are pesticides that kill members of the arachnid subclass Acari, which includes ticks and mites.

with the use of stress coping strategies. **The exposure of households to multiple shocks during the period of programme implementation may have slowed down or reversed resilience capacity building for some households.**

Objective 4: Assess the use of evidence generated by the program under component 1, which is expected to be used to both improve resilience programming as well as inform policy-making within Zimbabwe

Key highlights: The ZRBF has developed knowledge products on resilience that have been used in policy and programmatic decisions. Among the policy achievements realized were by-laws for 3 districts (Binga, Kariba and Mbire) and influence in the Tick Borne disease Control Strategy policy document. However, perceptions from donors and partners is that progress in influencing policy development on resilience programming has been slower than expected as in the case of finalization and approval of the Traditional grain commercialization policy strategy document;. Policy adoption takes time; the process took two years, yet the original plan was to complete this within a year. Notwithstanding the policy achievements, there is an opportunity for partners to engage and influence decision-makers at various levels of government. Given the initial work and achievements on policy, there is need for ZRBF to have a clearly defined way of measuring the use of its evidence in policy and programing influence. There should be a systematic way to measure the use and utilization of ZRBF evidence in policy and programing influence.

Research into use: Through ZRBF capacity-building efforts on the conceptualization of resilience pathway models (including the implementation of layered activities and monitoring), there are notable examples of contributions to the development of strategic policy documents (e.g. small grains strategy) and informed programmatic decisions (e.g. the Crisis Modifier activation was based on evidence from HFMS).

The promotion of small grains is widespread in the low-rainfall districts of the ZRBF and has achieved significant results. The component supported the generation of evidence necessary to improve the policy environment and guide resilience programming and service provision to enhance household and community resilience in Zimbabwe.

The ZRBF program generated significant data and produced with more than 40 analytical papers and technical notes available and used to inform policy and programming decisions. The barrier analysis study of the small grain value chain in Zimbabwe informed the Small Grain Strategy Document. In addition, the ZRBF adaptive programming and Crisis Modifier activation were based on evidence generated through analytical studies and High Frequency Monitoring System (HFMS).
This **strong knowledge base** created by ZRBF provided greater opportunities to influence future systemic change and policy work and resilience programming in the country. Through ZRBF support, the Government has adopted the High-Frequency Monitoring System (HFMS), which was highly praised by all stakeholders consulted. Informants from the MLAWRD confirmed that the government is now **upscaling high-frequency monitoring**.

ZRBF supported the strengthening of resilience analysis and measurement in the national rural vulnerability assessment (ZimVAC), Department for Civil Proteciton (DCP) Sendai Framework reporting (as part of capacity building on evidence generation to improve the policy environment), and supported the MLAFWRD Agriculture Information Management System (AIMS) one-stop shop.

Further, several hazard maps were developed and/or updated at both national and subnational levels. Participatory monitoring, evaluation, and learning frameworks were established and operationalized. To support the implementation of ZRBF resilience projects, the ZRBF supported the consortia and

partners in coming up with a common conceptualization of what a resilience approach requires (i.e., activities expected to build the capacity of individuals, households, and communities to minimize exposure to future shocks and stresses, support their recovery when exposed, and to enable adaptation to changing conditions). There are more examples of programmatic influence than of policy influence.

Objective 5: Assess the extent to which the component 3 crisis modifier has been able to respond to humanitarian shocks and protect development gains

Key highlights: The Crisis Modifier (CM) interventions implemented by various consortia helped minimize disruption to resilience gains. The ZRBF-benefitting households generally enjoyed more benefits from the crisis modifier mechanism as compared to the control households since this approach facilitated them in protecting the development gains. The programme technical support and ZRBF high-frequency monitoring system were effective sources of information on shocks and stresses for guiding the Crisis Modifier decision process.

The ZRBF crisis modifier was **activated 7 times** since 2017. Crisis modifier 1 to crisis modifier 5 were activated mainly to cushion households from the effects of consecutive droughts which had turned out to be frequent and recurrent shocks. Crisis Modifier 6 was activated by ECRAS to respond to the locust outbreak in Chiredzi and Mwenezi to protect the crop from locusts and prevent food shortages for 7,000 households; flood response in Matobo to replace 15 houses destroyed by a cyclone. The latest crisis modifier 7 was activated to respond to the effects of Cyclone Ana and incessant rains in 10 ZRBF districts – to replace destroyed houses, roads, and productive infrastructure around March to June 2022 (just before the impact evaluation assessment). The Crisis Modifier Mechanism managed to cover a cumulative total of 2,983,636 beneficiaries (at US$4.90 per beneficiary) between March 2017 and June 2022.

Activation of the Crisis Modifier improved over time with learning and experience. The 2019 assessment report indicates that the CM process improved from round one to round three, with much of the delay occurring between the launch of the call for concept notes and the actual approval of the CM. Delays of two weeks or more for the receipt of funds after the approval are also documented. Consultations with stakeholders confirmed that timeliness of delivery of the CM has improved over time; for instance, the recent responses (Cyclone Eloise in 2019 and locust outbreak in 2021) were delivered without delays. This was attributed to the changes and updates in the new standard operating procedure (SOP) for CM that now gives flexibility and shortens the timeframes for approvals and activation of CM activities.

The crisis modifier managed to protect community-level development gains that the ZRBF contributed to. Internal reports indicate that over 90,000 animals were saved from poverty deaths through folder and livestock survival feeding (a CM programme). About 2 million cattle (belonging to 286,946 households) were protected from tick-borne diseases in the 18 ZRBF targeted districts (through the ZRBF acaricide support). Over 70,000 people benefited from cash transfers during the lean season (CM support to reduce the sale of productive assets).

The ZRBF-targeted households generally enjoyed more benefits from the Crisis Modifier when compared with households who did not receive support from the crisis modifier mechanism. These exhibited a negative linear relationship with total shocks (-0.61) and shock severity (-0.056) with a 95% statistical significance, while food security showed a positive linear relationship (0.030). Households receiving the CM were likely to experience less shock severity, and recover with limited impact on their food security as compared to those who were not receiving CM support.

Lessons learned

Lesson 1: The resilience pathway is valid – ZRBF resilience interventions contribute to the achievement of resilience. A sequenced and layered approach has proved to deliver better household outcomes; participation in several interventions helps to generate more income.

Lesson 2: Adoption and adaptation are more effective pathways to building resilience. There are greater results of resilience capacity (absorptive and adaptive) through increased asset accumulation, livelihood diversification, commercialisation of productivity, market development, improved extension services, and access to early warning information systems.

Lesson 3: The medium-intensity approach takes longer (beyond programme timelines) to achieve high-impact results; the programme should focus on impact rather than breadth of coverage.

Lesson 4: The willpower to change personal circumstances is important to maintain consistent activity participation and resilience building. Therefore, resilience programmes need to be complemented with promotion of household-level initiative as a critical element of change.

Lesson 5: Intervention design should consider geographic and household targeting to maximise the optimization of underlying livelihood potential and household capacity. The mixed performance among projects and the inability of the resilience capacity to transform the food security situation for some beneficiaries were influenced by differences in underlying livelihoods and household asset base (e.g., exclusion of non-land-owners, etc.).

Lesson 6: Labour-sharing mechanisms for labour-constrained households contribute to resilience capacity, particularly for female-headed households. This may be linked to the capacity of these female-headed households to utilise their labour assets in comparison with male households.

Lesson 7: Sustained youth participation is central to enhancing household resilience; this was constrained in the programme by mobility challenges and poor retention rates (low interest).

Lesson 8: Evidence generation and dissemination of knowledge products influences policy and programmatic decisions and strengthens resilience-building approaches. The programme needs to be complemented with advocacy capacity among partners and use of available policy platforms.

Lesson 9: The design of monitoring and evaluation approaches should be coherent and improve evaluability by establishing a set of longitudinal data on impact contribution over the project's life.

Recommendations

Recommendation 1: Continue to build the three resilience capacities (especially absorptive and transformative capacities) through:

- Increasing attention to ISALs and making this intervention a central part of the programme to improve absorptive capacities.
- Investing in upstream and downstream policy work - supporting the development and implementation of policies (as has proved to work in the first phase).
- Strengthening local-level policy advocacy by identifying key policy issues in districts that can be addressed through by-laws, local resource allocation, and strengthening the link between policy messaging, advocacy approaches, and evidence generation.
- Delivering more of the same resilience-building interventions, but better evolved in developing capacities for value-added practices and market linkages by farmers (building on and scaling up the successful value-added services).

Recommendation 2: In the next phase, ZRBF should put water availability and access at the centre of its agro-based resilience interventions.

- Drawing on lessons from phase 1, design a strategy that provides a coherent package of water services across the programme area informed by context-specific needs – including in-field water harvesting and drip irrigation technologies.
- Strengthen key Government departments in climate, water, and technology issues for sustainability purposes.

Recommendation 3: The Government of Zimbabwe needs to scale-up the ZRBF programme by applying lessons learnt to bring interventions to maturity and fully realise the theory of change.

- Adopt a long-term approach to resilience building for targeted communities that ensures interaction with beneficiaries for at least ten years, instead of the current five-year cycle.
- Continue with the layered approach and consolidate tried and tested (best practices) high-impact interventions already identified in this phase.
- Scaling up best practices already identified and strengthening the sustainability of these gains. For infrastructure specifically, undertake an inventory of the performance of various pieces of infrastructure developed under the programme determining functionality and measures for sustainability.
- The crisis modifier mechanism should remain operational to help households recover from shocks but should be gradually withdrawn (with trigger severity increased over time as the capacities of households improve).
- Strengthening evidence-based graduation strategy using the evidence already created by the programme through OMS, impact studies, and other internal monitoring data.

Impact Evaluation Endline Study of UNDP Zimbabwe Resilience Building Fund (ZRBF) Programme

1 INTRODUCTION

The Zimbabwe Resilience Building Fund (ZRBF) is a 5-year government-integrated resilience programme implemented by the Ministry of Lands, Agriculture, Water and Rural Development (MLAWRD) and the United Nations Development Programme (UNDP). ZRBF is implemented in 18 districts experiencing chronic food insecurity due to recurring climatic shocks and underlying poverty. With support from the UNDP Programme Management Unit (PMU), the ZRBF is implemented through seven consortia partners led by: Christian Aid, Care International, International Rescue Committee (IRC), Dan Church Aid, Welthungerhilfe and ActionAid International. The Resilience Knowledge Hub (RKH) led by Mercy Corps works with consortia members to support the building of resilience capacities and nurture professional and social capital across all stakeholders. To assess the impact of programmes on livelihoods and resilience capacity, MLAWRD and UNDP commissioned an impact evaluation study whose main objective was to assess the endline status of key indicators and understand what works in resilience programming in Zimbabwe. This report presents the findings of this study.

1.1 Background and objectives

The purpose of this evaluation is to assess the endline status of key indicators and understand what works in resilience programming in Zimbabwe, how, and why. The results of the evaluation were used to compare with baseline status and in between 3 rounds of Outcome Monitoring Survey (OMS) studies, to test the program theory of change and understand the relationship between variables at the community, household, and individual levels. These evidence-based findings will inform future program design and implementation of resilience-building activities. This endline study sought to achieve five interrelated objectives:

- Conduct a robust final impact evaluation for the ZRBF and projects.
- Test the program and projects Theory of Change (**ToC**) through quasi-experimental or experimental methods to determine their impact on resilience outcomes at community, household, and individual levels.
- Investigate the relationships between household outcomes, shock exposure, and resilience capacities in the ZRBF and selected projects.
- Assess the use of evidence generated by the programme under component 1, which is expected to be used to both improve resilience programming as well as inform policy-making within Zimbabwe.
- Assess the extent to which component 3 (crisis modifier) has been able to respond to humanitarian shocks and protect development gains.

Based on the objectives of this impact evaluation, the evaluation of the ZRBF was conducted at two levels outlined in Table 1 showing the evaluation questions.

Table 1: Summary of evaluation questions at programme and project levels

Programme Level	Project Level
Impact: What is the impact of ZRBF (can include a combination of interventions) on community, household and individual resilience, as measured through KPI4 (Resilience Capacity Index (RCI) and other ZRBF-relevant impact and outcome indicators? To what extent has beneficiary resilience increased as a result of selected ZRBF interventions? What is the impact of selected ZRBF interventions on women and young people? How have women and young people contributed to the achievement of the results/impact?	**Impact:** What is the impact of selected ZRBF-funded projects (can include a combination of interventions) on community, household and individual resilience, as measured through KPI4 and other ZRBF-relevant outcome indicators? To what extent has beneficiary resilience increased as a result of selected ZRBF projects? What is the impact of selected ZRBF projects on women and young people? How have women and young people contributed to the achievement of the results/impact?

Programme Level	Project Level
To what extent the relationships between household outcomes, shock exposure, and resilience capacities in the ZRBF-selected districts improved as a result of ZRBF? What is the impact of the shock response mechanism on resilience, e.g., timeliness and effectiveness of shock response in comparison to in-kind humanitarian aid? Are the triggers of the crisis modifier/shock response appropriate? To what extent has evidence been used in ZRBF programming, policy and decision-making – How effective was the crisis modifier in protecting development gains?	**ToC**: Which interventions or combination of interventions worked or failed to work, for whom and why and under what range of climate conditions? What, if any, are the unintended consequences, positive and negative, of selected ZRBF-funded projects?

Annexe 1: Evaluation Framework provides the evaluation matrix that details the evaluation approach, methodology and methods for data collection and analysis for sub-questions and related indicators and key sources of information. Using the evaluation matrix allowed for systematic triangulation and obtaining the most reliable information possible.

The primary users of the evaluation will be UNDP, its development partners: European Union (EU), Foreign, Commonwealth and Development Office (FCDO) and Swedish International Development Cooperation Agency (SIDA), the ZRBF implementing partners, the Government of Zimbabwe and the grantee recipients. It is expected that the findings of the evaluation will deliver insights into the overall impact of the interventions, achievements, challenges, and recommendations on the design of ZRBF.

1.2 Description of ZRBF

The subject of the evaluation is the Zimbabwe Resilience Building Fund programme. It includes all resilience-building activities in 18 rural districts in Zimbabwe via seven project consortia. Table 2 provides an overview of consortia including districts of implementation and the number of households targeted. The map of the programme locations is found in **Annexe 2: Map of the programme locations**.

Table 2: Overview of consortia and implementing partners

Consortia	Districts implemented	HH targeted	Partners
Enhancing Community Resilience & Sustainability **(ECRAS)** July 2016-March 2021	Chiredzi and Mwenezi (34 wards)	10 500	**Lead:** CARE **Members**: PLAN ICRISAT
Matabeleland enhanced livelihoods, agriculture and nutrition adaptation **(MELANA)** July 2016-March 2021	Nkayi, Bubi, Umguza, Umzingwane (54 wards)	30 989	**Lead**: WHH **Members:** CTDO, IES, APT
Zambezi Valley Alliance for Building Community **(ZVA)** July 2016-March 2021	Binga, Kariba, Mbire (45 Wards)	45105	**Lead:** ActionAid **Members:** Environmental Law Association, African Breeders Services Total Cattle Management
Sizimele Action for Building Resilience in Zimbabwe **(Sizimele)**	Matobo, Insiza and Lupane (57 wards)	31 455	**Lead:** DCA **Members:** RT, ORT,

Consortia	Districts implemented	HH targeted	Partners
July 2017 to July 2020			Technoserve, CBOs, ProAFRICA, CyVAT, CCBICA, FoHF, MSU, HWA
Building Resilience through improving the Absorptive and Adaptive Capacity for Transformation **(BRACT)** October 2017 to October 2020	Mutoko and Mudzi (29 wards)	15 505	**Lead:** Christian Aid **Members:** SH, BIZ, CTDO, NCT
Enhancing Community Resilience and Inclusive Market Systems **(ECRIMIS)** October 2017 to October 2020	Zvishavane and Mberengwa (50 wards)	31 000	**Lead:** CARE **Members:** LDS, ICRISAT, LID
Program for Growth and Resilience **(PROGRESS)** July 2017 to July 2020	Beitbridge and Nyanga (33 wards)	20 000	**Lead**: IRC **Members:** CESVI, BIOHUB, MRI, CIMMYT

Source: http://www.zrbf.co.zw/projects

NB. ICRISAT (International Crops Research institutes for semi-arid Tropics) Welthungerhilfe (WHH), Community Technology Development Organization (CTDO), Institute of Environmental Studies (IES), Agricultural Partnerships Trust (APT, Institute for Rural Technologies (IRT), Organisation of Rural Technologies, Techno serve, Community based organisations (CBOs), Africa Community based organisations, CyVAT, Community Capacity, Building Initiative for CCBICA, Future of Hope Foundation (FoHF), Midlands State University (MSU), HWA, DanChurchAid (DCA), Silveira House (SH), Bio-Innovation Zimbabwe Trust (BIZ), Community Technology Development Organisation (CTDO), Nyahurune Community Trust (NCT), Lutheran Development Services (LDS), International

The ZRBF programme started in 2015 with the initiation of component 1 on evidence generation to inform programing and policy implemented by the UNDP ZRBF Programme Management Unit (PMU). Component 2 of the programme was the second to be initiated in July 2016 with 3 consortia partners Enhancing Community Resilience and Sustainability (ECRAS), Matabeleland Enhanced Livelihoods, Agriculture and Nutrition Adaptation (MELANA) and Zambezi Valley Alliance for Building Community (ZVA). Other partners, Program for Growth and Resilience (PROGRESS) and Sizimele Action for Building Resilience in Zimbabwe (SIZIMELE) as well as Building Resilience through improving the Absorptive and Adaptive Capacity for Transformation (BRACT) and Enhancing Community Resilience and Inclusive Market Systems (ECRIMS) were added in July 2017 and October 2017 respectively.

In August 2018, the Resilience Knowledge Hub (RKH) led by Mercy Corps was engaged as a strategic partner to support the building and nurturing of professional relationships and social capital between ZRBF partners and external stakeholders. The late start of the RKH was to allow PMU and Consortia to harvest lessons and generate evidence using strategic independent partners after some years of implementation. The scope of the evaluation covered all the ZRBF components and activities implemented by the sampled projects from 2015 up to September 2022.

The overall objective of the ZRBF is to contribute to the increased capacities of communities to protect development gains and achieve improved well-being outcomes in the face of shocks and stresses enabling them to contribute to the economic growth of Zimbabwe. A core focus of ZRBF is to build the resilience of individuals, households, communities and systems. The ZRBF programme is comprised of three components:

Component 1: Increase effective evidence-based institutional, legislative and policy frameworks in place at national and sub-national levels for resilience. The component focuses on capacity building and the generation of evidence and ensures its utilization in policy and programming decisions.

Component 2**:** Increase the absorptive, adaptive, and transformative capacities to face shocks and the effects of climate change for approximately 830, 000 people, in vulnerable communities frequently exposed to multiple hazards. ZRBF has supported a combination of interventions implemented in innovative, cost-effective and sustainable ways to address both the causal links between hazards exposure, poverty, limited rural livelihood options and food insecurity and also consider key social aspects of health, nutrition, access to basic services and social practices.

What are absorptive, adaptive and transformative capacities
The ZRBF programme defines absorptive, adaptive and transformative capacities as follows: **Absorptive capacities:** the ability to minimize exposure to shocks and stresses through preventative measures and appropriate coping strategies to recover quickly and avoid permanent, negative impacts. The ZRBF focused on cash savings, informal safety nets, disaster risk reduction strategies and reliance on bonding social capital.[3] **Adaptive capacities:** the ability to make proactive choices about alternative livelihood strategies based on an understanding of changing conditions. The ZRBF focused on access to information, livelihood diversification, accumulation of assets, access to financial services, and investment in human capital. **Transformative capacities:** the governance mechanisms, policies/regulations, infrastructure, community networks and formal and informal social protection mechanisms that constitute the enabling environment for systemic change. The ZRBF made investments for improved governance and policy development for resilience, access to formal safety nets, access to the market, access to basic services, access to agricultural services, access to infrastructure and empowerment of women, children, elderly and the disabled.

Source: OPM (2017) Baseline Impact Evaluation of the Zimbabwe Resilience Building Fund (ZRBF)

Component 3**:** Crisis Modifier is an innovative approach to responding to development challenges, including Climate Change and Natural /socio-economic Disasters, during long-term development programmes to protect developmental gains. A crisis modifier provides early warning, and early action to reduce the impact of climate-induced shocks for the fund in ZRBF programme areas. Since 2016, 7 cycles of Crisis Modifier were successfully activated. As a result, there has been an early warning that has protected development gains built under component 2.

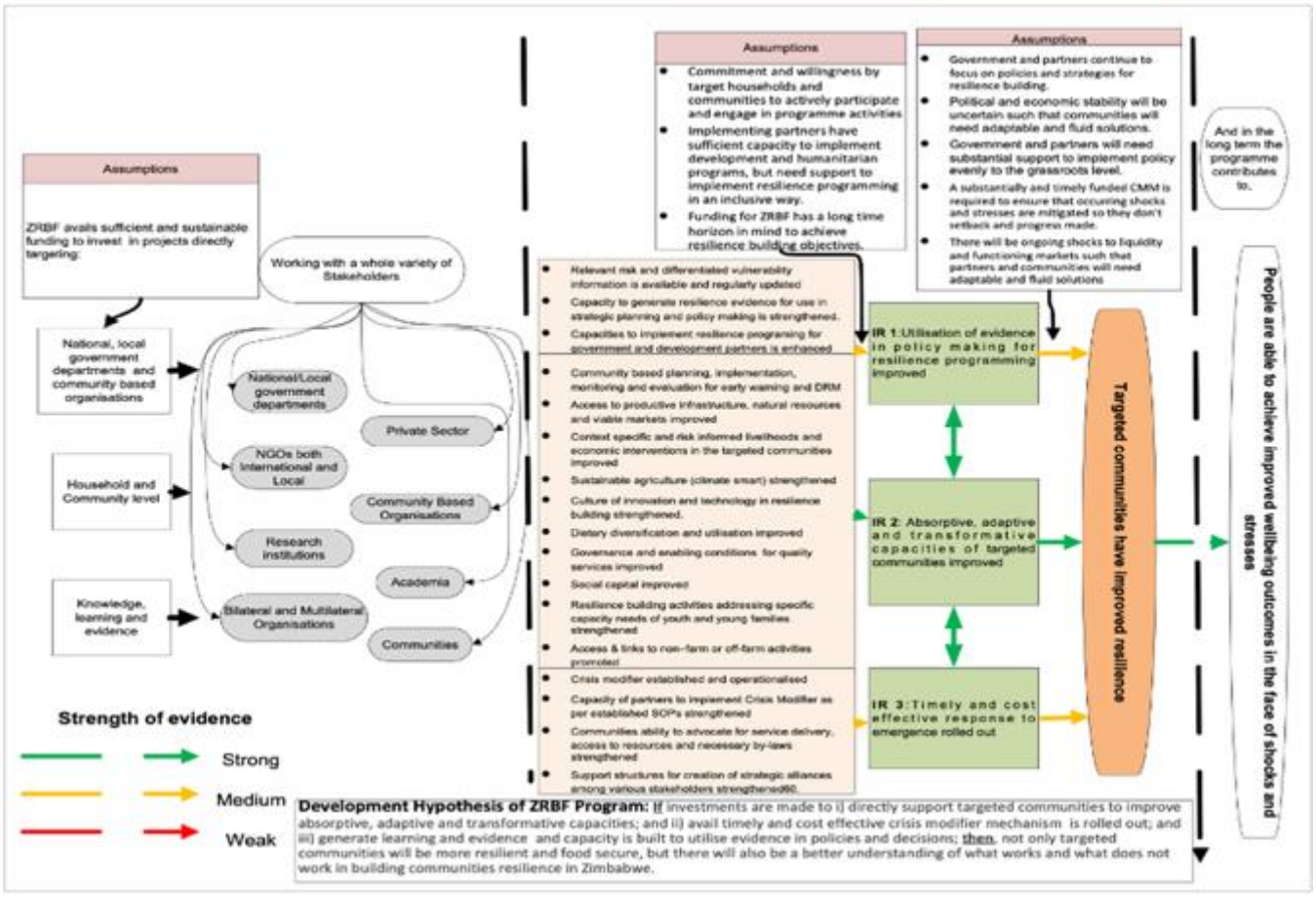
1.3 Program Theory of Change

The ZRBF has a comprehensive theory of change (ToC) (Figure 1) with a clearly articulated development hypothesis and resilience pathway and assumptions. The ZRBF development hypothesis states that:

If investments are made to i) directly support targeted communities to improve their resilience capacities (absorptive, adaptive and transformative); ii) avail timely and cost-effective response to emergencies, and iii) generate learning and build capacity for utilization of evidence in policies and decisions; THEN not only will targeted communities be more resilient and food secure, but there will be a better understanding of what works and what does not work in building communities' resilience in Zimbabwe.

[3] Defined by ZRBF as *reflecting the principles and norms that exist between members of a community that allow them to work closely with each other to prevent, cope and respond to shocks and stressors.*

Figure 1: ZRBF Theory of Change



Source: ZRBF programme design document

2 METHODOLOGY

This section of the ZRBF Impact evaluation report seeks to describe the methodology used for both the quantitative and qualitative components of the study, including the sampling procedures used to identify the study elements at different levels. It goes further to describe data collection tools, training of research assistants, data management and analysis, and the limitations embedded in the study. The evaluation relied on multiple methodological approaches using a mixed-method (MM) evaluation design which integrates social science disciplines with quantitative and qualitative approaches to theory, data collection, data analysis, and interpretation leading to 'The Rashomon Effect'.

2.1 Evaluation approach

The evaluation adopted a quasi-experimental impact evaluation design that aimed to quantify the attribution of ZRBF to observed outcomes. The baseline survey matched treatment (ZRBF beneficiaries) and control (non-beneficiaries of ZRBF) to facilitate difference in difference (DiD)[4] analysis at endline. At endline the evaluation survey followed up on this same panel to determine performance on ZRBF outcomes and impacts. However, there were some changes to the ZRBF indicators and measurement approaches during implementation which influenced the evaluation. These changes were a result of the programme's learning and adaptive approach to management. This is presented in Table 3. To support understanding of the contribution of ZRBF to indicators which used a different approach to that in the baseline or were new at endline, correlations and other multivariate analyses were used to determine the likelihood of the programme influencing them (measuring interdependence of these indicators with outcomes to which ZRBF's attribution had been estimated).

Table 3: Changes to indicators and implications for the endline evaluation

Indicator	Description	Unit of measure	Changes explanation	Data analysis approach
Impact Indicator 2	Prevalence of moderate or severe hunger (Households Hunger Scale-HHS) among ZRBF-targeted households	Percentage	No change	Baseline and Endline comparison (DiD)
Impact Indicator 3	Multi-dimensional poverty index for ZRBF targeted households	Index	No change	Baseline and Endline comparison (DiD)
Outcome Indicator 1	Number of women and men whose resilience has been improved because of ZRBF support	Number	Resilience measurement approach changed during implementation.[5] The evaluation used the baseline approach.	Baseline and Endline comparison (DiD)

[4] DiD or double difference allows the evaluation to determine difference on the treatment compared to the control that has been caused as a direct result of the intervention.

[5] The resilence measurement approach changed based on learning and new thinking on resilience measurement during programme implementation. The new approach included additional indicators for resilience index that were not collected during the baseline survey. Based on this direct comparison between the baseline (and endline) data cannot be done. However, trends can be compared to validate both datasets.

Indicator	Description	Unit of measure	Changes explanation	Data analysis approach
Outcome Indicator 2	Percentage of HHs with acceptable food- based coping strategy index score	Percentage	No change	Baseline and Endline comparison (DiD)
Outcome Indicator 3	Average Livelihoods based Coping Strategy Index score for households in targeted communities because of ZRBF intervention	Index/Score	No change	Baseline and Endline comparison (DiD)
Outcome Indicator 4	Average monthly household income of vulnerable households receiving ZRBF assistance	USD	No change	Data was collected but not included in the analysis.
Outcome Indicator 7	The proportion of ZRBF beneficiary households with acceptable Household Dietary Diversity Score (HDDS)	Per cent	No change	Endline treatment and control comparison. Comparison with OMS
Indicator 2.3	Percentage of people who used financial services in the past 12 months as a result of ZRBF support (include qsn)	Percentage	No change	Endline treatment and control comparison. Comparison with OMS
Indicator 2.5	The proportion of households adopting climate-smart agricultural production technologies (f/m disaggregation)	Per cent	No change	Endline treatment and control comparison. Comparison with OMS
Indicator 2.6	Percentage of farmers who practised the value chain activities (on-farm & off-farm) promoted by the project in the past 12 months	Per cent	No change	Endline treatment and control comparison Comparison with OMS
Indicator 3.2	The proportion of ZRBF programme participants who are deemed food insecure at the peak lean season compared to the district population (include new indicators not part of baseline uses ZimVAC guidance given)	Percentage	New	Endline treatment and control comparison
Indicator 3.3	Average utilization score perceived by ZRBF stakeholders who used HFMS to inform early action.	Number	New	Endline treatment and control comparison

The ZRBF programme conducted three annual OMS rounds to track the performance of the programme on key outcomes. The OMS rounds used a different sample panel than those used at baseline and did not include a comparator. Because of these differences in methodology, the dataset from this longitudinal panel study could not be matched with the baseline sample panel. As a result, the evaluation limited use of OMS for a cross-sectional comparison of results with the endline. While this might not have been ideal, the changes in the implementation approach e.g. where there was a shift from medium intensity to high intensity implementation (beneficiaries receiving at least three interventions) which led to programme contraction, creating a new panel allowed the programme to track these new dimensions. Nonetheless, the evaluation profers recommendations for improving impact evaluation of a similar programme in the future.

2.1.1 Measuring resilience

The conceptual framework follows closely the one used in the baseline and is explained in the following pages. It consists of three resilience capacities namely, absorptive, adaptive and

transformative. The conceptual framework highlights that resilience is dynamic, and exposure to a shock can set individuals, households, and communities on one of two pathways. In a resilience pathway, individuals, households, and communities will bounce back more quickly and better following the incidence of a shock. In a vulnerability pathway, recovery might be possible, but this might be at a lower level of resilience or welfare following exposure to the shock[6].

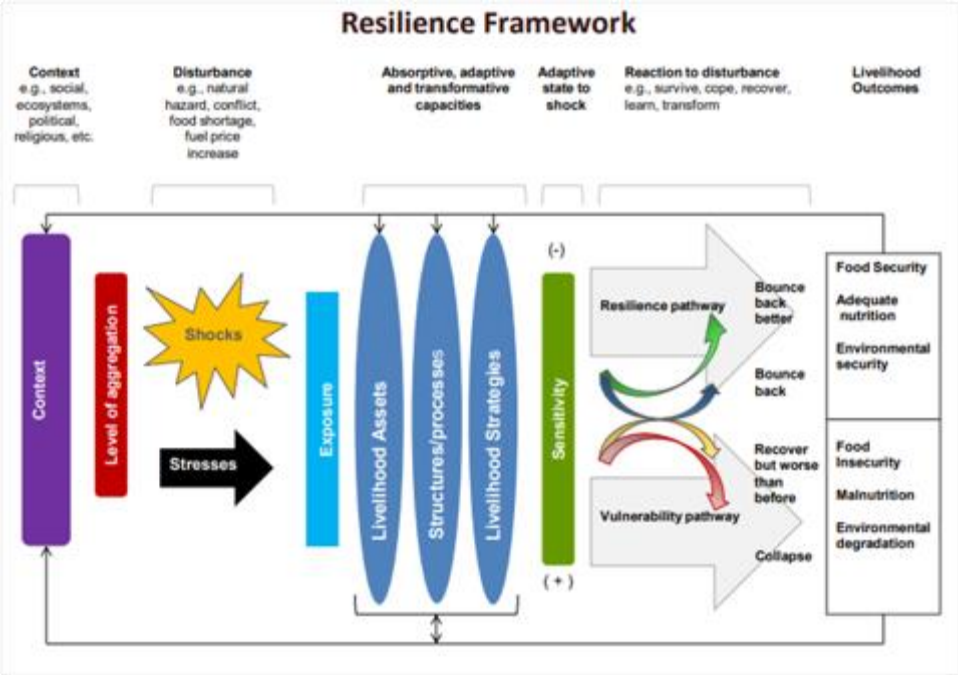


Figure 2: ZRBF Resilience Framework

Source ZRBF Baseline Report

This conceptual framework provides a framework on what needs to be considered to measure improvements in resilience. Empirical evidence collected at the endline was used to determine what factors contribute to resilience, under what contexts, and for what types of shocks.

There are four key factors considered in measuring resilience[7]:

1 Identify the wellbeing outcomes to be achieved, and measure resilience concerning these outcomes.
2 Identify the shocks and stressors that individuals, households, communities and larger systems are exposed to and the severity and duration of these shocks and stressors.
3 Measure the absorptive, adaptive and transformative capacities concerning these shocks and stressors at different levels.
4 Identify the responses of individuals, households, communities and larger systems to these shocks and stressors and trajectories of wellbeing outcomes.

To measure these four factors and calculate the Resilience Capacity Index (RCI)[8] the baseline used an adapted version of the Food and Agriculture Organisation's (FAO) Resilience Index Measurement and Analysis – II4 (RIMA–II) methodology[9]. The RCI was used to measure the outcome indicator 1: number of women and men whose resilience has been improved as a result of ZRBF support. Data for calculating the RCI was generated from the household questionnaire.

[6] http://www.zrbf.co.zw/data/media/00001237/ZRBF-BaselineReport-Final-2.pdf
[7] https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/6556/Wp459.pdf;jse
[8] The RCI is a composite outcome indicator used to count/assess the number of people with improved resilience relative to the baseline against absorptive, adaptive and transformative resilience capacities.
[9] See the following for more details: http://www.zrbf.co.zw/data/media/00001237/ZRBF-BaselineReport-Final-2.pdf

2.1.2 Integrating youth and gender

The leave no-one behind principle demonstrates the commitment of the United Nations to eradicate poverty in all its forms, end discrimination and exclusion and reduce inequalities and vulnerabilities that leave people behind and undermine the potential of individuals and humanity as a whole. In designing the endline study, the evaluation recognized the diversity that exists in societies on gender, age, disability status, ethnicity, religion, resource accessibility, and other social identifiers. Further, the evaluation sought to investigate and report on how these differences produced access and entitlement to resources and assets that increase resilience to climate change.

The evaluation used participatory approaches, recognizing sensitivities (power dynamics between men and women, culture, and political orientation) in the study location and population that ensured that the views of different groups were captured in this study. We mapped out the full range of stakeholders at the national, district and ward level. At the ward level, the study recognised the different experiences of different social groups, e.g., women, children, ethnic groups, and people with disabilities (and those without), among other considerations. The evaluators used active participatory approaches to collect primary data.

2.1.3 Mixed method approaches

The evaluation used quantitative and qualitative data collection techniques. Using this methodological approach ensured complementary data collection methods contributed to the provision of information which might have been missed by adopting only one perspective. The purpose of doing this was to strengthen the reliability of data, and validity of the findings and recommendations, and to broaden, as well as, deepen our understanding of the processes through which the project results were enumerated, to come up with sound benefits for the ZRBF beneficiaries or lack of it.

Quantitative data was collected through the household survey and secondary data analysis of the baseline survey, and OMS. Qualitative data was collected through two methods: an adapted Community Based Resilience Analysis (CoBRA) approach complimented by Key Informant Interviews (KIIs) with consortium partners, UNDP, development partners, and the government.

As an entry point, the evaluation team conducted an in-depth review of project documents sourced from the ZRBF PMU and partners at the district level. The documents that were reviewed included Annual Review Reports, three Outcome Monitoring Survey reports, project annual reports, consortia agreements and reports, the ZRBF baseline report, financial documents and technical reports, Crisis Modifier implementation reports amongst others. This process culminated in the compilation of an inception report, revision to tools and agreement with UNDP on the scope of the evaluation.

2.2 Quantitative component

As noted earlier, the quantitative assessment adopted a blended approach: (1) quasi-experimental longitudinal design to track progress and project performance between the baseline and endline surveys; (2) cross-sectional comparative assessment of control and treatment at endline; and (3) cross-sectional comparative assessment of the OMS and the endline survey.

2.2.1 Sampling design and approach[10]

Sample size

[10] For more details on the sampling approach and matching of control and treatment panel, see the baseline report: http://www.zrbf.co.zw/data/media/00001237/ZRBF-BaselineReport-Final-2.pdf

Quantitative data was gathered from households that previously participated in the baseline to allow for a longitudinal assessment of the project performance over time. The households were grouped into treatment and control groups. The primary sampling unit was a household. Since the households were matched at baseline, only matched cases were followed through during this study. A full list of participants at baseline (sampling frame) was verified and provided by UNDP. Therefore, the evaluation did not perform any sampling technique of participating households. However, there were several challenges with the sampling frame. Some households did not have unique household identification which made it difficult to match with the endline dataset. A manual process of verification of these unique IDs with the actual dataset was undertaken. Households whose IDs could not be located entirely were replaced using the replacement sample created at baseline. Some respondents could not be located because of death, or relocation. In other localities, the control sample received ZRBF interventions. These households were replaced with control households in the replacement sample and matched at baseline or dropped from the endline sample when such replacement was not available. The changes in the sample size required the recalculation of the level of confidence for the study population (discussion below and reflected in **Table 5**).

Resultantly data was collected from a total of 3,379 farmers, of these 1,941 were ZRBF beneficiaries and 1,438 non-beneficiaries. Only matched households were among those that were interviewed at baseline (see table 4 for more information). A total of 49.96% and 50.04% were males and females respectively. There was a sample attrition of 7.7% for treatment (2,103 at baseline to 1,941 at endline) and 31.5% for control (2,100 at baseline to 1,438 at endline) households between baseline and endline. To facilitate DiD analysis, the evaluation team to undertook rematching of the treatment and control panel for cases where the treatment household no longer had a pre-determined matching control using the Coarsened Exact Matching (CEM) approach used at baseline. The sample attrition changed the matching design from a 1:1 study to 1:2 for some treatment cases.

Table 4: Achieved sample size for the endline

District	Control	Treatment	Total
Beitbridge	32	217	249
Binga	297	20	317
Bubi	190	58	248
Insiza	135	142	277
Kariba	58	115	173
Lupane	131	131	262
Matobo	124	104	228
Mberengwa	229	251	480
Mbire	0	264	264
Nkayi	0	222	222
Nyanga	92	170	262
Umguza	35	56	91
Umzingwane	75	53	128
Zvishavane	40	138	178
Total	**1,438**	**1,941**	**3,379**

Results for the sample power are presented in **Table 5**. The results show that to achieve a sample power of 99%, 1,192 and 1,492 beneficiaries and non-beneficiaries were required. Therefore, the sample attrition at the endline did not affect the reliability of the results.

Table 5: Sample power calculation

	alpha	power	N	m1	m2	sd
Control	0.05	0.8	1,116	61.77	71.16	55.9
Treatment	0.05	0.8	892	61.77	71.16	49.96
Control	0.05	0.9	1,492	61.77	71.16	55.9
Treatment	0.05	0.9	1,192	61.77	71.16	49.96

Survey instruments

The endline survey instrument was consistent with baseline tools, the ZRBF indicators reference guidelines (August 2021) and other tools from similar surveys, including the ZimVAC Rural Livelihood Assessment tool, ZimVAC Resilience Measurement questionnaire and the OMS tools. Besides capturing data to compute resilience in its three different capacities (adaptive, absorptive and transformative components) the tool collected food security indicators, shock exposure, severity, recovery and household demographics as a way of getting a good understanding of resilience pathways. The household survey instrument is provided in Annexe 3: Household Survey Tool.

Data collection, entry, and quality assurance

Before data collection, enumerators underwent a five-day training to get a good understanding of the data collection instruments and the subject under investigation. The training included pilot testing and debriefing. The training was based on an approved training manual which covered details of the project, definitions of terms, interpretation of questions in the tool, roles and responsibilities of team members (core team, supervisors and enumerators) and sampling, survey management protocols and quality control procedures. Computer Assisted Personal Interview (CAPI) approach was used for data collection using tablets running on Kobo Kit. This approach allowed for daily review of progress, data quality checks and feedback to the team. There were three layers of quality control. The first layer was the supervisor who oversaw adherence to sampling protocols and reviewed all interviews for their team before they were uploaded on the server. The second layer was the Data Manager who undertook daily quality data checks and provided feedback to the teams on the same to ensure continuous improvement. The third layer was the verification of whether data collection took place, the right people were interviewed, and all questions were asked. The core team of the Data Manager, Field Manager and Data Assistant made unannounced visits to the field to verify and support data collection.

Data analysis - post-stratification, impact analysis

Quantitative data from both primary and secondary data sources were analyzed using STATA and SPSS. Quantitative data collected using mobile devices were converted to STATA.dta format for cleaning and analysis purposes. During data cleaning, outliers were removed, and missing values were labelled to ensure accurate data analysis. Data cleaning and analysis were conducted using STATA version16. Firstly, outliers were recoded to the median and in some cases excluded from the analysis. A total of 5 datasets, baseline, OMS1, OMS 2, OMS 3and endline, were analyzed. Outcome monitoring datasets were analysed independently. Only farmers that were matching those interviewed at the endline were included in the analysis. Crosstabulations, association tests, regression analysis and difference-in-differences were performed.

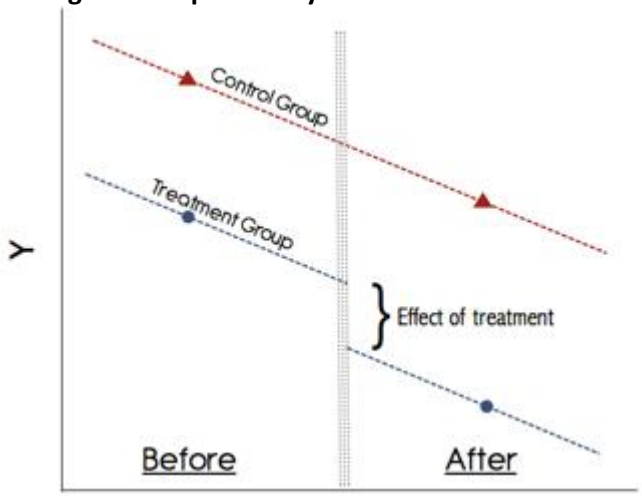
Post-stratification: Post-stratification was performed to adjust the weights of under-sampled subgroups due to high attrition levels so that the overall results were representative of the overall population. This created a trade-off between precision and accuracy.

Descriptive statistics were applied to the results of the evaluation. Crosstabulations were combined with association tests such as Chi-square, Kruskal-Wallis and rank tests. The team endeavored to produce a list of tables which were similar to those in the baseline report where possible.

Inferential statistical analysis was performed as well and included correlation analysis and association tests such as Chi-square analysis. Regression analysis was conducted wherever possible.

Impact analysis: As noted earlier in this section, DiD analysis was used to estimate the impact attributable to ZRBF. This impact analysis approach was appropriate for this endline assessment because the sample was not balanced and could not be measured by a simple comparison of treatment and control groups at this time point. This method measures both the treatment and control groups before and after the intervention. The difference-in-differences method relies on the assumption that treatment and control groups would have followed the same trend in the absence of treatment. This is called the parallel trend assumption. The parallel trend assumption is illustrated in the below diagram for an outcome that is expected to decrease over time and where the treatment is expected to further decrease the outcome.

Figure 3: Impact Analysis



The estimate of the impact programme is then:
$(\mathbf{A}_{AFTER} - \mathbf{B}_{AFTER}) - (\mathbf{A}_{BEFORE} - \mathbf{B}_{BEFORE})$

Where:

- $\mathbf{A}_{AFTER}$ is treatment group measured after the intervention has been delivered
- $\mathbf{B}_{AFTER}$ is control group measured after the intervention has been delivered
- $\mathbf{A}_{BEFORE}$ is treatment group measured before the intervention has been delivered
- $\mathbf{B}_{BEFORE}$ is control group measured before the intervention has been delivered

The 'before and after' nature of difference-in-differences estimates means that any time-invariant characteristics which might, in addition to the intervention, have a potential influence on the impact indicators being measured, are controlled for.

2.3 Qualitative component

The baseline survey had a very light touch qualitative component which focused on:

1 determining how learning is being used in the ZRBF programme;
2 explore how the purpose of the crisis modifier mechanism is perceived and the extent to which it is viewed as being able to respond to shocks and stresses; and
3 exploring the extent to which consortia are considering the specific challenges women and youth-headed households or household members face when improving their resilience.

At the endline stage, the interest was, in addition to the above, to understand the resilience capacities built by the ZRBF, explain the programme's contribution, and understand which interventions have had the greatest influence on resilience capacities and how. These issues could not be answered fully by the existing qualitative design at baseline. Therefore, in addition to using the design adopted at baseline, the endline used the Community Based Resilience Analysis (CoBRA) approach. CoBRA provided specific advantages of combining several resilience approaches, allowing for multi-dimensional resilience analysis using community-based measures of resilience (which complimented the quantitative approach to resilience measurement) while at the same time allowing for attribution of development programmes to identified resilient characteristics. Therefore, the CoBRA approach was useful in understanding, from the community's perspective, what resilient characteristics changed, and the interventions of ZRBF that contributed the most to the changes and how they are contributing. To achieve this, the CoBRA approach helps participants through the following:

- defining the concept of resilience in plain terms;
- identifying the key factors/characteristics contributing to their local resilience;
- assessing the progress of communities and households in achieving resilience;
- identifying households that are more (or fully) resilient; and
- specifying the types of interventions, they perceive to best build resilience.

Using the CoBRA methodology, the qualitative research component answered the following questions:

- What are the main characteristics of resilience at the community and household levels?
- Which households are more resilient and able to cope with shocks and stresses including gender and age?
- What kinds of factors are affecting their ability to cope?
- How do communities score their attainment of these priority characteristics in a normal period and a crisis period?
- How are ZRBF interventions transforming these household resilient characteristics?
- Which interventions or combination of interventions are contributing the most to this transformation and how?

Answers to these questions were obtained through Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) as well as the assessment of RKH outputs. The qualitative tools are found in **Annexe 4: Qualitative Tools.**

2.3.1 Focus Group Discussions

Randomly selected households from the target community participating in a ZRBF consortium operational area were selected. Each FGD had about 10-15 people. Men, women, and youth participated in separate discussions to solicit gender/age-specific views and perspectives on resilience. Each FGD took between 90-120minutes. The FGDs were undertaken in five steps illustrated in **Figure 4**.

Figure 4: The 5 stages for Conducting the CoBRA FGD

FGDs were used to determine the characteristics of resilient communities and households; prioritise the most important characteristics of resilience and determine which interventions contributed the

most to resilience. Specific households that had achieved partial or full resilience for follow-up Key Informant Interviews (KIIs) were also identified through FGDs. These households included ZRBF and non ZRBF households.

2.3.2 Key Informant Interviews (KIIs)

At least two households identified by communities during FGDs as partially or fully resilient were included in the KIIs at the community level. Communities used their definition of a resilient household agreed on during the FGD to identify these households. The interview with the resilient household aimed to understand the household's pathway to resilience and the factors that enhanced their resilient capacities. The discussion also included the steps taken to cope better with recent crises or hazards affecting the community. An average of 20-40 minutes were spent completing a KII with the representative of the FGD-nominated "resilient" households.

The CoBRA methodology was complemented with additional KIIs with ZRBF partners, governmental stakeholders and community leaders as additional layers of triangulation and validation on project effects on resilient capacities as well as explaining the path to resilience for beneficiaries of the program.

2.3.3 Sampling design and approach

The qualitative survey was conducted in project areas for five consortia covered by the baseline: ECRIMS, MELANA, PROGRESS, SIZIMELE, and ZVA. For each of the consortia one district was visited and, in each district, two wards were randomly selected. The selection of wards was based on two considerations: distance from the district's urban centre, and livelihood zone. In each district, a ward within 10km radius of the district centre and another further off were selected while taking into account livelihood zones representation. **Table 6** provides the districts, wards and livelihood zones visited for the qualitative survey. The sample sizes reached are also presented.

Table 6: Districts, wards, and livelihood zones visited for the qualitative evaluation and sample sizes

Consortia	District	Ward	Livelihood Zone	# of FGDs			# of KIIs resilient household	# of KIIs resilient household
				M	F	Youth	ZRBF	non ZRBF
ECRIMS	Mberengwa	26	Matabeleland Middleveld Communal	2	2	2	8	4
	Mberengwa	1	Cattle and Cereal Farming	2	2	2	7	5
MELANA	Nkayi	6	Eastern Kalahari Sandveld Communal	2	2	2	7	6
	Nkayi	1	National Parks/Forest/Conservancy	2	2	2	6	7
PROGRESS	Beitbridge	13	Cattle and Cereal Farming	2	2	2	6	6
	Beitbridge	15	Beitbridge Southwestern Lowveld Communal	2	2	2	6	6
SIZIMELE	Lupane	2	Lusulu, Lupane and Southern Gokwe Mixed Agriculture	2	2	2	5	7
	Lupane	11	Eastern Kalahari Sandveld Communal	2	2	2	3	5

Consortia	District	Ward	Livelihood Zone	# of FGDs			# of KIIs resilient household	# of KIIs resilient household
ZVA	Kariba	12	Central and Northern Semi-Intensive Farming	2	2	2	4	4
	Kariba	8	Cereal and Low Cotton Communal	2	2	2	5	3
Total				**20**	**20**	**20**	**57**	**53**

2.3.4 Data collection and management

A team of six research assistants with a supervisor conducted the qualitative assessment. They conducted FGDs in pairs, with each pair completing at least two FGDs and KIIs of nominated resilient households per day. The supervisor was responsible for monitoring the quality and accuracy of collected FGD and KII data. The teams worked in close collaboration with the Qualitative Evaluation Expert.

To ensure adequate capacity to undertake the CoBRA methodology, the team underwent a four-day training session on the CoBRA methodology including a pilot survey.

2.3.5 Data analysis

All data collected from all KIIs and FGDs was entered into standard excel spreadsheet formats for compilation, aggregation and analysis. Key tasks in the analysis of field data included:

- Mapping communities' resilience statements against sustainable livelihoods framework (SLF) categories.
- Summing and weighing/normalizing bean scores for all statements to get rankings of priority resilience characteristics overall and disaggregated by different groupings.
- Disaggregating results by district gender and youth.
- Compiling and aggregating the features and attributes of resilient households.
- Compiling a list of ongoing and future priority resilience-building interventions most frequently mentioned.

Quantitative results from the above analysis were interrogated alongside the more qualitative descriptions and explanations provided by FGD participants and resilient households.

2.3.6 Limitations of the evaluation

Changes in the programme may understate the impact of ZRBF: During implementation, the programme adopted a high and medium-intensity activity layering approach. The sample for the baseline did not make this distinction and was difficult to do so for the endline. This was caused by the contraction of operational sites as ZRBF implementation progressed with more focus on the intensification of activities. In this regard, some beneficiaries in these sites were, therefore, dropped. Thus, the evaluation is unable to make a comparative analysis of the impact of ZRBF in these two approaches to implementation. Nonetheless, the results of the evaluation do provide reliable evidence on the performance of ZRBF due to high geographical coverage of of the programme at endline.

Baseline and endline were conducted in different seasons: The baseline study data was collected in January and February 2018 while the endline survey was conducted during the period from June to August 2022 due timing of programme implementation. The seasonal differences affect the comparison of a few season-sensitive indicators i.e., Food Consumption Score. However, given that

the treatment and control groups are exposed to the same conditions "seasonal effect" will be similar across treatment(s) and control groups. Further with the matching specification and Difference-in-Difference, the seasonality mismatch does not pose a threat to the internal validity of the results with no or minimum possibility of overstating or understating the effect of season-sensitive indicators because the approach compared treatment and control exposed to similar seasonal conditions.

Use of different approaches to resilience measurement between the baseline and subsequent OMS rounds: The baseline and OMS used different approaches to measuring the resilience capacity index. Because the impact evaluation required difference-in-difference analysis to calculate the change in resilience capacity between baseline and endline that is as a result of ZRBF, it was not possible to use the OMS approach – which is considered more comprehensive due to its inclusion of observable and non-observable characteristics that contribute to resilience capacity because it had indicators not collected at baseline. The baseline used an adapted version of the Food and Agriculture Organisation's (FAO) Resilience Index Measurement and Analysis – II4 (RIMA–II) methodology[11]. While the baseline-endline and OMS studies used two different approaches to measure resilience these were complimentary and the findings are consistent which increases the level of confidence in the two approaches.

[11] See the following for more details: http://www.zrbf.co.zw/data/media/00001237/ZRBF-BaselineReport-Final-2.pdf

3 Findings

This section presents the findings of the evaluation, organized according to the five key objectives noted in section 1.1.

3.1 Objective 1: Impact of ZRBF interventions on community, household and individual resilience

Under this objective the evaluation answered three overarching questions:

- What is the impact of ZRBF (can include a combination of interventions) on community, household, and individual resilience, as measured through KPI4 and other ZRBF-relevant impact and outcome indicators?
- What is the impact of selected ZRBF projects on women and young people?
- How have women and young people contributed to the achievement of the results/impact?

SUMMARY OF FINDINGS

The evaluation sought to assess the impact achieved by ZRBF interventions at three levels; (i.) individual[12], (ii.) Household, and (iii.) community levels[13] disaggregated by gender and age, particularly among women and young people. The assessment also sought to explore the contribution of women and young people to the observed impact results.

The results showed that on aggregate, a majority of households among ZRBF beneficiaries experienced increased resilience a trend observed throughout the monitoring rounds in the project. The Resilience index among beneficiary households increased by 30% from baseline compared to a negligible 0.3% for control households.

There was no difference in resilience capacity by age however, the assessment noted that male-headed households had higher resilience capacity compared to female attributed to the difference in asset capacity utilisation. The programme may need to invest in understanding this difference further to come up with gender-responsive strategies that increase equity and resilience capacity building.

Transformative capacities were undermined by several contextual factors including economic stressors such as currency depreciation and high inflation resulting in declining capacity among households. The growth in resilience capacity is commendable, and the absorption and adaptive capacity build sustainability of changes. However, the prolonged impact of economic shocks may reverse the sustainability of the observed changes requiring further investments in transformative capacities while strengthening the absorptive and adaptive capacities.

The following detailed findings section provides descriptive and explanatory facts on the impact of ZRBF interventions on resilience capacity. The details have been segmented into two levels: the programme and project levels.

3.1.1 Impact of ZRBF on Resilience

Programme level impact

[12] Determined by multiplying the proportion of ZRBF households with improved resilience capacity by the total number of beneficiaries (*average HH size 5*) assuming household resilience has a domino effect on individual resilience

[13] The impact at community could not be completed as the comparison baseline data did not include measures at this level.

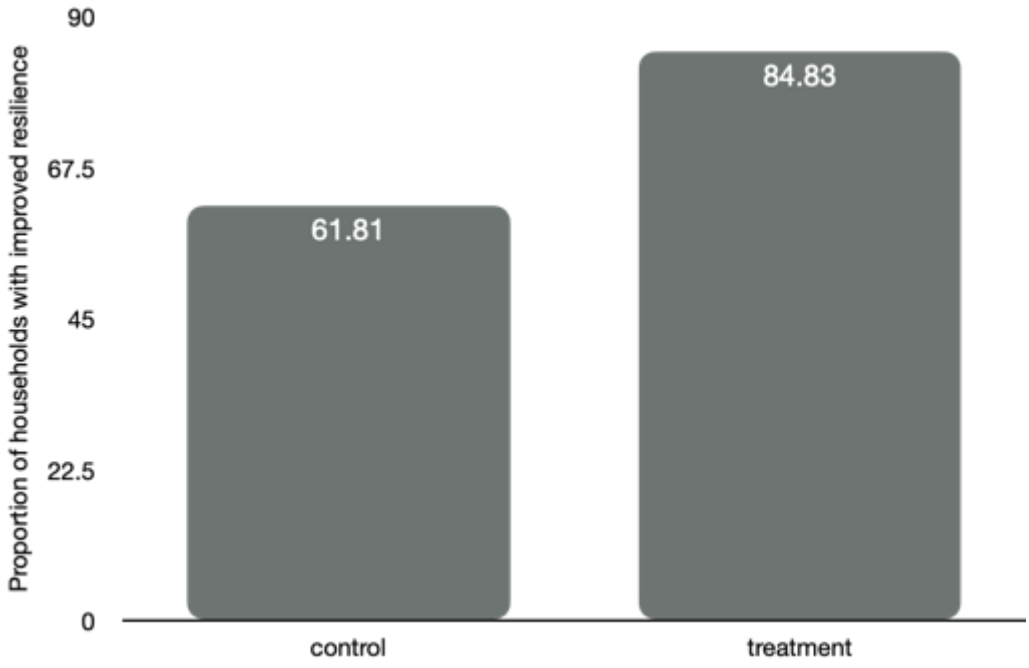
Overall ZRBF interventions had an impact on increasing the resilience of beneficiary households. The difference in difference analysis of the impact of ZRBF on resilience capacity shows that the programme had a contribution of 26.66 more units to the resilience capacity of beneficiary households (See **Table 7: Impact of ZRBF on Resilience Capacity**) concerning non-beneficiary households. This represents about 23.4% of observed resilient capacity among beneficiary households. Individual components (absorptive, adaptive and transformative capacities) that make up the resilience index also show a significant improvement between baseline and endline (**Table 10: Contribution of resilience capacities**).

Table 7: Impact of ZRBF on Resilience Capacity

	Before			After			
Outcome var.	Control	Treated	Diff (T-C)	Control	Treated	Diff (T-C)	Diff-in-Diff
Resilience Index	85.953	89.870	3.917	86.179	116.788	30.609	26.664
S. Err.			1.502			1.512	2.131
P>t			0.0**			0.000***	0.000***

The proportion of households with improved household resilience was calculated by computing households that had an increased resilience index between baseline and endline for both control and treatment groups. About 84.83% of ZRBF beneficiary households had improved resilience compared to 61.81% (p= 0.0000) among the control group, thus reinforcing findings that ZRBF's interventions strengthen resilience (**Figure 5**).

Figure 5: Proportion of households with improved resilience capacities



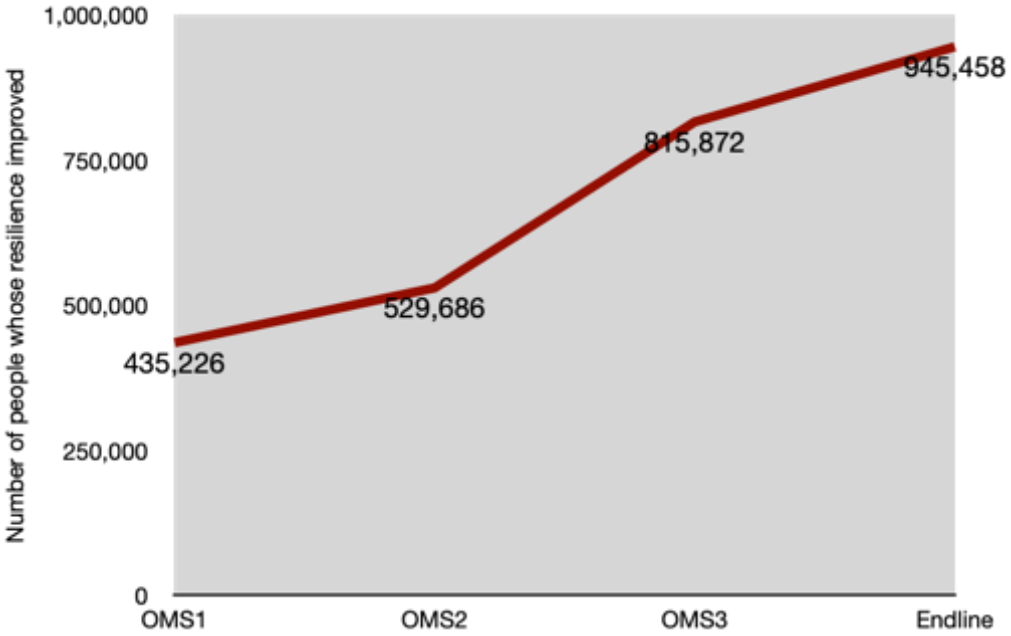
**Pearson Chi2 = 233.58 Prob = 0.0000

Using the total population of beneficiaries of 1,114,532, ZRBF managed to increase resilience for 945,458 individuals. This represents a 11% overachievement on the target of 830,000individuals.

Resilience capacity has also been increasing as the programme matured. As shown in Figure 6, the number of households with improved resilience increased with each round of the OMS and endline survey. The number of households with improved resilience also more than doubled from the first

OMS round to the endline. This trend demonstrates the effectiveness of gradual layering approach of the programme – as more interventions are added and mature, the resilience of beneficiaries increases.

Figure 6: Trend in households with improved resilience



Source: OMS rounds 1 to 3 and endline survey

ZRBF managed to increase youth resilience with 83.28% of youth-led households in ZRBF having improved their resilience capacity compared to baseline. When differences between age and sex are considered among households with improved resilience capacity, there was no significant difference between age groups (youth, elderly and middle-aged[14]) except for between males and females (**Table 8: Proportion of households with improved resilience (age and sex)**). A higher proportion of males than female-headed households had improved resilience. Despite a lower proportion of female-headed households, the ability of the programme to increase the resilience of over 80% of these households despite the constraints they face is commendable (see below).

Table 8: Proportion of households with improved resilience (age and sex)

Category	Value
Gender	
Proportion of females with improved resilience	83.09 **
Proportion of males with improved resilience	91.67**
Age Group	
Youths	83.28
middle age	84.31
Elderly	85.99

***p<0.01; ** p<0.05; * p<0.1

To understand further the programme's performance on resilience building for the different sex and age categories, correlation analysis was conducted between these variables and improved resilience to compare resilience performance of various groups. The results are presented in **Table 8: Proportion**

[14] Youth: 18 -30 years; middle aged: 30 – 59 years; elderly: above 60 years.

of households with improved resilience (age and sex). The analysis showed that female-headed households are 4 times less likely (see column Coef.) to have improved resilience compared to male-headed households. This may be linked to the capacity of these households to utilise their assets (land, labour etc.) in comparison with male households. Labour-sharing mechanisms were viewed as an important contributor to the resilient building by women resilient households spoken to in the qualitative survey. Improving access to labour for women-led households can improve their resilience building.

Households with middle and elderly aged 3 and 8 units are more likely to have improved resilience compared to youth-headed households (See **Table 9: Regression analysis (resilience index, age group, sex)**). This might be in part a result of the lower participation of youth in the programme as compared to the other groups and a greater part of the low correlation between youth participation and improved resilience. The latter means that a youth-headed household participating in ZRBF has lower chances of improving its resilience than other groups. In the last two years of the programme[15], a youth strategy was developed and implemented through partners ITF and Youth Connect and centred on building vocational and entrepreneurial skills as well as support for their agro-based enterprises. There are two major reasons why these interventions had lower traction. The first is the challenge of youth mobility. As noted in the FCDO Annual Review Report of 2021, there was limited success in youth participation for consortia working in districts near border towns due to migration to other countries, mainly South Africa and Botswana. Their high mobility proved a challenge to sustain the impact of interventions as resilience actions require long-term investment and nurturing to see results. Retention of youth in the programme depends on their perception of the intervention appropriateness. Qualitative findings show youth interests in entrepreneurship, and vocational skills across all five districts visited. While the ZRBF did invest in entrepreneurship, there was an opinion among youth that the interventions in many cases were biased towards agriculture, meaning beneficiaries needed to own productive assets such as land. The baseline survey showed that youth were less likely to own these assets. Lack of access or ownership to such assets, therefore, limits the extent of youth participation in a majority of the ZRBF interventions which were agro-based. This finding is also supported by those of the FCDO annual review report of 2021 which found mixed results of ZRBF on youth resilience. It found that the success of youth engagement occurred in districts where ZRBF made investments in vocational skills training, entrepreneurship and off-farm activities for youth as they have greater economic benefits.

Table 9: Regression analysis (resilience index, age group, sex)

res_index	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Age: base youths	0	.	.	.	.	.	
middle age	3	3	1.07	0	-3	9	
elderly	8	3	2.46	0	2	14	**
Sexhead: base male	0	.	.	.	.	.	
female	-4	2	-1.53	0	-8	1	
Constant	113	3	43.02	0	108	119	***

Mean dependent var	116.801	SD dependent var	46.075
R-squared	0.004	Number of obs	1897
F-test	2.697	Prob > F	0.044
Akaike crit. (AIC)	19914.369	Bayesian crit. (BIC)	19936.561

*** p<.01, ** p<.05, * p<.1

[15] Youth Strategy was developed in 2019.

3.1.2 Resilience components

To explain the difference in the resilience index, the evaluation explored the drivers of changes in each of the resilience components which show that all resilience capacities except for transformative capacity increased between baseline and endline (mean scores for each capacity) (See **Table 10: Contribution of resilience capacities**). There were large and significant positive shifts among ZRBF beneficiaries in the adaptive and absorptive capacities (7 and 5 times respectively from the baseline). ZRBF interventions supported asset accumulation, diversification of livelihoods, commercialisation of productivity, market development, improved extension services, access to early warning information systems etc all with the effect of increasing these two capacities.

Table 10: Contribution of resilience capacities

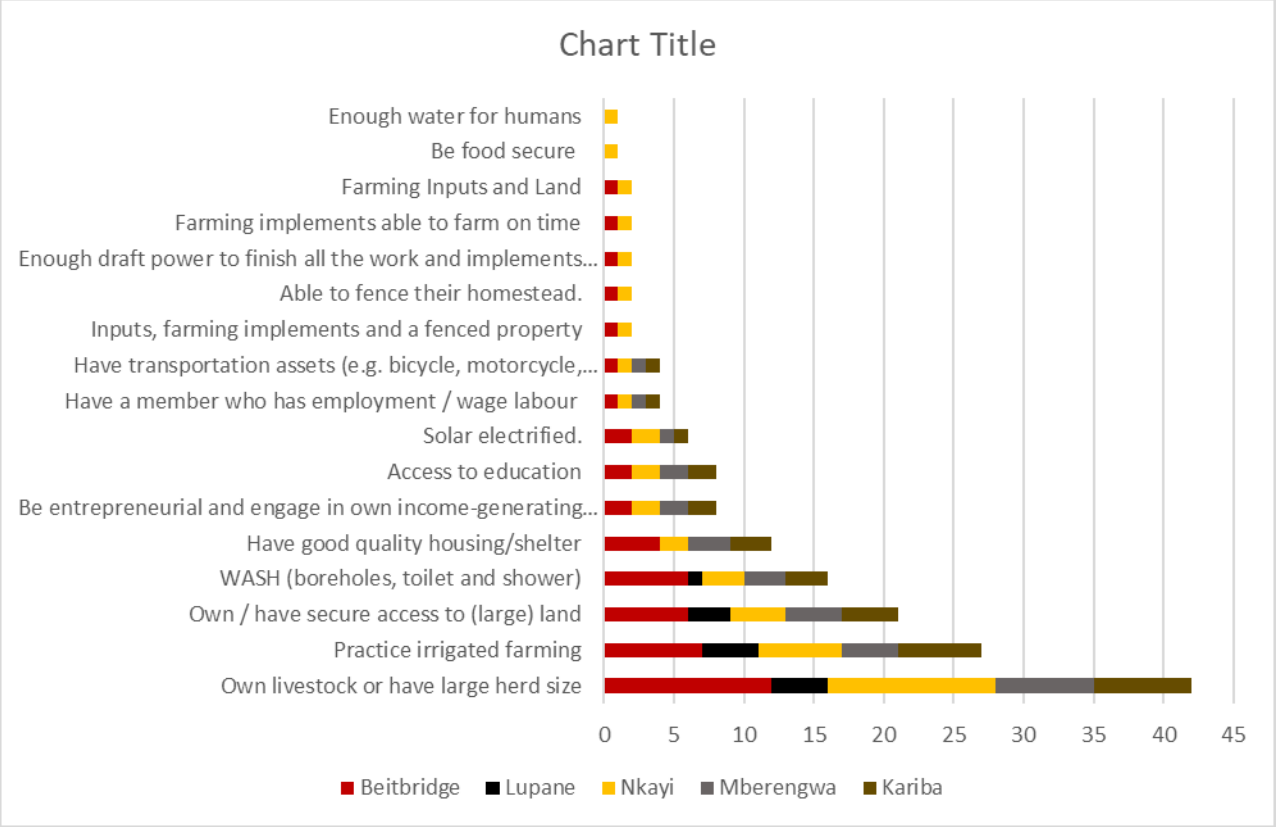
	Endline	Baseline	Baseline to endline
adaptive capacity index	**40.5**	**12.9**	*****
access to information	2.6	2.4	*
asset ownership	15.6	13.6	*
Remittances	0.1	0.3	***
informal social nets	2.8	1.2	*
access to cash	0.2	0.2	***
absorptive capacity index	**36.8**	**10.2**	*****
access to information	2.6	2.4	*
access to cash	0.2	0.2	*
Remittances	0.1	0.3	*
asset ownership	15.6	13.6	*
shock preparedness & mitigation	2.6	1.6	*
transformative capacity index	**49.2**	**64.0**	*****
access to markets	2.5	3.0	**
access to basic services	6.5	6.1	*

*** p<0.01; ** p<0.05; * p<0.1

[a]no corresponding data in baseline

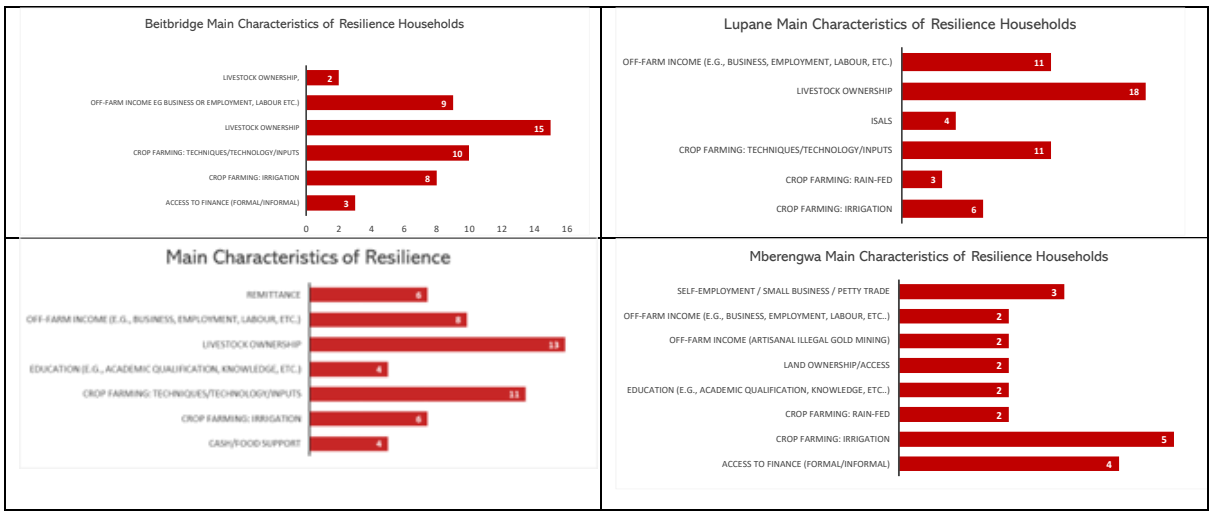
Adaptive and absorptive capacities were also the most observed capacities in the qualitative survey in contributing to resilience. As shown in **Figure 7**, multiple livelihood options (that include on and off farm enterprises), asset accumulation, good water and sanitation access were observed by communities as the most important household resilient characteristics across the five districts visited. In terms of actual features, owning livestock or having large herd size, practicing irrigation farming, own or have access to large piece of land, access to water and sanitation, engaged in entrepreneurship were prioritised in most FGDs. As shall be discussed in 3.2.1 and 3.2.2 ZRBF interventions were aligned to these prioritised interventions. The results, in sections 3.2.1 and 3.2.2 also show the likelihood that ZRBF interventions had significant influence of adaptive capacities.

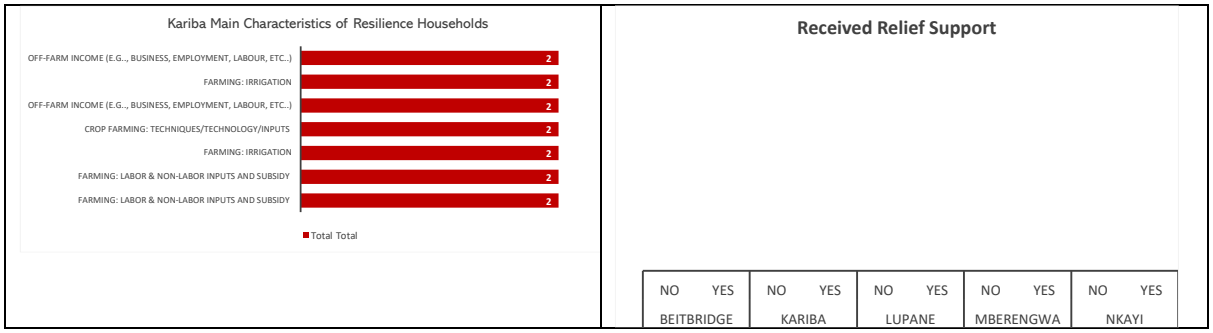
Figure 7: Perceived household resilient characteristics



Characteristics of resilient households interviewed in the qualitative survey also show the strength of these capacities in contributing to resilience (See **Figure 8**). In general, resilient households in the five districts of the qualitative survey had multiple sources of livelihood and included mainly livestock, used inputs and climate-smart agriculture techniques, practised some form of irrigated farming, and had off-farm sources of income. In all districts except Mberengwa they had received some humanitarian support in their life course (discussed more under section 3.5 crisis modifier).

Figure 8: Characteristics of resilient households





The ZRBF made a significant investment in adaptive capacities through the rehabilitation or construction of infrastructure (irrigation, dip tanks, consolidated community gardens etc), supporting the availability of extension services and other agriculture services, etc. Over the course of the programme, ZRBF developed 3967 pieces of infrastructure which improved adaptive capacities as well as forstering transformative change. Supporting training of extension officers and expanding farmer-led extension systems all contributed to strengthening community resilience. These investments have contributed to strengthening community resilience and the advancement of adaptive and absorptive capacities as the capacities are complimentary.

However, transformative capacities were undermined by several contextual factors. Economic stressors have persisted throughout the duration of the programme featuring a dual monetary system (Zimbabwe dollar and United States Dollar (USD)) and high inflation which affected the effectiveness of formal market linkages and led to limited investment in basic services (water, health, education) and rural infrastructure e.g., roads, dams, dip tanks etc., by the government. Zimbabwe also has a low coverage of social protection to provide social safety nets. A recent World Bank study shows only 13.5% of the poor in rural areas are covered by formal social safety nets. These factors hindered interventions for example the dual monetary system affects formal market linkages as the formal markets pay in local currency while farmers demand USD to hedge against high inflation. Farmers resort to informal markets where they sell their produce in USD. The absence of good roads in Kariba was mentioned as the biggest drawback for market linkages as buyers complained about the cost of reaching these farmers. While the programme supported access to quality extension services including farmer-led extension, in some remote areas access to the right quality government extension workers is limited as the areas are less preferred by government agriculture extension staff.

3.1.3 Project level impact

At the project level ZVA makes the largest contribution to resilience for beneficiaries of 49.7% or 46.7 units to the observed resilience index (**Table 11: Impact of ZRBF projects on resilience**). While ZVA has the largest contribution all projects do make significantly large contributions to the resilience capacity of beneficiary households ranging from 42 units in SIZIMELE to 36 units in MELANA.

Table 11: Impact of ZRBF projects on resilience

	Outcome var.	ECRIMS Resilience index	MELANA Resilience index	PROGRESS Resilience index	P-value	SIZIMELE Resilience index	ZVA Resilience index
Before	Control	67.845	66.415	66.945		61.271	70.301
	Treated	71.769	69.385	70.901		60.788	73.467
	Diff (T-C)	3.924*	2.97	3.956*	0.072*	-0.482	3.166*
After	Control	68.466	69.086	60.527		67.852	44.36
	Treated	113.17	108.913	103.805		110.212	94.494

	Outcome var.	ECRIMS Resilience index	MELANA Resilience index	PROGRESS Resilience index	P-value	SIZIMELE Resilience index	ZVA Resilience index
	Diff (T-C)	44.704***	39.826***	43.278***	0.000***	42.36***	50.134***
	Diff-in-Diff	40.78***	36.856***	39.322***	0.000***	42.843***	46.969***

*** p<0.01; ** p<0.05; * p<0.1

A different picture emerges when the proportion of the population of beneficiaries with improved resilience is considered (See **Table 12: Proportion of households with improved resilience in ZRBF projects**). While the ZVA project has the largest contribution to resilience among beneficiaries it has the least proportion of beneficiaries that have improved resilience (84%) (See **Table 12: Proportion of households with improved resilience in ZRBF projects**). Therefore, ZVA while improving resilience for fewer households it does so by a large margin. In contrast, ECRIMS makes a 32% (or 40.78 points) difference to the resilience capacity of beneficiary households and does so for 96.68% of their beneficiaries – smaller changes for a larger proportion of beneficiary households. One plausible cause for this could be the presence of a fewer households in ZVA receiving intensive support (at least three interventions) over the course of the programme implementation (65%) compared to ECRIMS (95%) (see Section 3.2.1 and Figure 19: Percentage of households participating in three or more ZRBF project activities).

Table 12: Proportion of households with improved resilience in ZRBF projects

Consortium	Resilience measurement using baseline median (%)		
	resilience decreased	resilience improved	Total
ECRIMS	3.32	96.68	100.00
MELANA	9.79	90.21	100.00
PROGRESS	8.47	91.53	100.00
SIZIMELE	10.33	89.67	100.00
ZVA	15.88	84.12	100.00
Total	**9.43**	**90.57**	**100.00**

To understand the performance of various projects, the evaluation stratified the ZRBF impact survey according to Zimbabwe classification of livelihood zones. There was a total of 13 livelihood zones (see Annexe 5) for a list of livelihood zones for each ward covered in the impact survey). However, one livelihood zone, Northern Zambezi Valley Communal, had too few cases to facilitate analysis. The use of livelihood zones was chosen as it allows to make comparisons across areas of similar climatic conditions and livelihood systems. An assessment of the performance of ZRBF outcomes in each livelihood zone provides an opportunity to undertake a comparative analysis of the performance of the ZRBF projects in similar livelihood zones. The results show that the underlying livelihood systems must inform design of intervention packages, approach and investment amount to build resilience based on the underlying livelihood options. The analysis, **Table 13: Multivariate regression analysis of climatic condition and resilience outcomes** shows that location influences resilience building of ZRBF interventions. For ZRBF households in Cereal and Low Cotton Communal, and Kariba Valley and Kariangwe-Jambezi Communal livelihood zones participation in ZRBF does not increase their resilience, with resilience decreasing with their participation. This is statistically significant at a 99% confidence level. Participating in ZRBF from Eastern Highlands Prime Communal, Greater Mudzi Communal and National Parks/Forests/Conservancy/Safari Areas livelihood zones have the highest likelihood of being resilient.

Furthermore, there is a high likelihood for ZRBF-supported households living in Cattle and Cereal Farming, Central Northen Semi-Intensive Farming, Eastern Kalahari Sandveld Communal, Masvingo

Manicaland Middleveld Smallholder, Matabeleland Middleveld Communal livelihood zones to have improved resilience, shock preparedness and mitigation and be food secure. These results may explain the differences in partner performance. ZVA is primarily in the Cereal and Low Cotton Communal, Kariba Valley and Kariangwe-Jambezi Communal livelihood zones. These are remote, with high exposure to humanitarian assistance, and significant human-wildlife conflict. Remoteness introduces challenges to the operating environment which undermine the use of interventions of ZRBF. Exposure to humanitarian assistance, coupled with significant human and wildlife conflict (e.g., frequent destruction of crops or loss of livestock by wildlife) contributes to households losing hope to build their resilience leading to significant dependence on external assistance. Such dependence leads to households' limited use of the ZRBF investments. The differences are starker in Kariba for ZVA.

Two livelihood zones were visited for the qualitative fieldwork in Kariba. Ward 8 in Cereal and Low Cotton Communal resilience was viewed as declining by communities despite investments from ZRBF. The major issues were to do with its remoteness, lack of other supportive infrastructure such as roads and high dependence on humanitarian assistance that is almost guaranteed annually. Human-wildlife conflict is very high and significant, food insecurity was very prevalent. Ward 12, in the Central and Northern Semi-Intensive Farming livelihood zone, is bordering Hurungwe district, has good access roads, better access to markets and generally greater participation by ZRBF beneficiaries in programme activities. Beneficiaries are more motivated to improve their resilience than their counterparts in ward 8 providing a sound basis for the performance of ZRBF interventions. This analysis speaks to the importance of:

- supporting local-level resource allocation by local government;
- supporting household mental preparedness to change their lives – the role of exchange visits, and
- greater coordination between humanitarian actions and resilience programmes to ensure the latter does not undermine the shift to building livelihood systems. This is an issue also noted in the Results Oriented Monitoring Report by the EU of 2018.

Table 13: Multivariate regression analysis of climatic condition and resilience outcomes

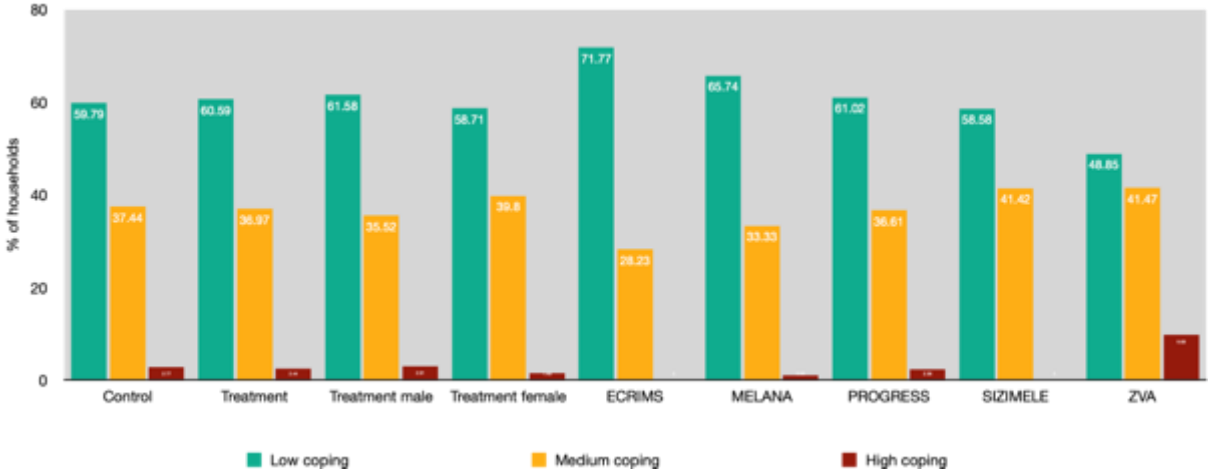
Livelihood zone	Resilience capacity		Shock preparedness & mitigation		Food insecurity experience scale	
	Coefficient	P-value	Coefficient	P-value	Coefficient	P-value
Beitbridge Southwestern Lowveld Communal	0.36***	0.00	0.16	-0.20	0.07*	-0.05
Cattle and Cereal Farming	0.41***	0.00	0.37***	0.00	-0.04	-0.22
Central and Northern Semi Intensive Farming	0.30***	0.00	0.23*	-0.08	-0.01	-0.78
Cereal and Low Cotton Communal	-0.27***	0.00	0.09	-0.59	0.38***	0.00
Eastern Highlands Prime Communal	0.56***	0.00	0.31	-0.19	-0.08	-0.25
Eastern Kalahari Sandveld Communal	0.38***	0.00	0.39***	0.00	-0.07**	-0.03
Greater Mudzi Communal	0.48***	0.00	0.00	-0.99	-0.06	-0.31
Kariba Valley and Kariangwe-Jambezi Communal	-0.23***	0.00	0.19	-0.12	0.18***	0.00
Lusulu, Lupane and Southern Gokwe Mixed Agriculture	0.21**	-0.03	-0.07	-0.71	0.06	-0.24
Masvingo Manicaland Middleveld Smallholder	0.44***	0.00	0.57***	0.00	-0.11***	-0.01
Matabeleland Middleveld Communal	0.40***	0.00	0.48***	0.00	-0.10***	0.00
National Parks/Forests/Conservancy/Safari Areas	0.48***	0.00	0.55***	-0.01	0.02	-0.75

3.1.4 Coping capacities

With increased resilience capacity, households avoid negative coping mechanisms to address disruptions to livelihoods and food consumption. The evaluation explored the changes in households' coping strategies by exploring two indices: the Food Based Coping Strategy Index (FCSI) or reduced Coping Strategy Index (rCSI) and the Livelihoods Coping Strategy (LCSI). The FCSI or rCSI is an experience-based indicator measuring the behaviour of households over the past seven days when they did not have enough food or money to purchase food. The LCSI is an indicator to measure the extent of livelihood coping households need to utilise as a response to lack of food or money to purchase food. The evaluation explains more about the influence of ZRBF on coping strategies in sections 3.2.1 (testing the theory of change) and 3.3 (impact of ZRBF on shock response).

Figure 9: Food Coping Strategy Index shows the status of the FCSI. Less treatment than control households were employing negative coping strategies to meet their food gap (medium and high coping)). The difference between the two groups is not significant (p=0.8557). Nonetheless coping capacity has improved for treatment groups with the proportion of households using medium to high coping declining by about 50% (72% at baseline and 39% at endline). Youth-headed households cope better than other age groups. Women-headed households, as expected given the challenges explained earlier, are slightly more likely to use negative coping strategies than their male counterparts. At the project level, ECRIMS had the highest proportion of households with low coping strategies (that is, not adopting pervasive coping strategies for food deficit) and no households taking on crisis-level coping strategies. However, ZVA at 48% has the least proportion of households that use low coping strategies. About 10% of the beneficiaries of ZVA were employing extreme coping strategies that may be very difficult for them to reverse.

Figure 9: Food Coping Strategy Index



The average livelihood coping strategy index (LCSI) was 2 for both control and treatment meaning that "households were using mildly negative coping strategies that may not affect the overall household's resilience capacity in the longer term" (See **Figure 10**). However, when ZRBF projects are considered ZVA beneficiaries have a higher LCSI compared to other projects, showing they are using coping strategies that could potentially affect the households' resilience capacity.

Comparison with OMS surveys shows households coping capacity has gradually improved with the programme (**Figure 11: Trend in the LCSI**). Showing a similar trend with resilience capacity.

Figure 10: Average Livelihoods based Coping Strategy Index score

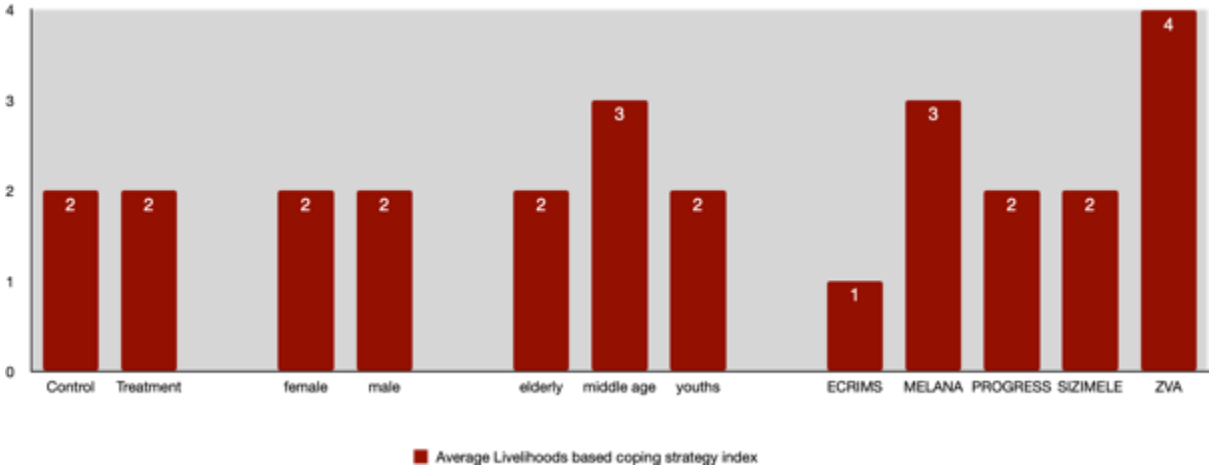
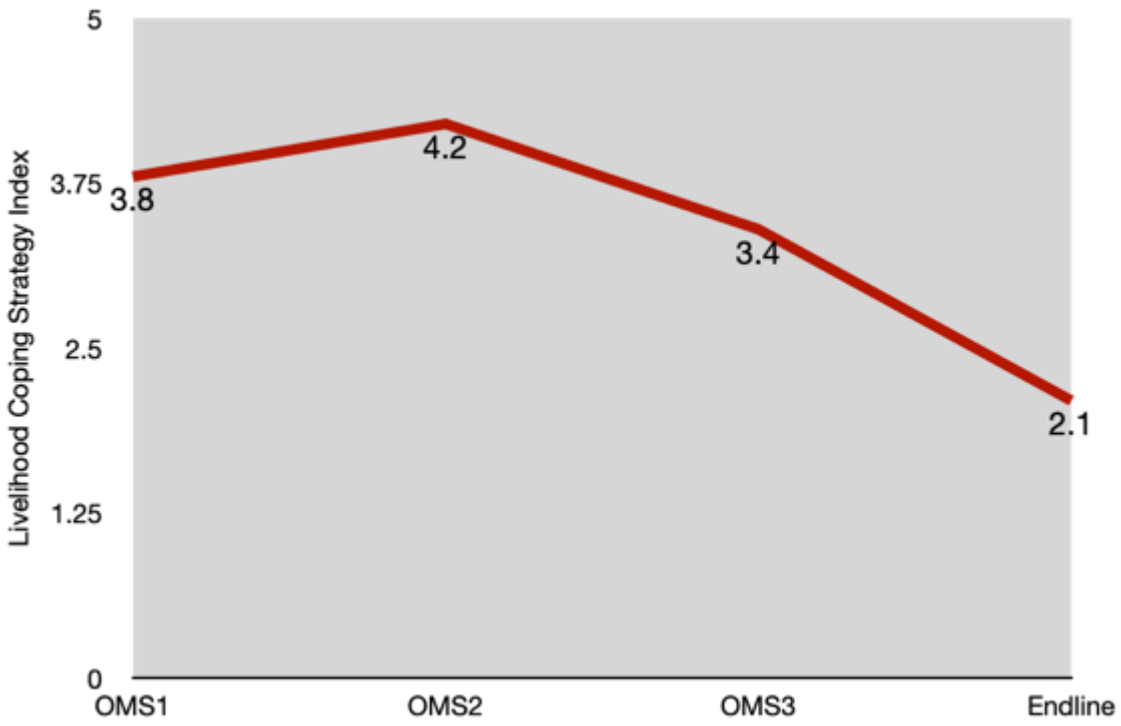


Figure 11: Trend in the LCSI



Source: OMS rounds 1 to 3; endline survey

3.1.5 Food security

Assessment of the food security status of households used three primary indicators (two proxy indicators of food security and a third being a measure of the prevalence of food insecurity respectively): Food Consumption Score (FCS)[16], Household Hunger Scale (HHS)[17] and estimation of the

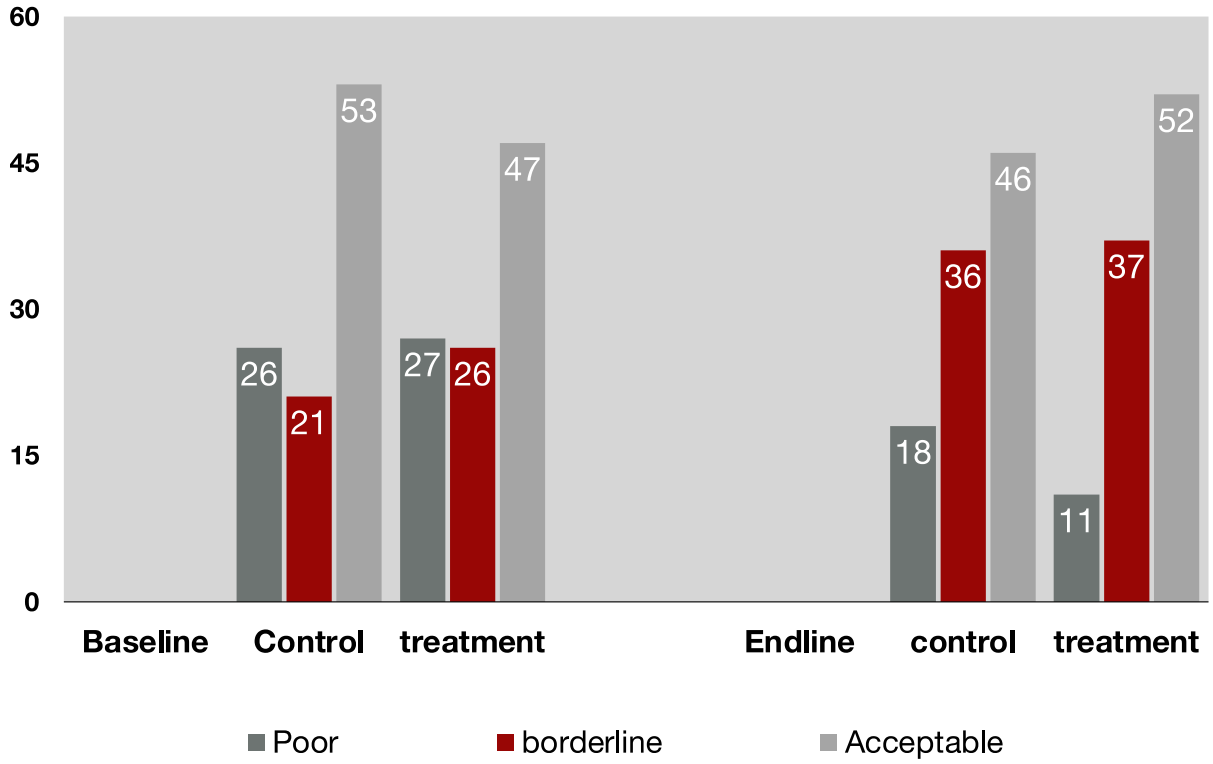
[16] "Food consumption score" (FCS) is a score calculated using the frequency of consumption of different food groups consumed by a household during the 7 days before the survey.

[17] it is a household food deprivation scale based on the idea that the experience of household food deprivation causes predictable reactions that can be captured by a survey and summarized in a scale.

population that is food insecure using the Zimbabwe Vulnerability Committee (ZimVAC) approach. For the third indicator, there was no baseline to determine the level of attribution of the ZRBF programme therefore assessment was limited to a control and treatment comparison at the time of the endline survey.

As shown in **Figure 12** ZRBF managed to protect the food consumption of households. While food consumption worsened in control households between baseline and endline (those with acceptable consumption declining from 53% to 46%), more treatment households improved their food consumption (47 to 52% at baseline and endline). This difference is statistically significant at the endline. While the difference between control and treatment is significant, attribution analysis using the DiD approach shows that ZRBF has made a contribution of 0.78% or 0.313 units to the average FCS for beneficiary households (see **Table 15: ZRBF projects' level of attribution to the average FCS**). This contribution is not statistically significant.

Figure 12: Food Consumption Score



Source: ZRBF baseline survey; and Endline survey

Table 14: ZRBF attribution on average food consumption score

	Before			After			
Outcome var.	Control	Treated	Diff (T-C)	Control	Treated	Diff (T-C)	Diff-in-Diff
FCS	42.856	43.857	1.001	38.083	40.008	1.925	0.924
S. Err.			0.648			0.648	0.917
P-value			0.123			0.003***	0.313

*** p<0.01; ** p<0.05; * p<0.1

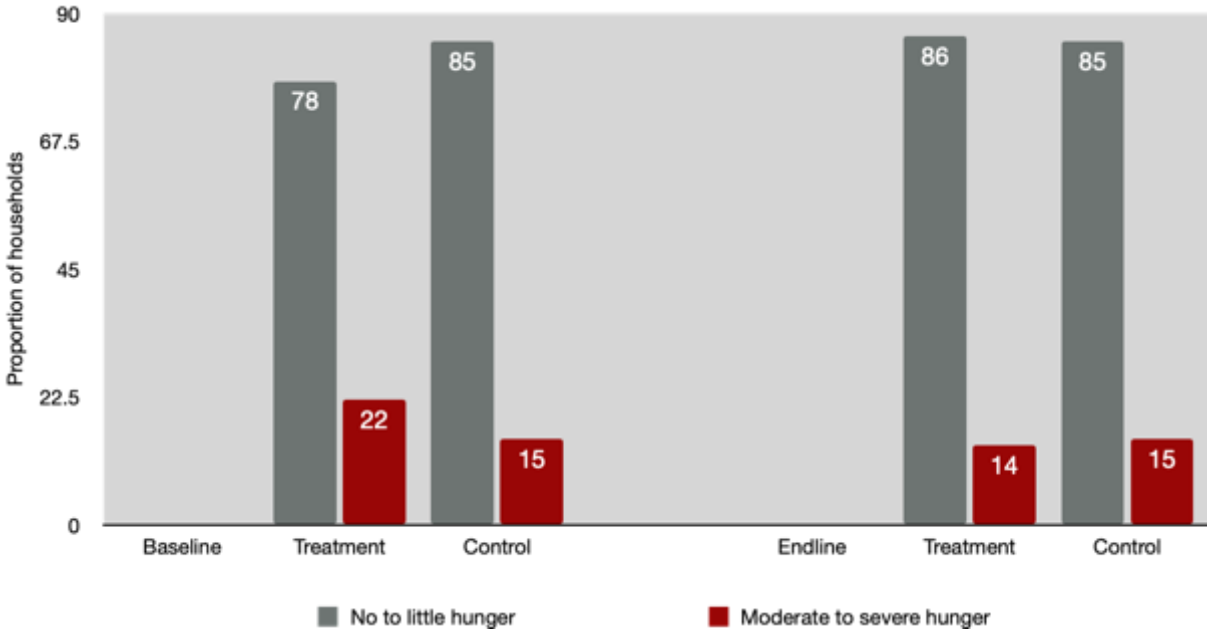
At the project level, consortia have made small contributions to food consumption ranging from 0.18% (SIZIMELE) to 6.02% (ZVA). However, no ZRBF project has been able to make a significant difference on the food consumption score (**Table 15: ZRBF projects' level of attribution to the average FCS**).

Table 15: ZRBF projects' level of attribution to the average FCS

		ECRIMS	MELANA	PROGRESS	SIZIMELE	ZVA
Before	Control	35.194	35.154	31.075	26.469	38.687
	Treated	38.518	39.064	36.831	29.694	41.215
	Diff (T-C)	3.324***	3.91***	5.755***	3.226***	2.528***
After	Control	35.171	31.856	30.428	33.352	26.664
	Treated	40.351	36.103	34.487	36.643	31.065
	Diff (T-C)	5.181***	4.247***	4.059***	3.291***	4.4***
	Diff-in-Diff	1.856	0.337	-1.697	0.065	1.872

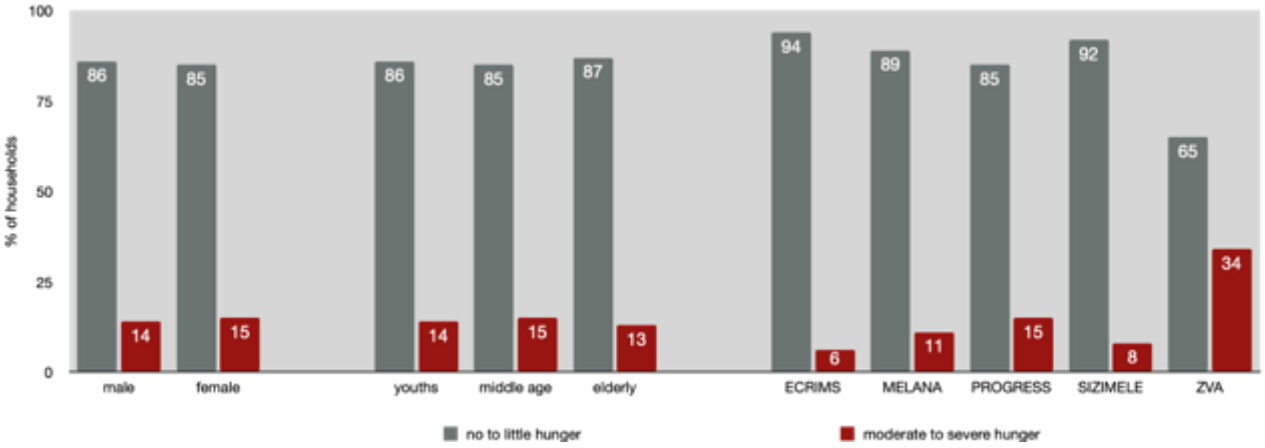
Household Hunger Scale[18], a measure of the severity of food shortages in a household, shows ZRBF is contributing to addressing the worst forms of food insecurity. Results of the baseline and endline analysis are presented in **Figure 13**. The proportion of households in ZRBF experiencing severe forms of food insecurity reduced between baseline and endline (22% to 14%) while control households have remained the same (15%).

Figure 13: Hunger scale classification for ZRB beneficiaries



[18] HHS is an indicator to measure household hunger. HHS is collected by asking three questions on potentially experienced food deprivation at household level over the past 4 weeks/30 days.

Figure 14: Household Hunger Scale by gender, age and project



The difference-in-difference analysis in **Table 16: ZRBF contribution to the household hunger scale** shows that ZRBF increased by 6.4% in the number of households that are in the little or no hunger group. This change is highly significant demonstrating that this would not have been achieved without ZRBF support.

Table 16: ZRBF contribution to the household hunger scale

Outcome var.	Control	Treated	Diff (T-C)	Control	Treated	Diff (T-C)	Diff-in-Diff
Hunger scale	1.25	1.177	-0.073	1.151	1.142	-0.009	0.064
S. Err.			0.013			0.013	0.019
P- value			0.000***			0.504	0.001***

*** p<0.01; ** p<0.05; * p<0.1

At the project level, PROGRESS with a 13% contribution (p=0.000), has the highest contribution to HHS (**Table 17: Contribution of ZRBF projects to household hunger scale**) MELANA (0.092 units; p=0.005) and ZVA (0.093; p=0.023) have an almost similar contribution, while SIZIMELE had no significant contribution to the HHS (p=0.324). ZRBF, therefore, does contribute to reducing the worst forms of food insecurity.

Table 17: Contribution of ZRBF projects to household hunger scale

	Outcome var.	ECRIMS hunger scale	P-value	MELANA hunger scale	P-value	PROGRESS hunger scale	P-value	SIZIMELE hunger scale	P-value	ZVA hunger scale	P-value
Before	Control	1.316		1.39		1.408		1.471		1.307	
	Treated	1.254		1.285		1.249		1.432		1.272	
	Diff (T-C)	-0.062	0.006***	-0.106	0.000***	-0.159	0.000***	-0.039	0.225	-0.036	0.127
After	Control	1.197		1.231		1.236		1.201		1.29	
	Treated	1.191		1.217		1.245		1.201		1.347	
	Diff (T-C)	-0.006	0.797	-0.014	0.561	0.009	0.734	0	0.99	0.057	0.087*

	Outcome var.	ECRIMS hunger scale	P-value	MELANA hunger scale	P-value	PROGRESS hunger scale	P-value	SIZIMELE hunger scale	P-value	ZVA hunger scale	P-value
	Diff-in-Diff	0.056	0.078*	0.092	0.005***	0.167	0.000***	0.038	0.324	0.093	0.023**

The Zimbabwe Vulnerability Assessment Committee (ZimVAC) food security model determines the household food security status by measuring the household's potential access to enough food for a minimum of 2100 kilocalories per day in the consumption period (12 months about 148kg cereals) per household member. The ZIMVAC food security analytical framework computes household food security status by combining a suite of indicators. The indicators of this framework are categorised into; 1) food based indicators-food stocks and own crop production and; 2) income based indicators-potential income from crop sales, potential income from livestock and potential income from other sources such as gifts, remittances, casual labour, pensions and formal employment . The income based indicators are converted into maize equivalent. The model is a linear model that converts income into cereal (maize) equivalent and and add it to own cereal production to determining food security status.

Figure **15** shows the proportion of food insecure households between control and treatment households at the programme and project level at the endline. More control (25%) than treatment (23%) households are food insecure showing that the programme is reducing the prevalence of food insecurity in programme areas. ZVA reported the highest proportion of food insecure households in both control (43.4%) and treatment (34.4%) whereas ECRIMS reported the lowest prevalence of food insecurity for both treatment and control households. Food insecurity was significantly higher in the control group compared to the treated group in the other 4 consortia (ZVA, PROGRESS, and SIZIMELE p=0.000; MELANA, p=0.008) using the two-sample t-test.

Figure 16: Trend in prevalence of food insecurity during programme implementation shows food insecurity has also been declining over time from 44.3% at OMS round 1 to 23% at the endline further demonstrating that as the programme matures key indicators also take the same trajectory as already shown with resilience and coping capacities.

Figure 15: Prevalence of food insecurity at endline

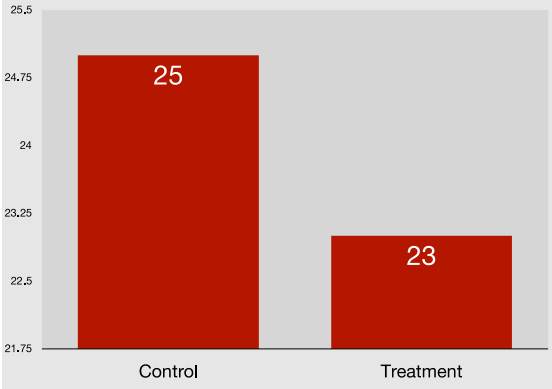
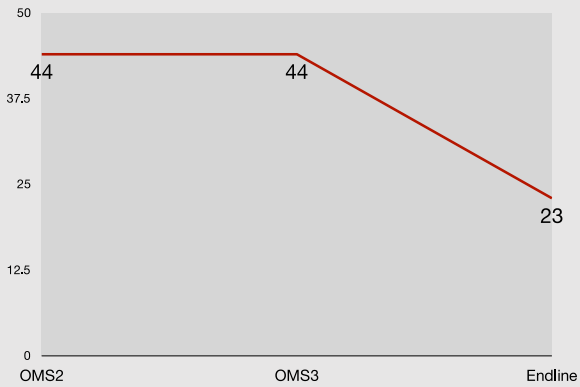


Figure 16: Trend in prevalence of food insecurity during programme implementation

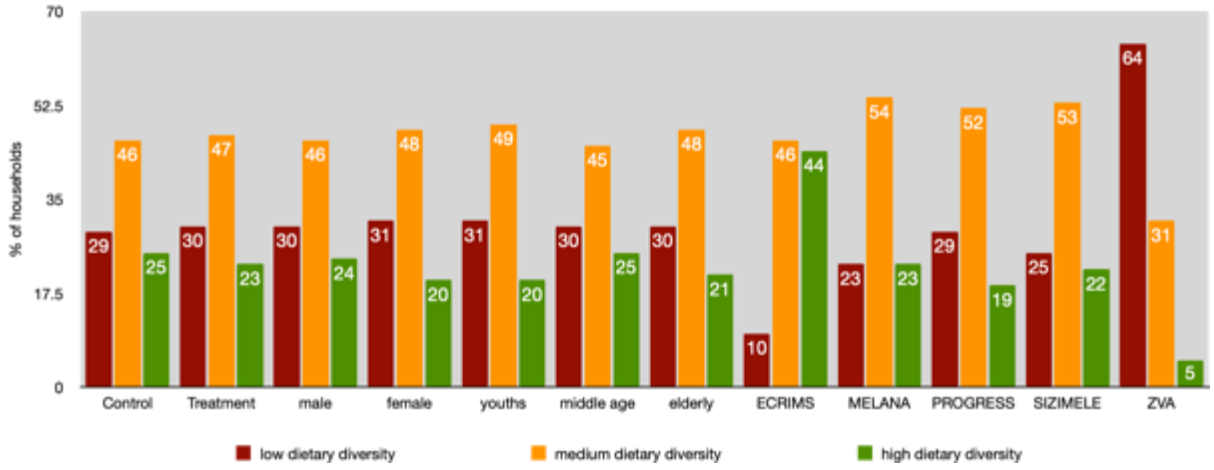


3.1.6 Nutrition

Household Dietary Diversity (HDD) score[19] was used as a proxy for nutrition within the ZRBF project. The results are shown in **Figure 17: Household dietary diversity**. The results show that while food security is improving it is not translating to significant shifts in dietary diversity. Treatment households had high dietary diversity than those in the control group, however, the difference is not significant (p=0.1728). While this is the case at the endline, OMS rounds 1 to 3 show the proportion of households with acceptable dietary diversity increased between each round – from 73.4% in OMS1 to 82.6% in OMS3. The ZRBF programme enrolled UNICEF in 2019 to strengthen the nutrition integration component in community resilience building. this may have contributed to improvements in nutrition-sensitive programming. However, as noted in the FCDO annual review of 2021, the nutrition focus of the programme needed to be enhanced by making it an integral part of programme performance reporting.

There were also no significant differences between age groups and sex (p=0.1894). At the project level, ZVA beneficiaries stand out with 64% of them having low dietary diversity at the endline. ECRIMS project had the highest proportion of beneficiaries with high dietary diversity (44%). These findings for ZVA and ECRIMS are linked to their performance on other food security indicators. For the former, a larger proportion of households had poor FCS, HHS, and prevalence of food insecurity which may point to the inability of those households that were unable to improve their resilience due to their capacity constraints (extremely poor households). The inverse may be true for ECRIMS, that targeting may have been more effective in addition to the project concept that adopted a highly intensive support approach as well as a layered and integrated approach to interventions[20] – where interventions are layered overtime as households' capacity increases (see Section 3.2.1, and Figure 20: Percentage of households participating in three or more ZRBF project activities).

Figure 17: Household dietary diversity



3.1.7 Achievements at an output level

Table 18: Performance of ZRBF on top-line indicators against targets provides details on the performance of ZRBF on top-line indicators against targets. ZRBF managed to meet or over-perform on 5 out of eight indicators that had targets or baseline values. The project did not meet the ambitious targets on the following indicators:

[19] *A qualitative measure of food consumption that reflects household access to a variety of foods.*

[20] Such as irrigated high value horticultural and traditional grains linked to private sector for marketing and investments

- Average monthly household income of vulnerable households receiving ZRBF assistance.
- The proportion of ZRBF beneficiary households with acceptable Household Dietary Diversity Score (HDDS); and
- Percentage of people who used financial services in the past 12 months as a result of ZRBF support.

Despite not achieving the ambitious target of $130 on income, the programme almost doubled the monthly income of households from US$54 at baseline to US$103 at the endline. This indicator also showed progressing increase during the programme implementation as documented in the OMS rounds from US$65.50 (OMS1), US$67.30 (OMS2) and US$98.4 (OMS3). Access to financial services was low in the programme. Formal financial services are limited (credit and weather indexed insurance) and inaccessible with beneficiaries facing several barriers to accessing them as noted in the OMS rounds 2 and 3. The informal savings group provided the programme with the best opportunity to increase this indicator. However, programme investments in informal savings groups varied between projects and are an area for strengthening in a future programme.

Table 18: Performance of ZRBF on top-line indicators against targets

Level	Issue	Indicator	Indicator	Baseline	Endline	Target	% Performance against target
Impact	Food security	Impact Indicator 2	Prevalence of moderate or severe hunger (Households Hunger Scale-HHS) among ZRBF-targeted households	31%	14.24%	n/a	
	Poverty	Impact Indicator 3	Multi-dimensional poverty index for ZRBF targeted households	n/a	n/a*	n/a	
Outcome	Resilience	Outcome Indicator 1	Number of women and men whose resilience has been improved as a result of ZRBF support	0	945,458	830,000	113%
	Coping capacity	Outcome Indicator 2	Percentage of HHs with an acceptable food-based coping strategy index score	38%	60.59%	55	110%
Outcome	Coping Capacity	Outcome Indicator 3	Average Livelihoods based Coping Strategy Index score for households in targeted communities as a result of ZRBF intervention	14	2	3.5	175%
	Access to income	Outcome Indicator 4	Average monthly household income of vulnerable households receiving ZRBF assistance	$54	$103	$130	79%
	Nutrition	Outcome Indicator 6	The proportion of ZRBF beneficiary households with acceptable Household Dietary	63%	69.5%	87%	79.9%

Level	Issue	Indicator	Indicator	Baseline	Endline	Target	% Performance against target
			Diversity Score (HDDS)				
Output	Access to finance	Indicator 2.3	Percentage of people who used financial services in the past 12 months as a result of ZRBF support		21.39%	40%	53%
	Climate Smart agriculture	Indicator 2.5	The proportion of households adopting climate-smart agricultural production technologies (f/m disaggregation)		95.86% (Male: 96.5%) (Female: 94.5%)	95%	100.9%
	Value chain participation	Indicator 2.6	Percentage of farmers who practised the value chain activities (on-farm & off-farm) promoted by the project in the past 12 Months		84.9%	55%	154.3%
	Food insecurity	Indicator 3.2	The proportion of ZRBF programme participants who are deemed food insecure at the peak lean season compared to the district population		23% compared to 25% for the control group.	n/a	

3.1.8 Conclusion

The main finding under this objective is that ZRBF interventions do lead to resilience capacity building. However, the level of effectiveness of these interventions varies by project with the ZVA and ECRIMS having the greatest influence at the household level.

Despite improvements in resilience capacities a proportion of households with improved resilient capacities are yet to fully realise food security outcomes. This clearly shows that resilience is not an end in itself but a means to an end and more time is needed to fully realise the food security outcomes linked to resilience. This relationship varies between projects with ECRIMS showing a large proportion of households that had improved resilience (96%) were also food secure (89%) – 7% cent difference between households with improved resilience and those that are food secure. ZVA had the largest difference between households with improved resilience capacity and those food secure (84% and 66% - a difference of 18%). The lower proportion of households with acceptable FCS (than those deemed food secure) also demonstrates the transient nature of food security for beneficiaries' households.

The mixed performance among projects and the inability of the resilience capacity to transform the food security situation for some beneficiaries of ZRBF can be explained by exogenous factors (timing of exposure to shocks and performance of transformative resilient capacity).

Resilience programming is better targeted at households with capacities mainly the poor or those with transient food insecurity are either labour constrained with assets and with good social capital (e.g.,

access to regular remittances, pension benefits etc.), or have assets, labour but no cash to fully utilise the available assets. In order to understand which of these groups were targeted by the ZRBF programme and therefore determine the effect of targeting on resilience outcomes the evaluation conducted a probit analysis to estimate probability of certain household characteristics participating in the programme. The analysis offers an indication of the effectiveness of the targeting approach by matching the treatment and comparison groups on a set of salient characteristics that influenced the participation of households in the programme. The results are shown **in Table 19: PROBIT estimates for participating in ZRBF**. Those growing small grains planted cash crops, and larger household sizes were likely to be involved in the programme. Lower age groups, those without cattle and smaller or no land were also likely to participate. Among these, those without cattle had a much higher chance of participating in the programme.

Table 19: PROBIT estimates for participating in ZRBF

Factor	Coefficient	Standard error
average age	-0.001	0.002
household size	0.008*	0.005
average age of adult members	0.009***	0.002
Land size (acres)	-0.045***	0.003
head education level	0.000	0.001
household own cattle	-0.127***	0.026
household planted cash crops	0.453***	0.038
household planted small grains	0.258***	0.026

Source: ZRBF baseline data, 2018

While ZRBF recognized the importance of targeting on resilience outcomes, the need to leave no one behind led to the enrolment of extremely poor housheolds on the programme. This is commendable but inadevently led to enrolment of target groups that need much more support than was avaibale through the ZRBF, e.g., medium to long term cash transfers. This challenge is more pronounced in high chronic poverty areas such as Kariba rural, Mbire, and Binga, where ZVA operated and may provide a reason why fewer ZRBF households were resilient and more ZRBF households, were food insecure at endline. Based on these results targeting is important for ensuring beneficiaries with potential for resilience building are targeted and that geographical location of the programme is ideal for resilience building within the resources and scope of the programme.

Other context issues had a role to play in the performance of the ZRBF interventions on resilience and food security. As shall be discussed under section **Error! Reference source not found.** shock exposure and severity were high during the programme implementation period, with communities in ZRBF areas facing consecutive droughts, livestock death due to diseases and reduced market functioning due to COVID-19. All this was overlaid with economic stressors – high inflation, price distortions etc. While the Outcome Monitoring Surveys (OMS) showed households able to recover from these shocks, the sequencing, overlaying and severity had the impact of slowing the ability of households to use their resilient capacities (mainly adaptive capacity) to stabilise food consumption. COVID-19 also put a strain on implementation by programme partners, especially during the lockdown periods in the second quarter of 2019 and early 2020, resulting in delays in implementation of activities that needed physical interaction with beneficiaries. Some interventions had not yet matured at the time of the evaluation

> "I did not have farming inputs and manpower and I was always the last one to plant in my field, but when the Pfumbvunza program was launched, I realised that we could help each other and till in groups and then we started getting inputs from Progress and managed to get better yields." **Beitbridge Old Nuli, KII with resilient household (category $B1_a$)**

as was noted in some areas. Beneficiary 1 (see below) shows that the goats provided by PROGRESS, at the time of the endline, were still to result in large goat herds that would allow her to sell to meet household needs. Similarly, Beneficiary 2, increased their goat herd size to three but was still not in a position to start disposing of the asset to meet household needs.

> ***Beneficiary 1****: "At first, I joined ISALs and with that money I managed to buy things wholesale and resale them for example blankets. This helped me to become resilient because even though I had less or little yield in the fields I could still manage to feed the family. I also received 2 goats from Progress and one of the goats has a kid at the moment I am still breeding the goats until they have increased in number then I will start selling them"* **Beitbridge, Shabwe area, KII with a resilient woman household**.
>
> ***Beneficiary 2:*** *"I also used to attend RBF meetings and as a group we were given money and we used that money to buy 2 goats, one goat died but with one remaining goat we managed to breed until we each get one goat and with one I managed to breed and I now have 3 goats."* **Nkayi, Maqeda area, KII with a resilient woman household.**

3.2 Objective 2: Test the program and projects Theory of Change (ToC) through quasi-experimental or experimental methods to determine their impact on resilience outcomes at the community, household and individual level.

In this objective the evaluation answered the following three main questions:

1. Which interventions or combination of interventions worked or failed to work, for whom and why and under what range of climate conditions?
2. What, if any, are the unintended consequences, positive and negative, of selected ZRBF-funded projects?
3. What has been changed or adapted in terms of intervention design and why?

Summary of Findings

The assessment to check which ZRBF interventions are strategic in the resilience-building pathway showed that value-added practices, and value chains, had the highest contribution followed by improved crop practices, improved livestock practices and improved water and soil practices. In addition, improved livestock; water and soil practices are more likely to improve households' ability to prepare and mitigate shocks.

A sequenced and layered approach is best suited to deliver better household outcomes (resilience capacity, capacity to mitigate effects of shocks, recovery from drought etc.). This was confirmed by the OMS round 3 and both end-line quantitative and qualitative studies.

The more interventions a household participated in, the more income and expenditure they would likely experience. However, the implementation of activities in isolation is likely to produce less impact especially if the activities are transformative in nature.

When resilience increases, households are less likely to engage in crisis (low cost) and emergency coping strategies which is statistically significant at a 99% confidence interval. The influence is particularly large for use of emergency-related coping strategies which are also known as medium-cost coping strategies where a one-unit change in resilience leads to 23 units decline in the use of emergency coping strategies. A unit change in the resilience index results in about 11 units in the use of stress-related coping strategies which are reversible in the short term.

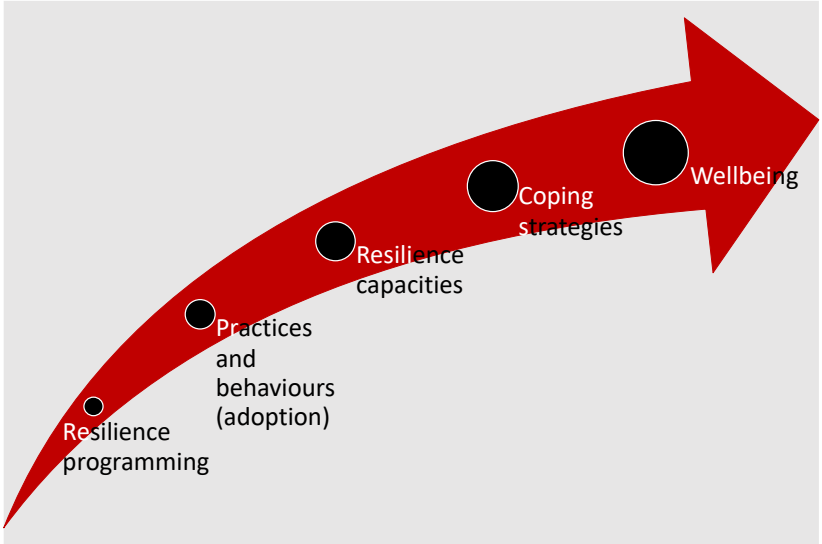
3.2.1 Testing the resilience pathway

To assess the contribution of ZRBF interventions on outcomes, the evaluation first assessed the level of participation in ZRBF climate-smart agriculture activities (CSA). This was followed by regression analysis to determine the level of contribution between participation in these activities and key ZRBF outcomes.

This section tests the hypotheses in the resilience pathway for ZRBF presented in Figure 18: Resilience pathway for ZRBF.

- **Hypothesis 1:** Assumes increased adoption of ZRBF resilience building Climate Smart Agriculture (CSA) practices.
- **Hypothesis 2:** Once households adopt or practice the CSA practices, they will improve their resilience capacity.
- **Hypothesis 3:** Resilience capacities will enable households to respond to shocks in a way that does not compromise their future resilience. They engage in short-term reversible strategies.
- **Hypothesis 4:** As households enhance their response mechanisms, they are better able to stabilise and diversify food consumption and thus improving their well-being.

Figure 18: Resilience pathway for ZRBF



Source: OMS 3 report

Hypothesis 1 and 2: Contribution of ZRBF interventions to outcomes

Adoption of project activities

Table 20: Participation in ZRBF interventions shows the high adoption of ZRBF-promoted CSA practices. The highest practices were for crops and livestock (average of 4 and three) and one practice for the value chain, value-added and water and soil practices.

Table 20: Participation in ZRBF interventions

	crop practices	liv practices	Value chain practices[21]	value added practices[22]	Water and soil practices
Mean practices	4	3	1	1	1
Proportion of ZRBF beneficiary households adopting	42%	39%	60%	65%	37%

Contribution of interventions

Table 21 presents results of multivariate regression analysis to understand the contribution of various ZRBF CSA practices to resilience, food insecurity, shock recovery, household expenses, livestock diseases and crop pests. Value added practices and value chain practises have the highest contribution to resilience. A unit change in value added practices and value chain practices leads to approximately 7 units (significant at 99%) and 5 units (significant at 95%) change to the resilience index respectively.

[21] Value chain practices: Marketing and distribution; post-harvest handling and storage

[22] Value added practices: Improved quality control technologies (sorting, grading); Drying, packaging, storage; Food processing (peanut butter, oils, amarula jam, honey); Branding and labelling (e.g., of honey, peanut butter)

Similarly, a unit change in improved crop practices yields approximately 4 units change in the resilience index. A unit change in improved livestock practices leads to about 2 units change (significant at 95%) in the resilience index and is statistically significant 99%. Improved water and soil practices have insignificant contribution to resilience capacity.

Improvements in the CSA practices are likely to improve the food security situation of households by small margin of about 0.1%[23]. However, their contribution is not statistically significant since this is incremental and the program need more time to fully benefit from CSA practices. With regards to shock preparedness and mitigation, improved livestock and water and soil practices are more likely to improve households' ability to prepare and mitigate shocks.

In general, adoption of the CSA practices has a small but significant effect in improving household's recovery from drought. The trend is the same for recovery from livestock and crop diseases.

Table 21: Contribution of ZRBF activities to selected household outcomes

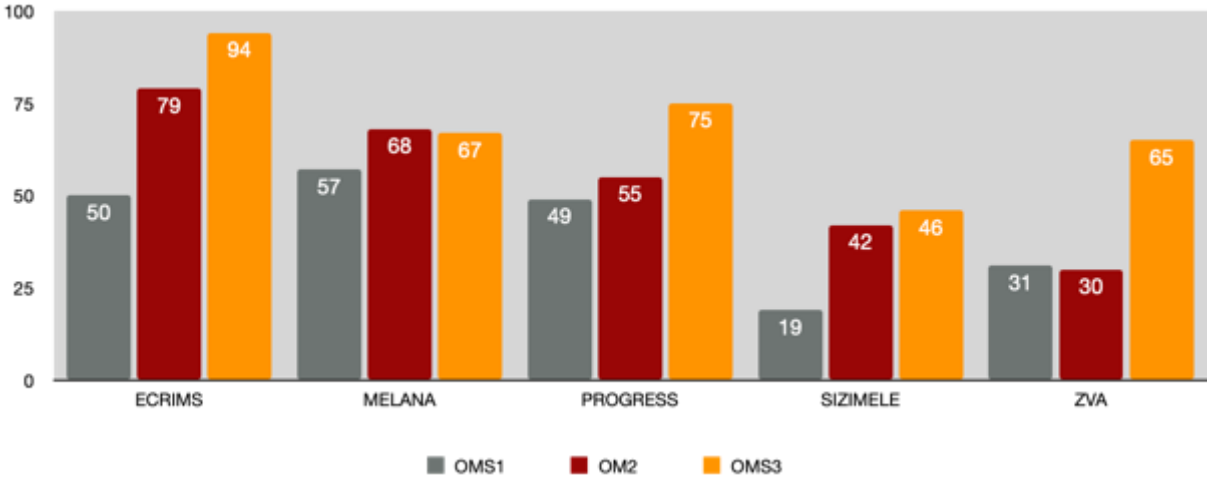
	Resilience capacity index	Food insecurity experience	Shock preparedness and mitigation	Household expenses	Recovery from drought	Recovery from livestock & crop disease
Improved crop practices	3.906***	-0.001	-0.057***	13.387***	-0.011***	-0.008
Improved livestock practices	1.598**	0.004	0.055***	0.91	0.002	0.004
Value added practices	6.587***	-0.012	0.051	4.082	0.013	-0.060***
Value chain practices	5.168**	-0.027**	-0.113***	16.169	-0.01	-0.01
Improved water and soil practices	0.91	0.002	0.065**	-23.591**	-0.005	0.021

*** p<0.01; ** p<0.05; * p<0.1

The analysis on multivariate regression analysis above (**Table 21: Contribution of ZRBF activities to selected household outcomes**) shows the disadvantage of implementing activities in isolation as each activity has mixed contribution to various expected household outcomes. A sequenced and layered approach is best suited to deliver better household outcomes (resilience capacity, capacity to mitigate effects of shocks, recovery from drought etc.). For example, the OMS round 3 found that the more interventions a household participated in the more income and expenditure they would likely experience. It found that each activity added about US$0.35 per person to household income. The report also showed that households participating in at least three activities (small grains, livestock, and ISAL and these three and water infrastructure, value chain activities, collective action) were less likely to face moderate to severe food insecurity and were likely to increase their resilience capacity. The programme progressively layered interventions (increase in households in three or more activities), however, the layering was varied across projects as shown in **Figure 20: Percentage of households participating in three or more ZRBF project activities**. High layering in ECRIMS (94% of households in three or more activities) can explain its better performance across key outcomes.

[23] This finding is corroborated by that of the OMS round 3 survey.

Figure 19: Percentage of households participating in three or more ZRBF project activities Figure 20: Percentage of households participating in three or more ZRBF project activities



Source: ZRBF OMS rounds 1 to 3

Hypothesis 3 and 4: Contribution of resilience to coping strategies and wellbeing

Table 22: Summary of correlation between resilience, food insecurity and shock preparedness and mitigation, shows a weak relationship between resilience and food security at endline and the need for more time to realise food security outcomes. Households that can respond to shocks (idiosyncratic and covariate shocks) are more likely to be resilient.

Table 22: Summary of correlation between resilience, food insecurity and shock preparedness and mitigation

	Resilience capacity	Food insecurity experience
Resilience capacity		
Food insecurity experience	-0.2349**	
Shock preparedness & mitigation	0.01	-0.0674**

*** p<0.01; ** p<0.05; * p<0.1

Table 23: Summary of regression analysis results of resilience index versus livelihood-based coping strategies shows that as resilience increases households are less likely to engage in crisis and emergency coping strategies and is statistically significant at a 99% confidence interval. The influence is particularly large for use of emergency-related coping strategies where a one-unit change in resilience leads to 23 unit decline in the use of emergency coping strategies. A unit change in the resilience index results in about 11 units in the use of stress-related coping strategies which are reversible in the short term.

Table 23: Summary of regression analysis results of resilience index versus livelihood-based coping strategies

Livelihood based coping strategy categories	Regression coefficient	P-value
[a]Crisis	-7.12941	0.00***
[a]Emergency	-23.4129	0.00***
[a]Stress	10.99541	0.00***

[a]Crisis: reduced non-food expenditure, sold productive assets, withdrawing children from school, sold non-productive animals

[b]Emergency: begging for food, sold land or house, sold last breeding female animal
[c]Stress: sold household assets, spent savings and borrow money to buy food.
*** p<0.01; ** p<0.05; * p<0.1

The resilience pathway as envisaged by ZRBF is strong. However, the links are affected by the strength of different stages along the pathway. This is influenced by the targeting approach and contribution of resilience capacity components to the observed resilience in particular adaptive and absorptive capacities and livelihood zone in which the ZRBF household is located.

In the qualitative survey, the resilient pathway is also clear: adoption of new practices, build-up of mainly adaptive capacities (livelihood diversification, asset accumulation), using assets and diversified livelihoods to withstand and recover from shocks. **Table 24** provides a summary of how selected ZRBF resilient households were able to build their resilience capacities, as well as shock preparedness, mitigation and response. The resilient pathway for the youth from Lupane was based on adopting livestock quality improvement interventions from ZRBF which improved the health and productivity of existing livestock enabling him to fetch higher prices on the market. With improved performance of livestock, he was able to strengthen his crop farming enabling him to produce a surplus for resale. The same pathway is observed from the resilient youth beneficiary from Nkayi. Support from ZRBF has enhanced the establishment of integrated farming systems.

The pathway to resilience also shows that for ZRBF interventions to work households need pre-existing assets (physical and social) they can build on to create the integrated farming system. Not only have ZRBF beneficiaries used CSA practices to establish integrated farming systems but income from on-farm activities is being used to create off-farm enterprises to diversify livelihoods as shown by the female ZRBF beneficiary from Lupane (see **Table 24: Pathways to resilience for selected resilient households in ZRBF**. It also demonstrates that when effective, ZRBF interventions can build a variety of resilient capacities that work together to improve coping strategies in times of shock. The male beneficiary from Mberengwa shows how adopting ZRBF interventions enabled him to draw added value from his social networks which have enhanced his ability to be resilient and build an integrated and diversified livelihood system. Improved availability of quality agriculture extension services was also a key contributor to the resilience pathway as shown by the story of the youth from Lupane and the male from Nkayi (**Table 24**) .

While adopting ZRBF-promoted CSA practices leads to resilience, it does not do this alone. In some cases, such as that demonstrated by the male from Nkayi, existing social assistance and other programmes to which they are beneficiaries also mutually reinforce the resilience-building effect of the two parallel interventions. Across all examples in **Table 24** resolve and determination of beneficiaries are important to ensure the resilient pathway works.

> *"I am better than other households because I work hard, and I always have food for my family even if the yields are poor, I always find something to do."* **Beitbridge, Old Nuli area, KII with a resilient female household.**

Table 24: Pathways to resilience for selected resilient households in ZRBF

District	Category	Pathway
Lupane	Youth	*"After realizing that there is climate change, the weather is not like before, I planned my way forward and decided to change how I used to do things. After being taught by LEAD on fodder and stock feed production, I started making my folder for my livestock in 2018. I would take the remains in the fields to prepare for my livestock. Agritex officers also taught us a lot of things when it comes to livestock and now, I am using that knowledge and information. I now know how to take care of healthy livestock. I now sell my livestock. From the sale of livestock, I managed to pay for my children's education. It also helps me to maintain my farming tools and inputs. I farm maize knowing that people will buy it because*

District	Category	Pathway
	Female	*it's our staple food in our village, from the sale of our crops I managed to change my cattle breed.* *I do not face any financial problems; my children's school fees are always paid and I can also manage to buy chemicals and medicine for my own livestock."* *"In the past years I have managed to sell livestock and buy grains so that when drought comes, we do not starve. There is always drought here so if there is drought I resale my grain to other villagers. I also keep chickens, and this made me manage to look after my family and also pay fees for my children. I also joined ISAL group where we loan each other money to start small businesses and projects."*
Beitbridge	Female	*"I got stockfeed from IRC which has helped with the feeding of my livestock. with the help from IRC my child graduated from university. I had six bulls which I managed to sell and pay for two semesters at university. the stockfeed helped increase my livestock herd as I did not face any animal death due to drought. We were taught about artificial insemination by Progress. After that they came with a veterinary doctor to test whether the cattle were good for insemination. From my cattle, seven got inseminated and all of them gave birth. no calf died so my cattle has multiplied increasing my herd. The fodder that I make now helps with the feeding of the cattle. I got lessons on fodder making from Progress. Even today I still make fodder for my livestock. I also got white sorghum and other seeds from Progress. I also got a breeding bull now I have the Thuli breed among my cattle."*
Nkayi	Youth	*"For us to be able to be resilient it's because of livestock. from livestock we got manure for the fields and we would sell some of the livestock like goats to buy fertilisers. when the farming season is over, we then start with gardens. at the garden we have different vegetables that we sell to get enough food. our aim is to be food secure always. sometimes we are fortunate enough to buy livestock from selling vegetables. if there are no rains, we do brick moulding. from brick moulding we get to build more rooms in the yard and also sell some of the bricks. we have managed to also buy and sell clothes from the money we get from selling bricks."*
	Male	*"I am a farmer so each time I get surplus I sell to provide for my family. I normally farm maize, small grain crops like millet and sorghum. I also plant sweet potatoes which I then sell to get money. When I am selling either maize, sorghum, millet or sweet potatoes i do not limit myself I accept anything be it money or goats or chickens. I sometimes sell these to get money. I normally get inputs from Agritex officer which are meant for Dhinga udye [Pfumvunza – government conditional input 100% subsidy programme] which we also plant in our fields. I also have snowapple or African chewing gum tree in my yard so when they are ripe I sale them in Bulawayo then I use the money to buy sugar. Some few years ago I sold my goats and used the money to buy mealie meal in Messina for resale. I have a garden where I grow vegetables and maize meal which I then sell to other village members. All these have helped me to be resilient."*
Mberengwa	Male	*"Firstly, I would say I worked a lot with ECRIMS which is where I gained most of my education and knowledge about projects. They taught us that a person should not just sit but be active and use their own hands to survive. So, in that journey of acquiring knowledge from ECRIMS, they used to give us allowances when we attended workshops to cover travel and subsistence. That allowance money I would not spend a cent of it. I saved the money and used it to start a poultry business. This was the first big sign of perseverance and resilience that attracted everyone who ended up helping me along the way. So I was keeping chickens. My brother who is in South Africa visited us and saw that I had almost 100 chickens. He admired my perseverance and decided to help me through drilling of a borehole at the homestead as well as paying for the installation of solar powered water pumps as a start-up for my household. I managed to buy water pipes and laid them around the field and started irrigated crop farming. As we were farming, the same brother came back again and was impressed with the work that we were doing with the irrigated crop and bought us a tractor and encouraged us to put the same effort at our dry land for rainfed crop farming. This is what we are currently doing. We also rent out the tractor for extra income. So, at the moment I feel we as a household are at a better place, though one can never say they are rid of all the problems. We managed to implement the skills that we were taught by ECRIMS on our own without having to wait for direct cash assist to start. Having that knowledge enable us to identify opportunities to maximize use of water when we now had our own borehole. For example, we managed to turn an old water harvesting*

District	Category	Pathway
		tank that was bought by our father in the 1960s that was lying idle into a fishpond. We are ow doing our fishery project."
Kariba	Male	*"My family did not have difficulties in getting food during the difficult times because we were able to sell our goats and buy farming inputs on time which other families could not do during difficult times; we were also able to fence our garden and build improved goat pens. Thus, we got protected from wild animals while other families were unable to survive the wild animal attacks on their gardens and livestock. Since we were given a water cart and some containers, we were able to get water for our animals easily and for home use which other families were unable to do in this dry area. I was nominated to be a paravet and also trained to be a lead farmer, that gave me a lot of knowledge in the area of goat farming, my wife and children now also have better knowledge in goat farming. As a family we helped other families with food and ZRBF now refers other families to me so that I share knowledge with them."*

3.2.2 Community understanding of resilience

The qualitative explored further the concept of resilience in ZRBF operational areas focusing on:

- What are the characteristics of resilient communities and individuals?
- What interventions are important for building resilience?
- What interventions have worked in the past to build resilience?

Focus Group participants in all districts were first asked to define what resilience means to them and asked to list as many characteristics as possible of their ideal resilient community. Groups listed a range of 6-15 characteristics. The groups participants were given 6 beans to individually and independently score what they considered to be their top three most important community resilience statements (3 beans for first, 2 beans for second and 1 bean for third). The statements were then placed in order of highest to lowest scoring. Statements that did not score any beans were removed.

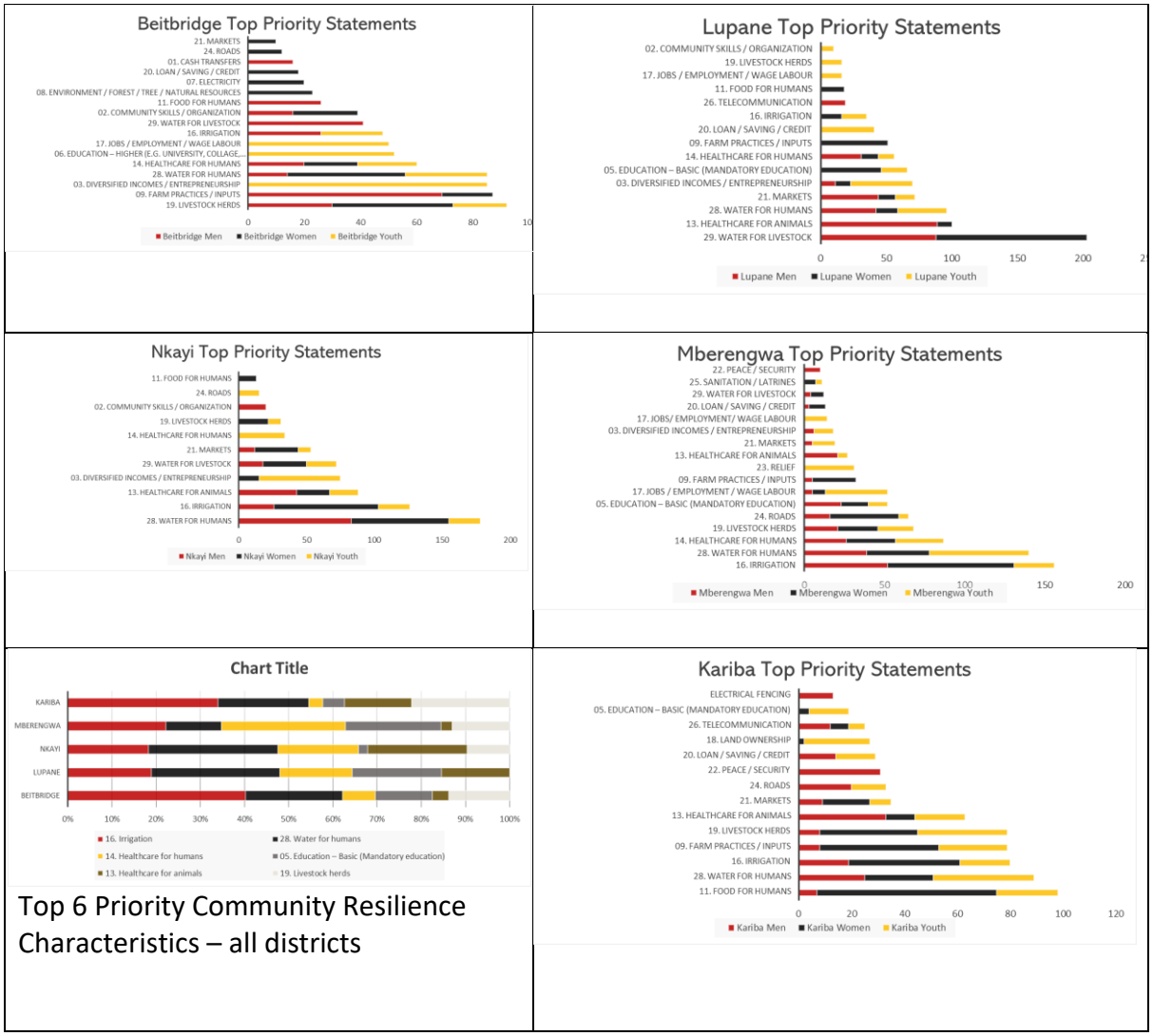
Figure 21: Community scoring on resilient capacities presents results of this scoring.

> "Irrigation has low chances of crop failure since the water will be available throughout the year. We are in farming region 5 meaning rainfall in this community is usually expected to be low unlike other regions like in Mutare or Harare. Hence through having an irrigation we would have had overcame our biggest shot which is drought; Also irrigation has no climate change because water is always there, all the crop planted will reach maturity because is always available; Irrigation is important because most of time the schemes are led by experts in farming who can advise on the type of soil and what should be planted which is different from personal rain fed crop farming where cop choices might not be as informed." **Mberengwa, Zenda area, FGD with Men**

Overall, the presence of irrigation schemes scored highly across all five districts as a measure of a resilient community. This was followed by adequate access to water for humans and then health care for humans followed by health care for animals/livestock. Availability of basic education was prioritised similar to health care for animals signalling its importance for household resilience. Presence of large livestock herds was also viewed as important for community resilience. The high ranking of irrigation and water for humans shows the importance of improved water availability for cropping and humans in any resilience building programme. While the presence of irrigation was consistently highly prioritised across all districts there were differences between districts. For example, in Mberengwa health care for humans was prioritised over irrigation, in Nkayi water for humans and health care for livestock were prioritised as top two while in Lupane water for humans and basic education were prioritised. There were also differences between groups of respondents across and within districts. Youth viewed a resilient community as that which has access to entrepreneurship, has basic education, has access to jobs/employment/wage labour, with the exception of youths in Mberengwa and Kariba. In Lupane, women and men both prioritised water for livestock because:

"Animals are not able to look for their own drinking water. Water is also important for our livestock because they are our main livelihood. We depend on these animals. Animals here walk for long distances to go to the nearest water source." **Lupane, Mphahla area, FGD with Men**

Figure 21: Community scoring on resilient capacities



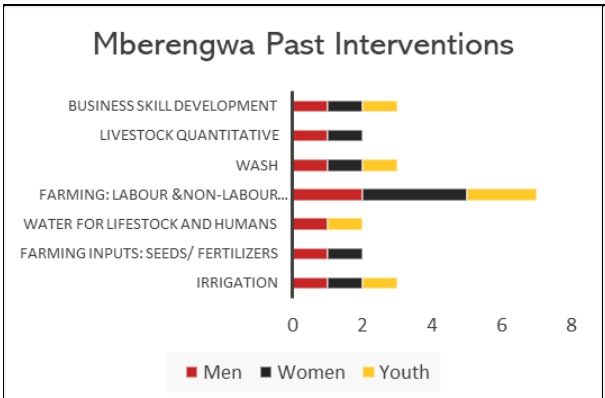
Top 6 Priority Community Resilience Characteristics – all districts

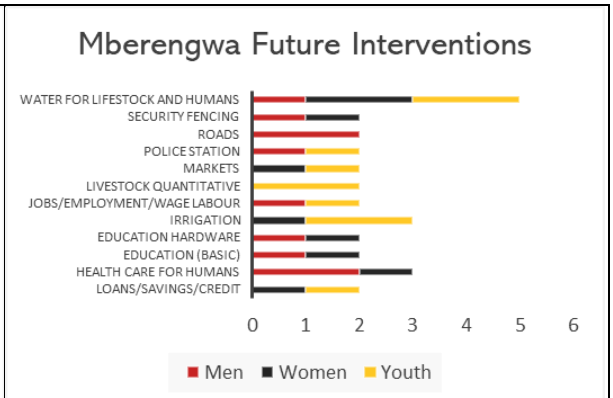
Communities were also asked about what interventions implemented in the past and current they considered as important for community-level resilience building. Results are presented in **Figure 22: Community perceptions on ideal community resilience building interventions** – showing the number of FGDs where these interventions were mentioned. As expected, interventions varied across districts and between groups of respondents (men, women and youth) but focused on building the adaptive capacities of households. Past interventions that supported livestock accumulation and health, irrigation, nutrition, access to crop inputs and labour, water for

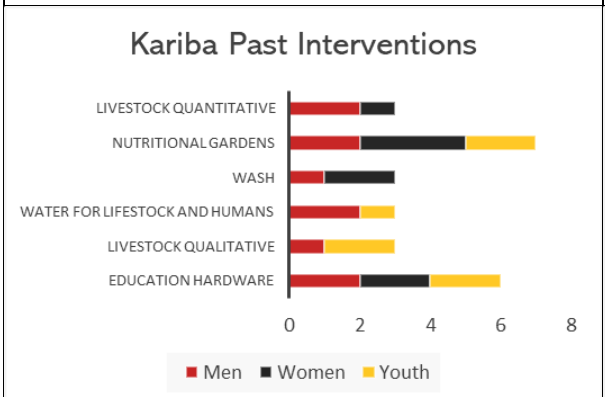
"Transport and road network are very important because as it is the roads here are very poor and they do not promote business because no one wants to come this side . Poor access to markets - Markets will help so that people sell their produce and it will create jobs for the youth and develop the community. irrigation scheme - there is need for irrigation so that people may be empowered and they are able to grow all year round and improve food security in the community." **Lupane, Mdlankunzi area, KII with a resilient household.**

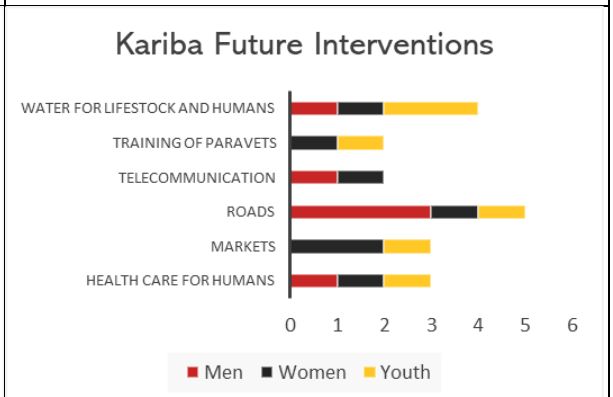
livestock and humans, and food aid were identified as the most effective at building community resilience across all districts. However, in Kariba interventions that build transformative capacities were viewed as ideal to build resilience in the future. These interventions mirror the support provided by the ZRBF programme and therefore reinforce the appropriateness of ZRBF interventions in building resilience. While interventions are appropriate, implementation of these interventions across projects had varying effects depending on the implementation approach. These include: 1) theft and non-replacement of solar powered water pumping systems (e.g., in PROGRESS), 2) death of livestock provided before multiplication due to diseases or wildlife attacks (PROGRESS, SIZIMELE), 3) death of calves after artificial insemination, among others.

Figure 22: Community perceptions on ideal community resilience building interventions









Qualitative data from key informant interviews with community-identified resilient households benefiting from ZRBF was also analysed to determine which interventions of ZRBF were contributing the most to resilience and how. In general, interventions focused on building adaptive capacities were viewed as the most effective. However, it is important to note that while market linkages were not prominent, the fact that resilient households were finding markets for promoted value chains may point to the importance of market development, a transformative capacity. Interventions that showed the greatest impact on the resilient pathway according to the storing of change include:

Beitbridge

- Gardens
- ISALS
- Livestock: Qualitative
- Livestock: Quantitative
- Livestock: Quantitative, SAL
- Pfumvudza

Lupane

- Crop farming: Techniques/technology/Inputs
- Apiculture
- Fodder production
- Small livestock
- ISALs

Nkayi

- Training: Life Skills
- Training: Life Skills - ISALs
- Crop farming: Techniques/ technology/ Inputs.
- ISALs.
- Livestock Quantitative

Mberengwa

- Education Hardware; Empowerment; Farming: improved marketing access
- Business (Skills development, improved business environment etc.);
- Farming: Irrigation;
- Mining
- Conservation farming
- ISALs

Kariba

- Water
- nutrition gardens

3.2.3 Spill over of ZRBF Interventions

There was spill over of ZRBF CSA practices with non-beneficiaries also adopting them. This was across all CSA practices and value chains. While there was a high significant difference (p=0.0000) between adoption of CSA practices the high number of control households (81.08 control compared to 89.75 treatment) shows the appeal of these practices beyond intended beneficiaries. The pattern of adoption follows that of the treatment group with the highest mean number of CSA being in crop practices followed by livestock practices (see **Table 25: Mean number of CSA practices adopted by control and treatment households**). At least 79.07% of control households were practising at least one value chain supported by the ZRBF programme. Support for small grain grinding mills was also increasing the adoption of small grains by ZRBF non-beneficiaries. Other spillovers included community-level interventions such as water availability which were improving access to drinking water for people and livestock; and provision of acaricide for cattle dipping which protected livestock from diseases and death.

> *"I have my borehole which I drilled which I have been using for my horticulture program and my livestock, I have also accessed information from PROGRESS and access to the grinding mill."* **Beitbridge, Ndou area, KII with resilient male household.**

> *"Most of our cattle died because of drought and we did not have a water source but now we have a borehole and can-do market gardening and also have water for our remaining livestock."* **Beitbridge, Old Nuli area, KII with resilient youth.**

Table 25: Mean number of CSA practices adopted by control and treatment households

	crop practices	livestock practices	Value chain practices	Value added practices	Water and soil management practices
control	3	3	1	1	1
treatment	4	3	1	1	1

3.3 Objective 3: Investigate the relationships between household, shock exposure, and resilience capacities in the ZRBF and selected projects

This objective answered the following question with results detailed in the sections that follow:

- To what extent the relationships between household outcomes, shock exposure, and resilience capacities in the ZRBF-selected districts improved as a result of ZRBF?

Summary of Findings
Covariate shocks were more common than idiosyncratic shocks. Households over the course of the implementation period have faced multiple shocks with high severity. The most common covariate shocks included: dry spells, increase in food prices, crop diseases/pests and livestock damage/death from wildlife.

Over 40% of ZRBF beneficiaries experienced a severe decline in income and food consumption as a result of the main shocks with food price increases leading to the largest proportion of households that experienced a severe decline. Significant differences between control only exist for crop diseases and pests and increases in food prices. Despite this context, the proportion of households within ZRBF who perceived having fully recovered was high and increased during the programme implementation and at the endline. However, when coping strategies are analysed there is a high number of ZRBF beneficiaries at the endline (32%) that use detrimental livelihood coping strategies (emergency and crisis). This may point to waning resilience capacity and ability to recover from shocks as a result of more frequent and overlaid shocks. The early onset of severe shocks (drought, COVID-19, livestock diseases and crop diseases etc) in the programme implementation may have slowed the effect of interventions on resilience building.

3.3.1 Shock Exposure and impact

A resilient household can address and recover from shocks and stressors in a way that does not disrupt or pose negative and observable consequences on their well-being or normal and acceptable functioning. ZRBF interventions sought to reinforce households' and community's preparedness for shocks or stressors and increase their ability to cope and ability to recover from recurrent shocks through resilience building. Results of the evaluation show that covariate shocks were more common than idiosyncratic (see Figure 23: Types of shocks ZRBF households were exposed to at endline). The most common covariate shocks included: dry spells, increase in food prices, crop diseases/pests and livestock damage/death from wildlife (**Figure 23**).

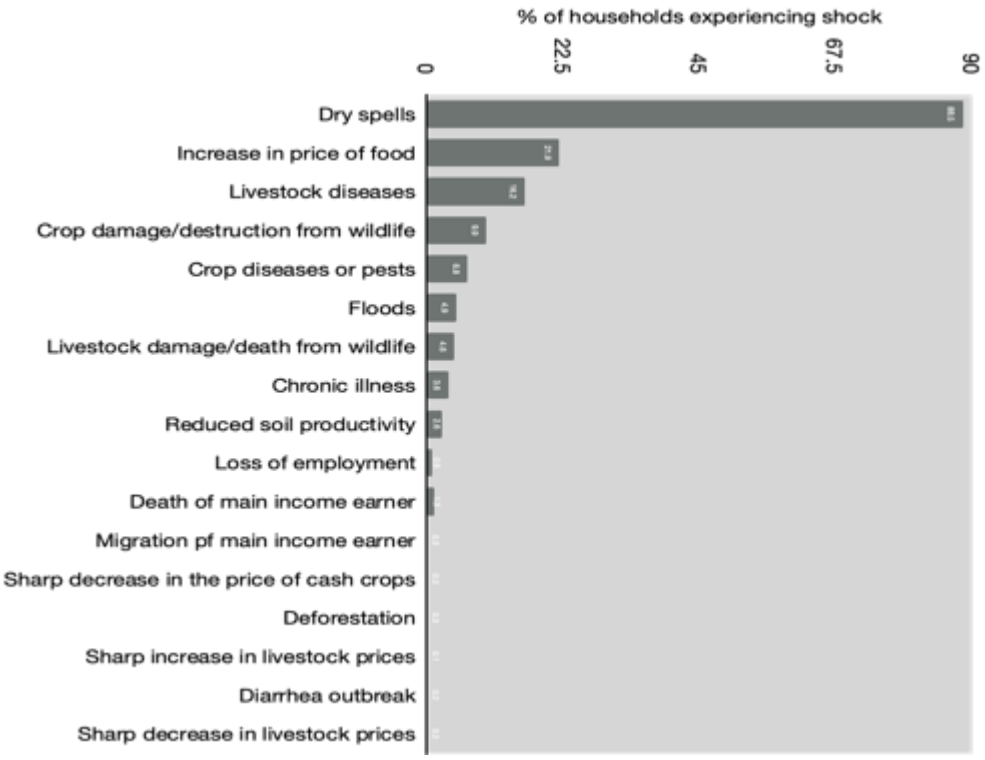
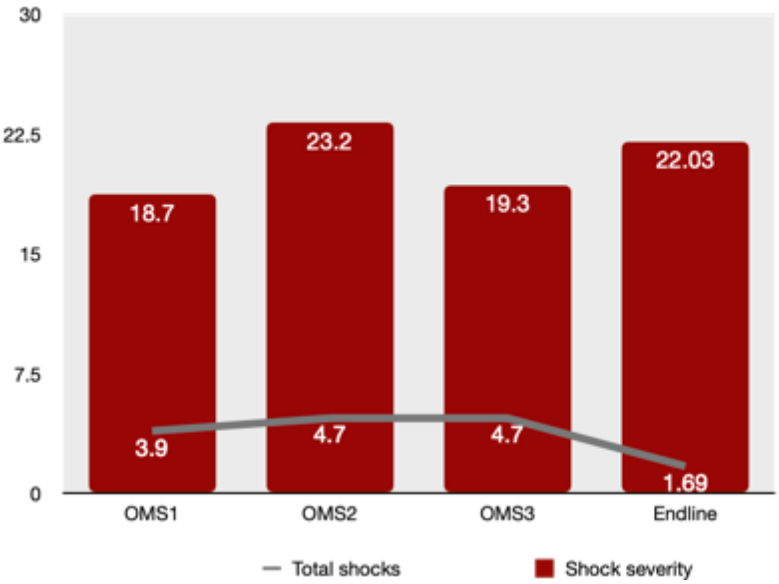


Figure 23: Types of shocks ZRBF households were exposed to at endline

ZRBF households faced multiple shocks during the programme implementation period. This reduced at endline as shown in **Figure 24** . Despite the low number of shocks, the shock severity[24] was high and almost comparable to the period when beneficiaries experienced the worst shocks in the OM2 round conducted in 2020 (**Figure 24: Number of shocks and severity**).

Figure 24: Number of shocks and severity



Source: Endline survey, UNDP 2021, OMS

[24] Computed as the combined total effects of shocks on food and income, ranging from 0 to 6.

Table 26: Severity of shocks further explores the severity of shocks on households' income and food consumption. Across all major shocks at the endline, over 80% of ZRBF beneficiaries had their income and food consumption declining (moderate or severe decline). Over 40% of ZRBF beneficiaries experienced a severe decline in income and food consumption as a result of the main shocks. Food price increases led to the largest proportion of households that experienced a severe decline. Significant differences between control only exist for crop diseases and pests and increases in food prices. Of course, communities appreciated the huge benefits which were brought about by the acaricide model in terms of curbing livestock diseases and both the qualitative and quantitative data showed that the model was a positive contributor to resilience building as it did not only save lives of livestock but also assisted in improving both the herd size and quality.

Table 26: Severity of shocks

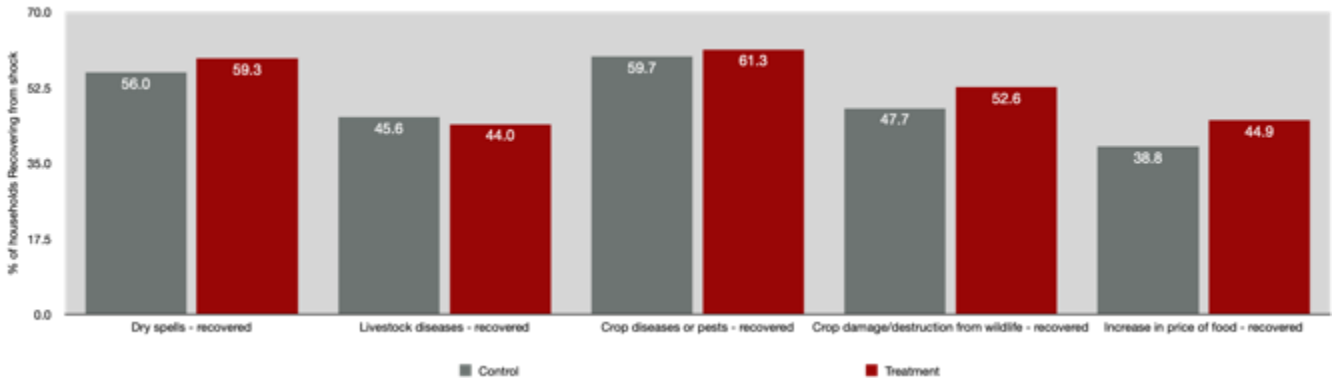
Shock	Severity on income and food consumption	Control	Treatment	Significance
Dry spells - severity	Remained the same	7.6%	7.7%	ns
	Moderate decline	49.2%	49.7%	ns
	Severe decline	43.1%	42.6%	ns
Livestock diseases - severity	Remained the same	14.8%	12.0%	ns
	Moderate decline	40.5%	41.2%	ns
	Severe decline	44.7%	46.8%	ns
Crop diseases or pests - severity	Remained the same	9.4%	5.7%	***
	Moderate decline	50.3%	55.8%	***
	Severe decline	40.3%	38.5%	***
Increase in price of food - severity	Remained the same	6.2%	3.9%	***
	Moderate decline	42.4%	40.6%	***
	Severe decline	51.5%	55.4%	***

*** p<0.01; ** p<0.05; * p<0.1

ns- not significant

Figure 25: Household recovery from main shocks provides a comparative analysis of control and treatment households' perceptions of their ability to recover from shocks affecting at least 10% of the households in the survey. In all cases, except for livestock diseases, ZRBF households were able to recover from main shocks that occurred at the endline in comparison to control households. The proportion of households reporting having recovered from main shocks shows the capacity to recover has increased as compared to OMS3. This continues the trend observed in the OMS rounds where households' who can recover from shocks were increasing between rounds. While one explanation for the rise in the endline could be the reduced shock exposure (average number of shocks a household is exposed to) which is lower for the endline than during the programme (through OMS rounds), the severity of the shocks is greater during the endline than the OMS rounds. This strengthens the argument for ZRBF interventions' capacity to build households' ability to recover from shocks.

Figure 25: Household recovery from main shocks



The above assessment of recovery is based on perception. Perceptive indicators do not provide a correct picture of the household and are likely to understate the actual situation. To complement this assessment the evaluation explored livelihood coping strategies used by households in response to the main shocks. The results are presented in **Figure 26: Livelihood-based coping strategies used by households to mitigate shocks**. While in general households in ZRBF seem to cope better than control households (use more stress-related livelihood strategies), the large proportion of beneficiary households using crisis-related livelihood coping strategies (32%) shows the high risk of reversal of ZRBF gains on resilience capacities that still exist in the short term. These households are disposing of and using their assets in ways that undermine their future capacity to respond to shocks.

Figure 26: Livelihood-based coping strategies used by households to mitigate shocks

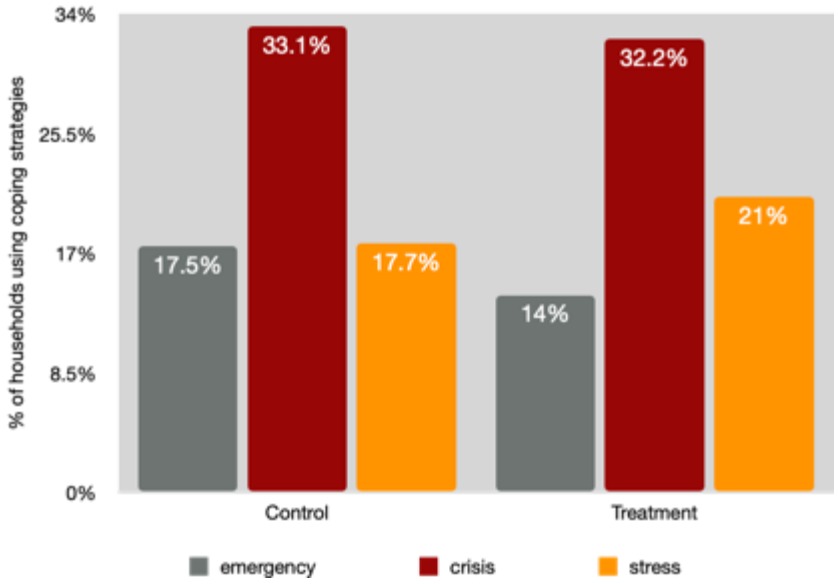


Table 27: Livelihood coping strategies by gender provides a comparative analysis of female and male-headed households' livelihood coping strategies for shocks. Within ZRBF, fewer female-headed households than their male counterpart employ stress, crisis and emergency coping strategies. However, within gender groups, more females on ZRBF interventions are employing the three coping

strategies with high statistical significance for the difference in the use of emergency coping strategies (99% confidence level).

Table 27: Livelihood coping strategies by gender

		Emergency	Crisis	Stress
Adult males	Control	21.0%	30.2%	24.10%
	Treatment	19.5%	26.3%	19.50%
Adult females	Control	11.30%	18.20%	22.30%
	Treatment	11.90%	22.30%	14.00%

*** p<0.01; ** p<0.05; * p<0.1

ns- not significant

Table 28: Households' ability to recover from main shocks shows the livelihood coping strategies employed to mitigate the effects of specific main shocks by ZRBF and non-ZRBF households. The majority of households utilise crisis-related livelihood coping strategies for "Livestock disease" and "crop dame/ destruction from wildlife. For all shocks except for "increase in price of food" more ZRBF households use stress-related livelihood coping strategies.

Table 28: Households' ability to recover from main shocks

Shock		Emergency	Crisis	Stress
Dry spells - recovered	Control	11.9%	25.3%	15.0%
	Treatment	8.9%	25.3%	18.3%
Livestock diseases - recovered	Control	11.5%	35.6%	16.3%
	Treatment	11.6%	35.5%	26.4%
Crop diseases or pests - recovered	Control	20.2%	24.7%	14.6%
	Treatment	14.5%	22.4%	19.7%
Crop damage/destruction from wildlife - recovered	Control	15.5%	33.3%	19.0%
	Treatment	25.0%	42.0%	25.0%
Increase in price of food - recovered	Control	10.6%	17.4%	10.6%
	Treatment	4.9%	14.3%	8.8%

*** p<0.01; ** p<0.05; * p<0.1

ns- not significant

3.3.2 Conclusion

Results of this section show that households over the course of the implementation period have faced multiple shocks with high severity. Despite this context, the proportion of households within ZRBF who perceived having fully recovered was high and increased during the programme implementation and at the endline. However, when coping strategies are analysed there is a high number of ZRBF beneficiaries at the endline (32%) that use detrimental livelihood coping strategies (emergency and crisis). This may point to waning resilience capacity and ability to recover from shocks as a result of more frequent and overlaid shocks. As discussed earlier, the early onset of severe shocks (drought, COVID-19, livestock diseases and crop diseases etc) in the programme implementation may have slowed the effect of interventions on resilience building.

To understand this more, the evaluation undertook a series of correlation analyses focusing on the effects of shocks on coping strategies and various coping strategies on resilience capacities and food

insecurity. The results show a high correlation (99% confidence interval) across all outcomes (**Table 29**). The use of emergency coping strategies was associated with declining absorptive capacity (shown elsewhere in the report as important for resilience building). The use of crisis livelihood coping strategies is associated with decreasing adaptive resilience capacity by 1.62 times more than those using stress-related strategies. The likelihood of households using stress-related coping strategies to reduce adaptive capacities is less than emergency and crisis by a factor of 13 and 7 respectively. Furthermore, the use of any coping strategies increases the food insecurity experience of households although this is more than double for those using emergency strategies. When the relationship between total shocks and livelihood coping strategies is considered, the more shocks the more likely households will employ emergency and crisis-related coping mechanisms. There is no relationship with the use of stress coping strategies. Therefore, the hypothesis that exposure of households to multiple shocks during the programme implementation may have slowed down or reversed resilience capacity building for some households holds.

Table 29: Correlation between shocks, coping strategies and resilience

	Adaptive index	Absorptive index	Transformative index	Food insecurity	Emergency	Crisis	Stress
emergency	-.203***	-.160***	-.059***	.140***			
crisis	-.192***	-.082***	-.123***	.044***			
stress	-.118***	-0.012	-.114***	.062***			
Total shocks					.090***	.064***	-0.007

*** p<0.01; ** p<0.05; * p<0.1

3.4 Objective 4: Assessment of the use of evidence generated by the program under Component 1, which is expected to be used to both improve resilience programming as well as inform policy-making within Zimbabwe

This section had the following questions: **To what extent has evidence been used in ZRBF programming, policy and decision-making?**

Summary of Findings

The ZRBF has achieved knowledge products on resilience ensuring its utilization in policy and programmatic decisions. Through ZRBF's capacity-building efforts on the conceptualization of resilience pathway models, implementation of layering activities and monitoring activities, there are notable examples of how this had fed into the development of strategic policy documents (e.g. small grains strategy) and informed programmatic decisions (e.g. the Crisis Modifier activation was based on evidence from HFMS). The promotion of small grains is widespread in the low-rainfall districts of the ZRBF and has achieved significant results.

However, perceptions from donors and partners is that progress in influencing national policy development on resilience programming has been slower than expected as in the case of finalization and approval of Traditional grain commercialization policy strategy document because policy adoption takes time due to the longer approval processes of such policy documents. The process took two years, yet the original plan was to complete this within a year. However, evidence from PMU shows that progress in the development of bi-laws was timely. Notwithstanding the policy achievements, there is an opportunity for partners to engage and influence decision-makers at various levels of government.

Given the initial work and achievements on policy, there is need for clear evidence of the need for ZRBF to have a clearly defined way for measuring the use of its evidence in policy and programming influence. This should define more specific programmatic linkages with pertinent country policies and strategies to increase possibilities of ZRBF upstream contribution to these frameworks. There should be a systematic way to measure the use and utilization of ZRBF evidence in policy and programming influence.

The component supported the generation of evidence necessary to improve the policy environment and guide resilience programming and service provision to enhance household and community resilience in Zimbabwe. ZRBF played a central role in terms of building a knowledge base around resilience and ensuring its utilization in policy and programming decisions. Significant data from ZRBF generated several programmes and knowledge products which are available online[25]. More than 40 analytical papers and technical notes were generated to inform policy and programming decisions. ZRBF funded a study on the barrier analysis to establish the reasons for the low uptake of small grain production[26] and one on emerging solutions in small grain chains in Zimbabwe[27] thus presenting an opportunity to improve small grains value chains and mitigate the impacts of climate change. The barrier analysis study of the small grain value chain in Zimbabwe informed the Small Grain Strategy Document. In addition, the ZRBF programming and Crisis Modifier activation were based on evidence generated through analytical studies and HFMS. This strong knowledge base created by ZRBF provided greater opportunities to influence future systemic change and policy work and resilience programming

[25] http://www.zrbf.co.zw/media/publications

[26] UNDP 2018 Barrier analysis of small grains value chain in Zimbabwe. http://www.zrbf.co.zw/data/media/00001062/ZRBF-Barrier-Analysis-of-Small-Grains.pdf

[27] UNDP 2018, "Emerging solutions in small grains value chains in Zimbabwe." http://www.zrbf.co.zw/data/media/00001448/Emerging-Solutions-in-Small-Grains-Chains-in-Zimbabwe.pdf

in the country. Robust knowledge and experience gathered provided an opportunity to upscale Knowledge sharing platforms on resilience.

To support the implementation of ZRBF resilience projects, the RKH supported the consortia and partners in coming up with a common conceptualisation of what a resilience approach requires, activities expected to build the capacity of individuals, households, and communities to minimise exposure to future shocks and stresses, recover when exposed, and adapt to changing conditions. This was promoted through RKH implementing the Foundation in Resilience (FiR) curriculum. In addition, RKH was instrumental in making sure that the resilience pathway was infused in all research studies, capacity building and implementation of consortia projects. For example, the analysis of three rounds of OMS data was one of the first resilience studies conducted by RKH to test this pathway and show that this pathway's model is correct.[28] Further, through the resilience approaches, a clear rationale for resilience building through a layering of project activities to cope with and adapt to shocks and stressors, including climate change was also shown that works.

ZRBF supported the strengthening of resilience analysis and measurement in the national rural vulnerability assessment (ZimVAC), DCP Sendai Framework reporting as part of capacity building on evidence generation to improve the policy environment and supported MLAFWRD Agriculture Information Management System (AIMS) one-stop shop[29]. A comprehensive module on resilience analysis was also included in the Poverty, Income, Consumption, and Expenditure Survey (PICES). Further, several hazard maps were developed and/or updated at both national and subnational levels. The hazard mapping informed ZRBF of geographical targeting and the DRM policy under review. Participatory monitoring, evaluation and learning framework were established and operationalized. ZRBF also supported the Department of Civil Protection (DCP) Sendai Framework[30] routine reporting.

Through ZRBF support, the Government has adopted the High-Frequency Monitoring System (HFMS), which was highly praised by all stakeholders consulted. Informants from the MLAWRD confirmed that the government is now upscaling the high frequency monitoring. At the time of this endline survey, preparations were being made for the training of provincial and district staff to support its scale-up to all 63 districts in the country. This will be linked to the crisis modifier concept and the government disaster risk management system.

The ZRBF has made significant achievements in terms of generating evidence and knowledge products on resilience, but key informants from donors and consortia partners highlighted that progress in influencing policy development on resilience programming has been slower than expected. From what was reviewed and discussed with stakeholders/partners, there are more examples of programmatic influence than policy influence (mainly due to the processes required for policy framing and approvals). For example, the promotion of small grains is widespread in the low-rainfall districts of the ZRBF and has achieved significant results. For example, evidence in Chiredzi and Mwenezi shows that area under small grains and associated yields have increased when compared to the baseline (see **Figure 27** and **Figure 28** respectively) as a result of the promotion of small grains under ZRBF.

[28] http://www.zrbf.co.zw/activities/resilience-knowledge-hub
[29] FCDO, Annual Review
[30] RSA Manual developed by programme with government endorsement. Not on website yet. Check here: http://www.zrbf.co.zw/media/publications

Figure 27: Percentage area under maize and traditional grains between 2016/17 and 2021/22

Source: ZRBF ECRAS presentation during the end of Programme review and lessons learnt workshop 27-29 September 2022.

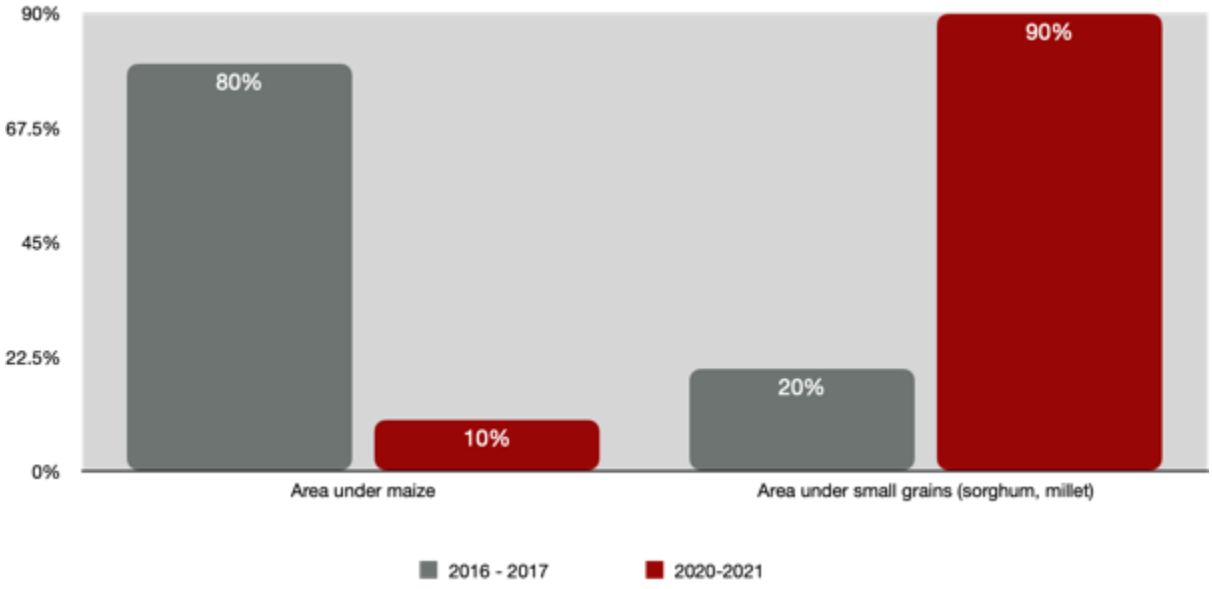
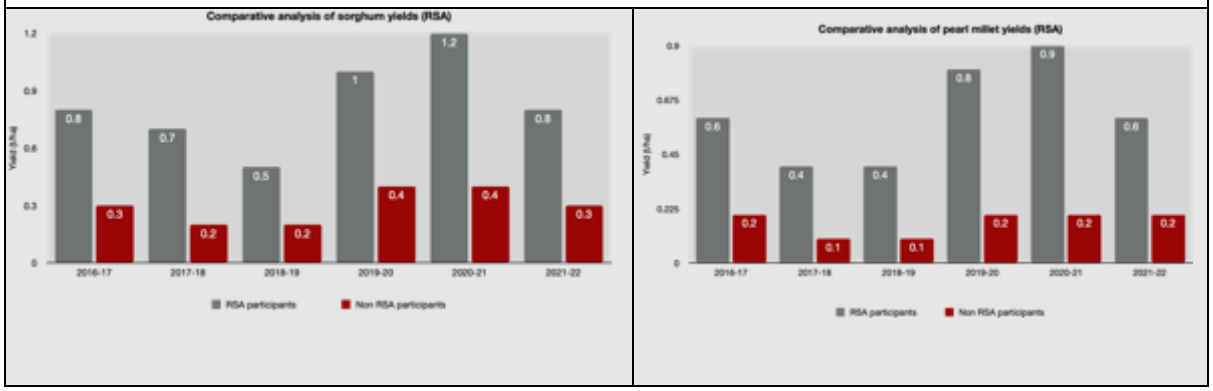


Figure 28: Improved crop yields, RSA[31]-comparative analysis



Source: ZRBF ECRAS presentation during the End of Programme review and lessons learnt workshop 27-29 September 2022.

The programme played a substantive role in providing technical support to all the consultative processes in the formulation and development of strategy policy documents and their approval, launch, and dissemination. All stakeholders consulted spoke of the development of the traditional grain commercialization policy strategy document (already in use) as a significant achievement. According to ZRBF PMU, support has also gone to the development of the Sunflower and Legume Value Chain promotion strategy document (currently under review and scheduled to be completed by February 2023, and the community-based sustainable cattle dipping model and its implementation in 18 rural districts.[32]

The programme has also recorded progress with bi-law development at district level. It supported the review of 12 pieces of legislation (Statutory Instruments) focusing on Animal Health and Legislative Control Measures, aligning them to the Tick-borne Disease Control Strategy document. In addition,

[31] Resilient and Sustainable Agriculture (RSA)

[32] Key achievements lessons learnt and experiences on Component 2: Improving absorptive, adaptive, transformative capacities and Crisis Modifier. Presentation made by Solomon Mutambara at the ZRBF End of Programme Review and Lessons Learnt Workshop, 27-29 September 2022

ZRBF supported the development of by-laws (Binga, Kariba and Mbire) to support resilience building efforts.[33]

The ZRBF conducted a knowledge, attitude and perception survey on the current DRM legislation in 3 districts of Matabeleland South in which participants recommended the alignment of the Civil Protection Act with global best practices.[34] The results translated into engagement with the Department of Civil Protection (DCP) at the national and sub-national levels in advocating for more traction in the enactment of the DRM bill. According to informants from Sizimele consortia, districts were currently capacitating the chiefs and managing information networks for the implementation of the new DRM bill once it has been passed.

At endline, a total of 18 Disaster Risk Reduction (DRR) plans had been reviewed and updated for all the 18 districts as well as shared with the respective provinces for integration into development plans. There was a strong participation of stakeholders from the provincial and national civil protection committees who were also involved to ensure that ward and district plans are integrated within national and sub-national developmental plans. ZRBF supported the review of the national DRM templates and guidelines and support the Department of Civil Protection in the piloting and standardizing of the new DRM templates for national adoption[35].

The major reasons for the slow traction of ZRBF in policy influence and implementation were perceived by stakeholders to be a result of (i) the long-time it takes for policy adoption (ii) the need for more capacity in policy advocacy, for partners to be able to engage and influence decision-makers at various levels of government (iii) need for ZRBF strategy on understanding and measuring the use of evidence and policy influence. The strategy needs to define more specific programmatic linkages with pertinent country policies and strategies to increase possibilities of ZRBF upstream contribution to these frameworks. Although it is too early to tell, it is anticipated that the recently convened resilience platform will bring different actors to enhance the common understanding and approaches of resilience using lessons learnt from the RKH and how to strengthen ZRBF's evidence-based policy development and implementation.

3.4.1 Conclusion

The ZRBF successfully generated evidence to improve the policy environment, guide resilience programming and service provision to enhance household and community resilience in Zimbabwe. ZRBF provided technical support to conceptualise resilience and research work with partners to test the resilience pathway. and demonstrate that it works. As a result, there are more examples of ZRBF evidence generation on programmatic influence than of policy influence due to several factors- that is policy influence takes time.

[33] Key achievements lessons learnt and experiences on Component 2: Improving absorptive, adaptive, transformative capacities and Crisis Modifier. Presentation made by Solomon Mutambara at the ZRBF End of Programme Review and Lessons Learnt Workshop, 27-29 September 2022

[34] FCDO Annual Review Report, 2021

[35] Key achievements lessons learnt and experiences on Component 2: Improving absorptive, adaptive, transformative capacities and Crisis Modifier. Presentation made by Solomon Mutambara at the ZRBF End of Programme Review and Lessons Learnt Workshop, 27-29 September 2022

3.5 Objective 5: An assessment of the extent to which the Component 3 crisis modifier has been able to respond to humanitarian shocks and protect development gains

This objective answered the question: **How effective was the crisis modifier in protecting development gains?**

Summary of Findings

The Crisis Modifier interventions implemented by various consortia helped minimise disruption to resilience gains. The ZRBF benefitting households generally enjoyed more benefits from the crisis modifier mechanism as compared to the control households since this approach facilitated them in protecting the development gains.

The programme technical support and ZRBF high-frequency monitoring system were effective sources of information on shocks and stresses for guiding the Crisis Modifier decision process.

The ZRBF programme implemented a crisis modifier (CM), which is an innovative and flexible mechanism that responds to covariate shocks in order to protect development gains from the programme. It is a flexible tool which is used to scale up and/or down certain programme components depending on stresses and shocks that set in. The CM mechanism allows for the activation of budgets, to counter the effects of the stresses and shocks, through specific (new and existing) interventions. The objectives of the CM mechanism are twofold: to provide a resilience 'cushion' by providing support to resilience building of poor and vulnerable groups, through a set of 'no regret' actions, in response to recurring, local climatic fluctuations (for example, early drought signs and localised flood); and to provide a fast, effective and well-coordinated pre-humanitarian response to those affected during extreme events such as droughts, epidemics, floods and other crises[36].

During the first two cycles of the Crisis Modifier activation was not always timeous due to the long processes required for the release of funds resulting in affected households getting delayed assistance. However, this has since improved following a review which was done in 2019. These delayed triggering were confirmed by both the focus group discussions and key informants during the qualitative data collection process at the district and ward levels. However, the delays have since improved following a review which was done in 2019 [37].

3.5.1 The ZRBF Crisis Modifier Mechanisms' achievements

The ZRBF crisis modifier was activated 7 times since 2017. Crisis modifier 1 to crisis modifier 5 were activated mainly to cushion households from the effects of consecutive droughts which had turned out to be frequent and recurrent shocks. Crisis Modifier 6 was activated by ECRAS to respond to locust outbreak in Chiredzi and Mwenezi[38] to protect crops from locusts and prevent food shortages for 7000 households; flood response in Matobo[39] to replace 15 houses destroyed by the cyclone. The latest crisis modifier 7 was activated to respond to the effects of Cyclone Ana and incessant rains in 10 ZRBF districts to replace destroyed houses, roads, and productive infrastructure around March to June 2022[40] just before the impact evaluation assessment. The Crisis Modifier Mechanism managed to

[36] Crisis Modifer Standard Operating Procedures.
[37] Crisis Modifer Standard Operating Procedures.
[38] ZRBF Enhancing Community Resilience and Sustainability (ECRAS)- Crisis Modifier 6 Report, 2021.
[39] Emergency Cyclone Response and Recovery for Matobo District. Crisis Modifier Report, 11 March 2021-11 June 2021.
[40] ZRBF End of Crisis Modifier Draft Report- Zimbabwe Resilience Building Fund, End of Crisis Modifier Top Up, February to October 2020

cover a cumulative total of 2, 983, 636 beneficiaries at a cost of US$4.90 per beneficiary between March 2017 and June 2022.

A previous review of the CM mechanism[41] demonstrated that CM interventions implemented by various consortia helped minimise disruption to resilience gains. These crisis modifiers managed to protect the development gains which were brought to the communities by the ZRBF (see **Table 30: A summary of activities implemented under the Crisis Modifier**) although according to one consortia partner, the triggering was not very timeous requiring some bureaucratic processes of concept note, delaying release of funds and resulting in affected households getting delayed assistance.

Table 30: A summary of activities implemented under the Crisis Modifier

Activity	Developmental gains protected by the activities
Water provision support:	Household water trekking distance was reduced from 3km to below 1km. Reduced the high prevalence of water-borne diseases in the 18 targeted districts. Livestock trekking distances were reduced from 6 km to an average of 2.5 km reducing the chances of cattle wasting and poverty death for 150741 cattle.
Rehabilitation of 7 irrigation schemes	A total of 622 households benefited from rehabilitated irrigation schemes in 3 districts (Mutoko-252, Mudzi -170, and Lupane-200). The activity improved the income of the farmers, which was compromised by the 2018/19 drought.
Support for fodder production and preservation	The livestock survival feeds protected 90652 cattle from poverty death or household panic disposal for 31570 households in 11 districts. The cattle were under threat from the critically inadequate pastures that would cause high mortalities if the cattle were not provided with supplementary feeds.
Support for acaricides to 1054 communal dip tanks	A total of 2,008,626 cattle for 286 946 households are protected from tick-borne diseases in all the 18 ZRBF targeted districts, while efforts are being made to build the capacity of communal dip tanks to procure their acaricides beyond the period of support.
Inputs support for drought tolerant crop production	A total of 61558 farmers were supported in the production of small grain crops in 16 districts.
Cash for asset arrangement	6308 households benefited from cash transfers and had their household income boosted, which was compromised by droughts in the 2 successive seasons. The cash injection prevented households from invoking negative coping mechanisms such as dropping children from school.

Source: *Key achievements lessons learnt and experiences on Component 2: Improving absorptive, adaptive, transformative capacities and Crisis Modifier. Presentation made by Solomon Mutambara at the ZRBF End of Programme Review and Lessons Learnt Workshop, 27-29 September 2022*

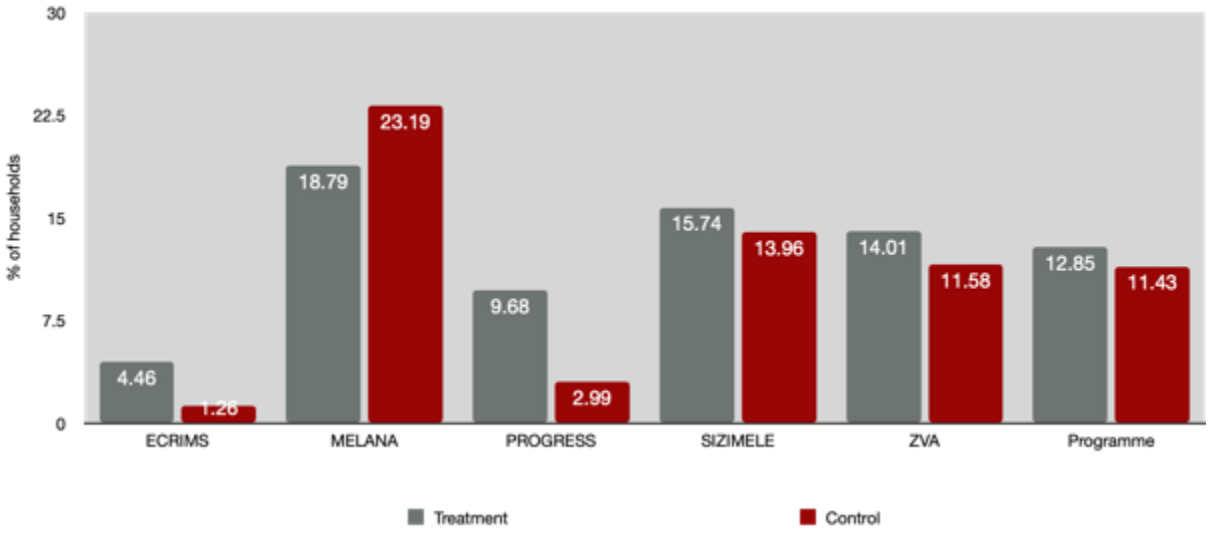
The above information demonstrates the activation of CM and its contribution to cushioning ZRBF beneficiaries.

Several notable CM interventions such as fodder production and preservation and distribution of drought-tolerant small grain and legume seed were among the highly rated by partners consulted. Key informants from partners and the government generally felt that the ZRBF high-frequency monitoring system was an effective source of information on shocks and stresses for guiding the CM decision process.

[41] UNDP (2019), ZRBF Resilience Knowledge Hub: Mock, N., Stack, J., and Sundsmo, A. 2019. Assessment of the Zimbabwe Resilience Building Fund Crisis Modifier Mechanism.

An analysis of the households who received support through the crisis modifier mechanism shows that ZRBF about 13% of the households received some form of support at the programme level while at project level the results are shown in **Figure 29: Percentage of households who received support from the CM by consortium**.

Figure 29: Percentage of households who received support from the CM by consortium



The ZRBF benefitting households generally enjoyed more benefits from the crisis modifier mechanism as compared to the control households since this approach facilitated them in protecting the development gains which were brought up during the resilience-building process.

As shown in **Table 31**, households who received support through the crisis modifier mechanism exhibited a negative linear relationship with total shocks (-0.61) so was the shock severity (-0.056) with a 95% statistical significance while food insecurity showed a positive linear relationship (0.030) which is confirmation that exposing households to some form of support in the event of crisis reduces the impact of the shock and also reduces the possibility of households being food insecure.

Table 31: Correlation between receipt of shock mitigation support and resilience outcomes

Dependent	Total shocks	Shock severity	Food insecurity
Received support	-.061**	-.056**	.030**

*** p<0.01; ** p<0.05; * p<0.1

3.5.2 Conclusion

The Crisis modifier mechanism is a strategic approach to mitigate and counter the effects of the stresses and shocks at household and community levels especially if there is an embedded mechanism to ensure that the triggering is done timeously before households are exposed to employing high-cost coping strategies to cushion themselves. Through the ZRBF interventions package, the crisis modifier mechanism has proved to be an approach used to sustain the benefits of resilience building in the event of a shock or a hazard. The benefits of the crisis modifier mechanism are more visible in ZRBF beneficiaries' development gains achieved under Component 2.

4 Lessons Learned and Recommendations

This section presents the lessons and recommendations from the impact study.

4.1 Lessons learned

The key lessons from the evaluation are as follows:

Lesson 1: The resilience pathway is valid – ZRBF resilience interventions do contribute to the achievement of the resilience pathway. The implementation approach has the greatest influence on the strength of the causality. A sequenced and layered approach has proved to deliver better household outcomes as participation in several interventions has helped generation of more income. Diversity in livelihood sources reduces vulnerability if one is impacted by shock or stressors households can switch to maximise access from other sources and reduces negative coping strategies.

Lesson 2: Adoption and adaptation are more effective pathways to building resilience. The study has shown greater results of resilience capacity through increased asset accumulation, livelihoods diversification, commercialisation of productivity, market development, improved extension services, and access to early warning information systems all with the effect of increasing absorptive and adaptive capacities. In the context of unpredictable economic stressors, transformative actions need insurance measures to mitigate the observed ineffectiveness.

Lesson 3: The medium-intensity approach takes longer periods beyond programme timelines to achieve high-impact results. The sequenced, layering and integrated approach where beneficiary households participate in at least three high-impact interventions are more likely to improve resilience and coping strategies and increase food security. Programmatic considerations should focus on impact than breath.

Lesson 4: The willpower to change personal circumstance is important to maintain consistency in activity participation and resilience building. A greater desire to change by the head of the household has shown increased participation and perseverance needed to ensure success in the resilience activities and enhance the achievement of outcomes. Therefore, resilience programmes need to be complemented with change management to promote and motivate willpower to change the personal situation. This has to be grounded on a nuanced understanding of the drivers for resisting or pushing change which can be tied to graduation models that incentivise change into higher resilience capacities before exit.

Lesson 5: Resilience building is iterative rather than once off and requires support to protect assets in an environment of frequent and severe shocks especially if these occur before significant resilience capacity has been developed. The evaluation showed household's waning resilience capacity and ability to recover from shocks as a result of more frequent and overlaid shocks. The early onset of severe shocks (drought, COVID-19, livestock diseases and crop diseases etc) in the programme implementation may have slowed the effect of interventions on resilience building.

Lesson 6: Interventions design should consider geographic and household targeting to maximise the optimisation of underlying livelihood potential and household capacity. The mixed performance among projects and the inability of the resilience capacity to transform the food security situation for some beneficiaries were influenced by differences in underlying livelihoods and household asset base. The extremely poor rural households have limited access to labour, and lack assets and skills to optimise the use of productive assets. Wealthier households (poor and middle) have no labour constraints, have assets, skills and social capital to produce surplus and are ready for private sector market linkages.

Lesson 7: Labour-sharing mechanisms for labour-constrained households contribute to resilience capacity, particularly for female-headed households. The analysis showed that female-headed households are 4 times less likely to have improved resilience compared to male-headed households. This may be linked to the capacity of these households to utilise their labour assets in comparison with male households. Labour-sharing mechanisms were viewed as an important contributor to the resilient building by women resilient households spoken to in the qualitative survey. Improving access to labour for women-led households can improve their resilience building

Lesson 8: Sustained youth participation is central to enhancing household resilience. There was identified low participation in the programme due to challenges of mobility and low interest shown by poor retention in programmes. There is a need to link entrepreneurial and vocational skills to access to productive assets and capital to ensure the utilisation of skills gained and enhance livelihood access. Lack of access or ownership to assets limits the extent of youth participation in a majority of the ZRBF interventions which were agro-based.

Lesson 9: The presence of evidence generation and dissemination of knowledge products influences policy and programmatic decisions and strengthens resilience-building approaches. The support of the Resilience Knowledge Hub (RKH) supported capacity-building efforts on the conceptualisation of resilience pathway models, implementation of layering activities and monitoring activities that contributed to the effectiveness of resilience activities. This need to be complemented with strengthened advocacy capacity among partners and utilisation of available policy platforms for intentional advocacy delivery.

Lesson 10: The design of evaluations should follow a longitudinal panel sample to strengthen the attribution within the same sample through the project life circle. Considering the cost of monitoring and evaluation study designs must be carefully considered to enhance more learning and tracking, midterm, and endline.

Lesson 11: The continuum from resilience to food security requires time and household demonstrating improved resilience may not necessarily be food secure. Results of the evaluation showed a weak relationship between resilience and food security at endline and the need for more time to realise food security outcomes.

4.2 Main conclusions and recommendations

The following are the main conclusions and recommendations.

The evaluation shows that the theory of change for the programme is sound in relation to context and impact pathway assumptions and the programme is on track to achieve this vision– that resilience interventions lead to improved resilience, less sensitivity to shocks and overtime food security. However, some interventions had not yet reached maturity to realise the full extent of this causal linkage – projects started at different times during the programme's life course (some in 2016 and others in 2017; COVID also slowed implementation).

Notwithstanding the fact that the 3 resilience capacities are interlinked, absorptive and transformative capacities have performed less than adaptive capacities. However, the 3 capacities are critical, and fluid and need to be simultaneously built over time. Furthermore, value-added and value-chain practices have the highest contribution to resilience. A unit change in value-added practices and value chain practices leads to approximately 7 units (significant at 99%) and 5 units (significant at 95%) change to the resilience index respectively.

Recommendation 1: Continue to invest in adaptive capacities but strengthen absorptive and transformative capacities through:

- Increasing attention to ISALs and making this intervention a central part of the programme to improve absorptive capacities. ISALs will build savings but also offer a platform for farmer investments in on and off-farm enterprises, and the introduction of other value-added activities such as financial literacy and insurance. There is a need for the Consortia to programme the ISALs in a manner that is adaptive to withstand various macro and micro-economic Issues, such as the fluid fiscal and monetary changes. (Responsibility: UNDP and Consortia)
- Investing in policy work on both upstream and downstream thus supporting both the development and implementation of policies as has proved to work in the first phase. (**Responsibility:** Government, UNDP and Consortia).
- A new programme should strengthen local-level policy advocacy through each project identifying key policy issues in the district that can be addressed through by-laws and local resource allocation and strengthening the link between policy messaging and advocacy approaches and evidence generation.
    - In particular, the importance of local-level by-laws should not be ignored.
    - The current decentralisation process will avail greater resources at the district level for service delivery making it important for UNDP and its partners to support pro-poor investments that improve resilience by local authorities. (**Responsibility:** UNDP, Government of Zimbabwe and Consortia)
- ZRBF should continue to deliver more of the same resilience-building interventions but that are better evolved in developing capacities for value-added practices and market linkages by farmers, building on and scaling up the successful value-added services in the current programme while exploring innovations from lessons on productivity and market development in the first phase. (**Responsibility:** Government of Zimbabwe and UNDP)

Recommendation 2: In the next phase, ZRBF should put water availability and access at the centre of its agro-based resilience interventions.

- Water access was viewed by communities as central to resilience building: water for humans, water for livestock, and water for irrigation. Water investments also increase the likelihood of a household being resilient.
- Drawing from lessons from the first phase (irrigation scheme, dam weirs, water harvesting) the programme will need to design a strategy that provides a coherent package of water services across the programme area informed by context-specific needs to include infield water harvesting and drip irrigation technologies.
- Strengthen key Government departments in climate, water and technologies issues for Sustainability purposes.
- Innovation and building on what works in establishing sustainable water infrastructure should guide such investments. (**Responsibility:** UNDP and Government of Zimbabwe)

Recommendation 3: The Government of Zimbabwe needs to scale up the ZRBF programme by applying lessons learnt to bring interventions to maturity and fully realise the theory of change.

- **1a:** Adopt a long-term approach to resilience building for targeted communities that ensures interaction with beneficiaries for at least ten years, then the current five-year cycle. (**Responsibility:** UNDP, DPs and Government of Zimbabwe)
- **1b:** The programme should continue the layered approach to support. It should consolidate tried and tested (best practices) high-impact interventions already identified in this phase.
    - The focus should be on scaling up best practices already identified and strengthening the sustainability of these gains. For infrastructure specifically, undertake an inventory of the performance of various pieces of infrastructure developed under the

programme determining functionality and measures for sustainability. (**Responsibility:** UNDP and Government of Zimbabwe)

- In this period the crisis modifier mechanism should remain operational to help households recover from shocks but should be gradually withdrawn with trigger severity increased over time as the capacities of households improve. (**Responsibility:** UNDP)
- This should be coupled with a strengthened evidence-based graduation strategy utilizing a huge evidence base already created by the programme through OMS, impact studies and other internal monitoring data. (**Responsibility:** UNDP and government of Zimbabwe)

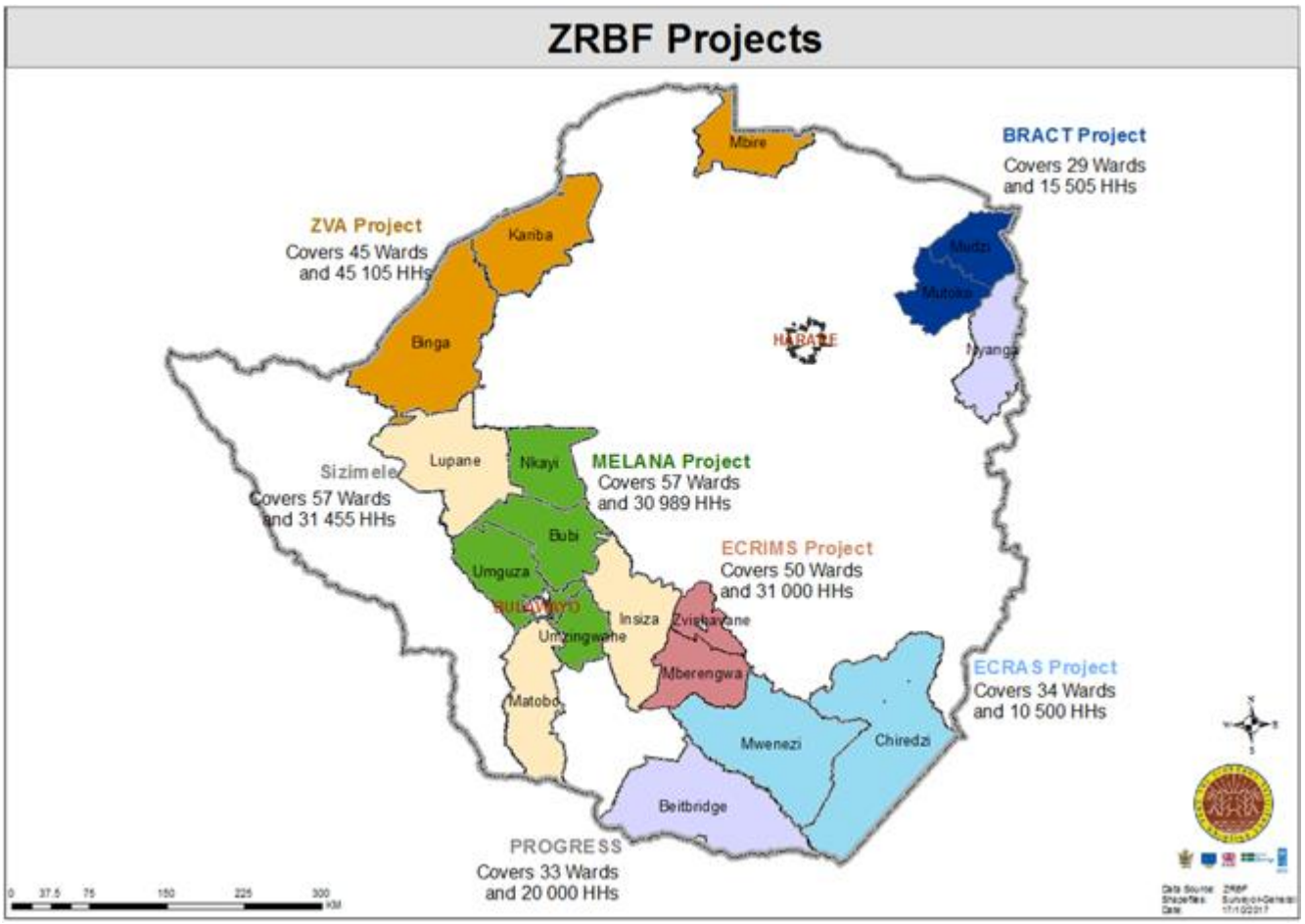
Annexe 1: Evaluation Framework

Key Evaluation Question	Sub-Questions	Measure / Indicator	Data Source/ Means of Verification	Data Collection Methods and Analysis
Objective 1: Carry out a robust final impact evaluation for the Zimbabwe resilience building fund & projects (End-line evaluations)				
What is the impact of ZRBF (can include a combination of interventions) on community, household and individual resilience, as measured through KPI4 and other ZRBF-relevant impact and outcome indicators? · To what extent has beneficiary resilience increased as a result of selected ZRBF projects?	• Has the ZRBF project through its activities managed to improve the welfare of beneficiary households? • Has the ZRBF managed to increase resilience by improving the food security of beneficiary households? •	The proportion of population living below the national poverty line (disaggregation by sex and age; district) Prevalence of households with moderate or severe hunger • Multi-dimensional poverty • Household Hunger scale • Food Consumption Score	Households	Household Survey • RIMA • HEA
· What is the impact of selected ZRBF projects on women and young people? · How have women and young people contributed to the achievement of the results / impact?	Has resilience improved amongst women and young people	Number of women and men whose resilience has been improved because of project support (f/m disaggregation)		
Objective 3: Investigate the relationships between household outcomes, shock exposure, and resilience capacities in the ZRBF and selected projects				
▪ To what extent the relationships between household outcomes, shock exposure, and resilience capacities in the ZRBF selected districts improved as the result of ZRBF?	▪ What shocks were households exposed to, what was the nature and extent of these shocks? ▪ To what extend was the ZRBF programme through its interventions able to respond to the nature of shocks affecting households? ▪ What was the effect of exposure to single shock and the	Exposure to climate related shocks, economic shocks, idiosyncratic, crop related shocks, livestock related shocks <u>Coping strategy index</u> Average Food based Coping Strategy Index score for households in targeted communities because of ZRBF intervention (f/m disaggregation)	Households	Household Survey Literature Review • Baseline • Monitoring Surveys Focus Group Discussions

Key Evaluation Question	Sub-Questions	Measure / Indicator	Data Source/ Means of Verification	Data Collection Methods and Analysis
	effects of exposure to a combination of shocks? ▪ What were the households' coping strategies and were these positive/ negative? ▪ How did the coping strategies vary by household type/ groups (gender, age, wealth groups, livelihood zones)?	Average Livelihoods and Assets based Coping Strategy Index score for households in targeted communes because of ZRBF intervention (f/m disaggregation) Average number of income sources of vulnerable households receiving ZRBF assistance		
Objective 4: Objective An assessment of the use of evidence generated by the programme under Component 1, which is expected to be used to both improve resilience programming as well as inform policy making within Zimbabwe				
To what extent has evidence been used in ZRBF programming, policy and decision making	• What evidence products were generated by the ZRBF project? • Was the evidence generated appropriate, relevant to the context, trusted, timely and provided in a manner that is appropriate to the users of evidence? • Is there evidence of use of evidence/ knowledge generated in programming policy and decision making?	Use of evidence produced by policy makers Relevance of evidence produced to the needs and information gaps of key policy makers and programmers Appropriateness of modes of delivery of evidence Reliability and validity of evidence produced	Grantees Government and Donors	Literature Review
Objective 5: An assessment of the extent to which the Component 3 crisis modifier has been able to respond to humanitarian shocks and protect development gains				
a) How effective was the crisis modifier in protecting development gains?	b) To what extend did the crisis modifier mechanism protect development gains achieved under Component 2	Perceptions of the efficacy of the HFMS Perceptions of the timeliness of the crisis modifier mechanism	a) Baseline Report b) Outcome Monitoring Reports	Literature Review Key Informant Interviews

Key Evaluation Question	Sub-Questions	Measure / Indicator	Data Source/ Means of Verification	Data Collection Methods and Analysis
	c) What was the nature of the response?	Perceptions of the appropriateness of the crisis modifier mechanism	c) Crisis Modifier Assessment Report Grantees Government and Donors	
d) What is the impact of shock response mechanism on resilience, e.g., timeliness and effectiveness of shock response in comparison to in-kind humanitarian aid?	e) To what extent has the crisis modifier mechanism been able to respond in an agile and flexible manner to shocks and stresses			
f) Are the triggers of the crisis modifier / shock response appropriate?	g) Identify the triggers to which the crisis modifier responded h) Where these triggers appropriate to warrant the crisis modifier or where there any other alternative responses?		d) Baseline Report e) Outcome Monitoring Reports f) Crisis Modifier Assessment Report Grantees/ IPs ZRBF personnel Project Beneficiaries	Literature Review Key Informant Interviews

Annexe 2: Map of the programme locations



Annexe 3: Household Survey Tool

Cover sheet

District Name	
Ward Code	[_ | _]
EA Code	[_ | _]
Interviewer Code	[_ | _]
Household Id	[_ | _ | _ | _]
Name of the Village	
Please provide a description of the location of the household	
Status 0= Control 1=Treatment	
Consortium 1 = ECRIMS 2 = MELANA 3 = PROGRESS 4 = SIZIMELE 5 = ZVA 6 = ECRAS 7 = BRACT	
Date of visit	
Is a person available at the dwelling Yes = 1	[_]

No = 0 If No go to results section and complete	
Does this household contain at least one household member between 18 and 69 years old? Yes = 1 No = 0 If no this household is ineligible go to results section and complete	[_]
Does this household own at least one acre of land for its own production or consumption? Yes = 1 No = 0 If no this household is ineligible go to results section and complete	[_]

SECTION A: ROSTER

#	Name of respondent	[Name]'s Gender Male = 1 Female = 2	In what year was [NAME] born?	How old is [NAME] in completed years?	What is [NAME]'s relationship to the head of the household? See codes below	What is [NAME]'s present marital status? See codes below	Does [NAME] have a phone Yes = 1 No = 0 If no -> R9	What is [NAME]'s phone number
	R1	R2	R3	R4	R5	R6	R7	R8
1								
2								
3								
4								

5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Relationship codes (R5)		Marital status codes (R6)
Household head = 1	Parent-in-law = 7	Legally married = 1
Spouse = 2	Brother or sister = 8	Living together like husband and wife = 2
Son or daughter = 3	Co-wife = 9	Separated, but still legally married = 3
Son-in-law or daughter-in-law = 4	Other relative = 10	Widowed = 4
Grandchild = 5	Adopted/foster/stepchild = 11	Single = 5
Parent = 6	Not related = 12	

ROSTER – EDUCATION

#	Has [NAME] ever attended school Yes =1 No = 0 If no ->R13	What is the highest level of education that [NAME] has completed? See codes below	R11 – R12 only asked to members aged 5 – 24 years	Did [NAME] attend school at any time during the 2022 school year? Yes = 1 No = 0 If no ->R13	During this 2022 school year, what grade is [NAME] attending? See codes below
	R9	R10		R11	R12
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Education codes				
ECD = 0	Grade 3 = 3	Grade 6 = 6	Form 2 = 9	Form 5 = 12

Grade 1 = 1	Grade 4 = 4	Grade 7 = 7	Form 3 = 10	Form 6 = 13
Grade 2 = 2	Grade 5 = 5	Form 1 = 8	Form 4 = 11	

ROSTER – Livelihoods ONLY ASKED TO MEMBERS 15 YEARS AND OLDER

#	In the last one week (7 days), did [NAME] do any kind of work for pay, profit or family gain? Yes = 1 No = 0 If yes -> R16	Even if [NAME] did not work in the last one week, did [NAME] have a job or enterprise to return to? Yes = 1 No = 0 If no -> next section	What was the <u>main reason</u> [NAME] was absent form work in the last one week? See codes below	Specify other	How would you describe [NAME]'s main work in the last one week? (or work [NAME] is returning to? See codes below	Specify other
	R13	R14	R15	R15a	R16	R16a
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						

Absent codes (R15)		**Work codes (R16)**	
Health reasons = 1	Problems with transport = 7	Own farming/crop production = 1	Self-employment (informal trader/vendor, own business, bricklayer, tailor) =7
Vacation / leave= 2	Bad weather=8	Own livestock production= 2	Artisanal mining/quarrying=8
Caring for family or other (except maternity / paternity leave) = 3	Study or training leave=9	Piece work: Agricultural wage labour (crops/livestock) = 3	Handicrafts (baskets, mats, pottery, beads, ropes, clothing) =9
Maternity / paternity leave= 4	Unrest (violence) = 10	Piece work: Non-agricultural wage labour=4	Remittances=10
Other family / community obligations (e.g., funeral, meeting) = 5	Temporarily laid off / reduction in economic activity= 11	Salaried, permanent wage labour (ag/non-ag) =5	Paid childcare/domestic work=11
Strike / stay-away / lockout= 6	Seasonal work = 12	Sale of wild/bush products (inc. charcoal and construction materials) =6	

SECTION B: HOUSING CHARACTERSITICS

	Question	Codes			Response
H1	What is the main source of drinking water for members of your household?	Piped into dwelling = 1 Piped into yard/plot = 2 Piped to neighbour = 3 Public tap/standpipe = 4 Tubewell/borehole = 5	Protected well = 6 Unprotected well = 7 Protected spring = 8 Unprotected spring = 9 Rainwater = 10	Tanker truck = 11 Cart with small tank = 12 Surface water = 13 Bottled water = 14	[_ | _]
H2	Where is [WATER SOURCE] located? If 1 or 2 -> H4	In own dwelling = 1 In own yard/plot = 2 Elsewhere = 3			[_ | _]

H3	How long does it take to go there, get water, and come back? RECORD IN MINUTES				[_ | _ | _]
H4	What kind of toilet facility do members of your household usually use?	Flush to piped sewer system = 1 Flush to septic tank = 2 Flush to pit latrine = 3	Flush to somewhere else = 4 Flush, don't know where = 5 Blair toilet = 6	Pit latrine with slab = 7 Pit latrine without slab = 8 Bucket toilet = 9 No facility/bush/field = 10	[_ | _]
H5	Where is that [TOILET FACILITY] located?	In own dwelling = 1 In own yard/plot = 2 Elsewhere = 3			[_ | _]
H6	What type of fuel does your household mainly use for cooking?	No food cooked = 0 Electricity = 1 LP gas = 2 Natural gas = 3	Biogas = 4 Paraffin/kerosene = 5 Coal, lignite = 6 Charcoal = 7	Wood = 8 Straw/shrubs/grass = 9 Animal dung = 10	[_ | _]
H7	How many rooms in this household are used for sleeping?				[_ | _]
H8	What is the main material of the floor in the household?	Earth/sand = 1 Dung = 2 Wood planks = 3	Palm/bamboo = 4 Parquet/polished wood = 5 Vinyl/asphalt strips = 6	Ceramic tiles = 7 Cement = 8 Carpet = 9	[_ | _]
H9	What is the main material of the roof?	No roof = 1 Thatch/palm leaf = 2 Rustic mat = 3 Palm/bamboo = 4	Wood planks = 5 Cardboard = 6 Metal/tin = 7 Wood = 8	Asbestos = 9 Ceramic tiles = 10 Cement = 11 Roofing shingles = 12	

SECTION C: ASSET OWNERSHIP: Household assets

AO1. Do you or any member of your household own any of the following? Please check the item is functioning	Yes = 1 No = 0	AO2. Do you or any member of your household own any of the following? Please check the item is functioning	Yes = 1 No = 0	AO3. Do you or any member of your household own any of the following? Please check the item is functioning	Yes = 1 No = 0
Radio	[_]	Chair/stool	[_]	Watch	[_]
Television	[_]	Wardrobe	[_]	Mobile Phone	[_]
Computer	[_]	Satellite dish/decoder	[_]	Bicycle	[_]
Refrigerator	[_]	Washing machine	[_]	Motorcycle or motor scooter	[_]
Battery or generator for power	[_]	Borehole	[_]	Car or truck	[_]
Solar panel	[_]	Mattress	[_]	Boat with a motor	[_]
Pushing tray	[_]	Bed	[_]	Sewing machine	[_]

ASSET OWNERSHIP: Productive assets

AO4. Do you or any member of your household own any of the following? Please check the item is functioning	Yes = 1 No = 0	AO5. Do you or any member of your household own any of the following? Please check the item is functioning	Yes = 1 No = 0	AO6. Do you or any member of your household own any of the following? Please check the item is functioning	Yes = 1 No = 0
Plough	[_]	Pruning/cutting shears	[_]	Motorized water pump	[_]
Tractor	[_]	Hoe	[_]	Stone grain mill (manual)	[_]
Cultivator/ridger/planter	[_]	Spade or shovel	[_]	Motorized grain mill	[_]
Walking motorized tiller	[_]	Traditional beehive	[_]	Animal cart/scotch cart	[_]
Sickle	[_]	Modern beehive	[_]	Water cart	[_]
Pick axe	[_]	Knapsack sprayer	[_]	Individual granary	[_]
Axe	[_]	Mechanical water pump	[_]		

SECTION D: LIVESTOCK

LVE 1 What type of livestock do you or you or members of your household own If no -> next item	Yes = 1 No = 0	How many [LIVESTOCK] do you currently own?
	LVE1	LVE2
Bulls	[_]	
Oxen	[_]	
Cows	[_]	
Other cattle (heifers, steers, calves)	[_]	
Sheep/goats	[_]	
Donkeys	[_]	
Rabbits	[_]	
Pigs	[_]	
Poultry	[_]	

ONLY ASK THESE QUESTIONS IF HOUSEHOLD OWNS BULLS, OXEN, COWS, OTHER CATTLE

	Question	Codes			Response
LIVE3	Did the quantity of your cattle production change over the last 12 months? If no change or decreased -> next section	No change = 1 Increased = 2 Decreased = 3			[_]
LIVE4	Why did your cattle production decrease over the last 12 months?	Drought = 1 Less access to breeding stock = 2 Theft = 3 Disease = 4 Reduced vet/animal health services = 5	Reduced availability/higher cost of feed = 6 Less pasture availability = 7 Less water availability = 8 Poor market prices = 9	Poor market access = 10 Got out of livestock rearing = 11 Sold some livestock = 12 Some livestock died = 13	[_ | _]

				Wildlife predation = 14	
LIVE5	Do you expect this to be a permanent or temporary change?	Permanent = 1 Temporary = 2			[_]

SECTION E: LAND AND CROP PRODUCTION

	Question	Codes			Response
LD 1	Was this household engaged in crop production activities over the last 12 months?	Yes = 1 No = 0			[_]
LD 2	Does this household own any arable land? If no -> next section	Yes = 1 No = 0			[_]
LD 3	How many acres of land does this household own? ACRES				
LD 4	How many acres of land were planted by this household for your own production or consumption in the 2021/2022 season? ACRES				
LD 5	Did the quantity of your crop production in the 2021/2022 season change compared to the 2015/2016 season? If no change or increased -> LD8	No change = 1 Increased = 2 Decreased = 3			[_]
LD6	Why did the household crop production change?	Less/variable rainfall =1 Drought = 2	Planted different crops or crop varieties = 7	Costs of inputs too high = 12	[_ | _]

		Floods = 3 Disease/insects = 4 Planted less area = 5 Planted fewer crops = 6	Low market prices = 8 Low market prices = 9 Poor market access = 10 No access to inputs = 11	Lack of irrigation = 13 Labour constraints = 14 Wildlife predation = 15 Shortage of draft power = 16	
LD7	Do you expect this change to be a permanent or temporary change?	Permanent = 1 Temporary = 2			[_]

SECTION F: CROPS PLANTED IN 2021/2022 SEASON

In the 2021/2022 season did you plant any of the following crops? If no -> next item	Yes = 1 No = 0	What was the area planted for [CROP] in the 2021/2022 season? ACRES	In the 2021/2022 season did you plant any of the following crops? If no -> next item	Yes = 1 No = 0	What was the area planted for [CROP] in the 2021/2022 season? ACRES
	LD8	LD9		LD8	LD9
Hybrid maize	[_]		Ground-nuts	[_]	
Fortified maize	[_]		Sunflowers	[_]	
Other maize	[_]		Nyimo	[_]	
Hybrid sorghum	[_]		Sweet potatoes	[_]	
Fortified sorghum	[_]		Irish potatoes	[_]	
Other sorghum	[_]		Yams/Cassava	[_]	
Wheat	[_]		Edible dry beans	[_]	
Mhunga/nyawuti/pearl millet	[_]		Cow peas/Nyemba	[_]	
Rapoko/rukweza/finger millet	[_]		Onions	[_]	
Rice	[_]		Peas	[_]	
Sesame/runinga	[_]		Tomatoes	[_]	
Tobacco	[_]		Leafy vegetables	[_]	
Cotton	[_]		Other vegetables	[_]	

2021/2022 SEASON'S HARVEST

Crop	LD10 Did your household grow this crop? *0=No 1=Yes 99=N/A*	LD11 In total, how much has your household harvested and/or expecting to harvest?		LD12 How much of the current harvest has your household sold to date?		LD13 How much of the current harvest is your household expecting to sell?	
		Qty	Unit	Qty	Unit	Qty	Unit
1.Maize							
2.Sorghum (Mapfunde/Amabele)							
3.Finger Millet (Rapoko, rukweza/Uphoko)							
4.Pearl Millet (mhunga/unyawuthi)							
5.Tubers (sweet potatoes, potatoes, cassava, yams)							
6.Cowpeas							
7.Groundnuts (unshelled)							
8.Round nuts (unshelled)							
9.Sugar beans							
10.Soya beans							
11.Tobacco							
12.Cotton							
13.Paprika							
14.Sunflowers							
15.Summer wheat							
16.Other							
Unit Codes: *1 = kg, 2 = 5 Litre Tin, 3 = 20 Litre Tin, 4 = 50kg bag 5 = 90kg bag, 6= bale, 7= tonnes, 99=N/A*							

SECTION G: FOOD SECURITY

NO.	QUESTIONS AND FILTERS			CODING CATEGORIES				SKIP
	CEREALS FROM CASUAL LABOUR AND REMITTANCES/GIFTS IN THE CONSUMPTION YEAR: JUNE 2021 TO MAY 2022							
FS1	How much did you have access to cereals from casual labor exchange and remittances/gifts during June 2021 to May 2022?			FS1a. Quantity from Casual Labour exchange		FS1b. Quantity from Remittances and gifts		
				QUANTITY	UNIT CODE	QUANTITY	UNIT CODE	
	UNIT CODE:		a. Maize (grain or mealie meal)	☐☐☐☐☐	☐	☐☐☐☐☐	☐	
	1=Kg 2=5 Liter Tin 3=20 Liter Tin 4=50kg bag	5=90kg bag 6=Bale 7=Tones 9=n/a	b. Sorghum	☐☐☐☐☐	☐	☐☐☐☐☐	☐	
			c. Millets (Rapoko, pearl millets)	☐☐☐☐☐	☐	☐☐☐☐☐	☐	
			d. Wheat	☐☐☐☐☐	☐	☐☐☐☐☐	☐	
			e. Rice	☐☐☐☐☐	☐	☐☐☐☐☐	☐	
	FOOD STOCKS (CEREALS AND PULSES) AS AT 01 JUNE 2021							
FS2	How much food, from all sources, did your household have in stock on 1 JUNE 2021?			FS2a Quantity		FS2b. Main Sources [ENTER CODES]		
				QUANTITY 000 →Next food	UNIT CODE			
	FOOD TYPE [Include FLOUR and GRAIN]							
	a. Maize			☐☐☐☐☐	☐	☐☐		
	b. Sorghum (Mapfunde/Amabele)			☐☐☐☐☐	☐	☐☐		
	c. Millets (rapoko/rukweza/uphoko/mhunga/ unyawuthi)			☐☐☐☐☐	☐	☐☐		
	d. Wheat			☐☐☐☐☐	☐	☐☐		
	e. Rice			☐☐☐☐☐	☐	☐☐		
	f. Groundnuts (shelled/musvo/ezicacadiweyo)			☐☐☐☐☐	☐	☐☐		
	g. Groundnuts (unshelled/dzinemakanda/ezingacacadwanga)			☐☐☐☐☐	☐	☐☐		
	h. Round nuts (shelled/musvo/ezicacadiweyo)			☐☐☐☐☐	☐	☐☐		

	i. Round nuts (unshelled/dzinemakanda/ezingacacadwanga)	☐☐☐☐☐	☐	☐☐	
	j. Cowpeas	☐☐☐☐☐	☐	☐☐	
	k. Beans	☐☐☐☐☐	☐	☐☐	
	l. Other (specify)	☐☐☐☐☐	☐	☐☐	

	CODES: MAIN SOURCES		UNIT CODE:		
	1 = Own production 2 = Domestic Purchases (cash and barter) 3 = Imports (cash and barter), 4 = Remittance from Outside Zimbabwe 5 = Remittances from Within Zimbabwe 6 = GVT Food Assistance (all forms of Assistance) 7 = Non-GVT Food Assistance (all forms Assistance)	8 = Gifts (from non-relative well-wishers) 9 = Labor exchange 10 = Borrowed 11 = Gleaning 12 = 0ther 99= n/a	1=Kg 2=5 Liter Tin 3=20 Liter Tin 4=50kg bag 5=90k bag	6=Bale 7=Tones 9=n/a	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP
	HOUSEHOLD CASH SOURCES IN THE PAST 12 MONTHS [FROM JUNE 2021 TO MAY 2022]		
FS3	During the past 12 months (from June 2021 – May 2022), what was your household's most important source of CASH? [SINGLE RESPONSE]	Remittance from outside ..... 1 Remittances from within ..... 2 Food crop production/sales ..... 3 Cash crop production..... 4 Casual labour ..... 5 Begging ..... 6 Livestock production/sales..... 7 Skilled trade/artisan ..... 8 Own business ..... 9 Petty trade ..... 10 Pension..... 11 Salary/wages ..... 12 Fishing ..... 13 Gifts ..... 14 Vegetable production/sales ..... 15 Small scale mining/ mineral sales..... 16 Beer brewing ..... 17 Food assistance..... 18 Cross border trade..... 19 Currency trade ..... 20 Gathering natural products for sale e.g., firewood 21 Collecting scrap/ waste material for re-sale 22 Rentals ..... 23 Others (specify) ..... 24 Not applicable (no other source)..... 99	99→FS3a
FS3a	Who is the main contributor of this most important CASH source? [SINGLE RESPONSE]	Father ..... 1 Mother ..... 2 Both Father and Mother..... 3 Daughter..... 4 Son ..... 5 Other relatives 6	

FS3b	During the past 12 months (from June 2021 – May 2022), what were your household's <u>other sources</u> of <u>CASH</u>? [MULTIPLE RESPONSE] [SELECT ALL THAT APPLY]	Remittance from outside ..... 1 Remittances from within ..... 2 Food crop production/sales ..... 3 Cash crop production..... 4 Casual labour ..... 5 Begging ..... 6 Livestock production/sales..... 7 Skilled trade/artisan ..... 8 Own business ..... 9 Petty trade ..... 10 Pension..... 11 Salary/wages ..... 12 Fishing ..... 13 Gifts ..... 14 Vegetable production/sales ..... 15 Small scale mining/ mineral sales..... 16 Beer brewing ..... 17 Food assistance..... 18 Cross border trade..... 19 Currency trade ..... 20 Gathering natural products for sale e.g., firewood 21 Collecting scrap/ waste material for re-sale 22 Rentals ..... 23 Others (specify) ..... 24 Not applicable (no other source)..... 99	
	HOUSEHOLD FOOD SOURCES IN THE PAST 12 MONTHS [FROM JUNE 2021 TO MAY 2022]		
FS4a	During the past 12 months (from June 2021 – May 2022), what was your household's <u>most important source</u> of <u>FOOD</u>? [SINGLE RESPONSE]	Own production..... 1 Cash purchases from household income 2 Purchases from cash transfers (humanitarian assistance) ..... 3 Food aid (humanitarian assistance)..... 4 Casual labour for food ..... 5 Remittances……6 Other (specify) 7	

		Not applicable (no other source……9	
FS4b	During the past 12 months (from June 2021 – May 2022), what were your household's <u>other sources</u> of FOOD? [MULTIPLE RESPONSE] [SELECT ALL THAT APPLY]	Own production..... 1 Cash purchases from household income 2 Purchases from cash transfers (humanitarian assistance) ..... 3 Food aid (humanitarian assistance)..... 4 Casual labour for food ..... 5 Remittances……6 Other (specify) ..... 7 Not applicable (no other source) ……..……9	
	HOUSEHOLD INCOME AND EXPENDITURE [Ask this module to the Household Head/knowledgeable family members in the household]		
	INCOME [LAST CALENDAR MONTH] [MAY 2022]		

FS5	What was the estimated total amount of income earned by your household from each of the following activities in the <u>last</u> calendar month (May 2022)?	Cash		In-kind		
		1.Amount	2.Currency 1 = USD 2 = Rand 3 = RTGS /bond 99=N/a	3.Equivalent Amount	4.Currency 1 = USD 2 = Rand 3 = RTGS/ Bond 99=N/a	
	A. Remittance outside	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	B. Food crop sales	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	C. Casual labour	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	D. Livestock sales	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	

	E. Sale of livestock products/ draught power hiring	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	F. Skilled trade/artisan	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	G. Own Business/beer brewing	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	H. Petty Trade (including vending)/cross border trade	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	I. Pensions	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	J. Salary/wages/earnings	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	K. Fishing, gathering of natural products e.g., firewood, fruits	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	L. Small scale mining/ mineral sales	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	M. Social Transfers (incl. cash and in-kind) from government or NGOs	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	N. Receipt of money owed	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	O. Loan received	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	P. Rental income	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	Q. Payment of money owed	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	R. Cross border trade	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	S. Beer Brewing	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	T. Remittance within country	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	

	u. Non-State Social Transfers *(incl. cash and in-kind)*	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	v. cash crop sales	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	w. vegetables sales	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	x. Other Specify	☐☐☐☐☐☐	☐☐	☐☐☐☐☐☐	☐☐	
	EXPENDITURE IN LAST CALENDAR MONTH May 2022					
FS6	How much did your household spend on the following items in the LAST calendar MONTH (May 2022), in cash or in-kind?	1. Amount/ Equivalent		2. Currency 1 = USD, 2=Rand 3 = RTGS/Bond 99=N/a		
	A. Maize flour	☐☐☐☐☐☐		☐☐		
	B. Maize grain	☐☐☐☐☐☐		☐☐		
	C. Wheat flour/ grain	☐☐☐☐☐☐		☐☐		
	D. Bread, buns and other confectionery	☐☐☐☐☐☐		☐☐		
	E. Millet (pearl millets/finger millet)	☐☐☐☐☐☐		☐☐		
	F. Rice and pastas	☐☐☐☐☐☐		☐☐		
	G. Sorghum (grain, flour)	☐☐☐☐☐☐		☐☐		
	H. Sweet potatoes	☐☐☐☐☐☐		☐☐		
	I. Irish potatoes	☐☐☐☐☐☐		☐☐		
	J. Other tubers (cassava, yams)	☐☐☐☐☐☐		☐☐		
	K. Milling costs	☐☐☐☐☐☐		☐☐		
	L. Sugar and other sugar products/honey	☐☐☐☐☐☐		☐☐		
	M. Salt/soups	☐☐☐☐☐☐		☐☐		
	N. Milk (including powdered and formula)	☐☐☐☐☐☐		☐☐		
	O. Tea leaves and coffee	☐☐☐☐☐☐		☐☐		
	P. Dovi, Butter, jam and margarine	☐☐☐☐☐☐		☐☐		

	Q. Cooking oil and fats	☐☐☐☐☐☐	☐☐	
	R. Meat (Beef, pork, chicken including live chicken and other meats)	☐☐☐☐☐☐	☐☐	
	S. Fish/Kapenta	☐☐☐☐☐☐	☐☐	
	T. Soya mince/Soya Chunks	☐☐☐☐☐☐	☐☐	
	U. Vegetables (leaf, tomatoes, onions etc.)	☐☐☐☐☐☐	☐☐	
	V. Cooking fuel (paraffin, gel, gas, fire wood, electricity etc.)	☐☐☐☐☐☐	☐☐	
	W. Matches/candles	☐☐☐☐☐☐	☐☐	
	X. Washing and bathing soap and other detergents	☐☐☐☐☐☐	☐☐	
	Y. Vaseline, tooth paste and other lotion	☐☐☐☐☐☐	☐☐	
	Z. Alcohol and cigarettes (including snuff)	☐☐☐☐☐☐	☐☐	
	AA. ..... Transport (include bus fare, vehicle fuel and services costs)	☐☐☐☐☐☐	☐☐	
	BB. ..... Domestic worker (including maid, herd boy)	☐☐☐☐☐☐	☐☐	
	CC. ..... Communication (air time/telephone bills / internet)	☐☐☐☐☐☐	☐☐	
	DD. ..... Sanitary ware (including Pampers and tissue paper)	☐☐☐☐☐☐	☐☐	
	EE. Others (specify)	☐☐☐☐☐☐	☐☐	
	EXPENDITURE IN LAST 12 MONTHS [JUNE 2020 – MAY 2022]			
FS7	How much did your household spend on the following items in the LAST 12 calendar MONTHS (June 2021 – May 2022)?	1. Amount/ Equivalent	2. Currency 1 = USD 2 = Rand 3 = RTGS/bond 99=N/a	
	A. Education expenses (School fees and levies, uniforms, stationaries and others)	☐☐☐☐☐☐	☐☐	
	B. Agricultural inputs (Seed, fertilizers, chemicals, fuel)	☐☐☐☐☐☐	☐☐	

	C. Agricultural services (Labour, tillage)	☐☐☐☐☐☐	☐☐	
	D. Veterinary chemicals and drugs	☐☐☐☐☐☐	☐☐	
	E. Agricultural tools (include spare parts and maintenance)	☐☐☐☐☐☐	☐☐	
	F. Business costs (running and investment costs)	☐☐☐☐☐☐	☐☐	
	G. Health/medical	☐☐☐☐☐☐	☐☐	
	H. Clothes/shoes (excluding school uniforms)	☐☐☐☐☐☐	☐☐	
	I. Social occasions (weddings, parties)	☐☐☐☐☐☐	☐☐	
	J. Funeral expense	☐☐☐☐☐☐	☐☐	
	K. Loan Repayment	☐☐☐☐☐☐	☐☐	
	L. Constructions expenses (including maintenance)	☐☐☐☐☐☐	☐☐	
	M. Remittances out	☐☐☐☐☐☐	☐☐	
	N. Taxes (livestock, household, Government and council taxes and any other taxes)	☐☐☐☐☐☐	☐☐	
	O. Other items – specify	☐☐☐☐☐☐	☐☐	

SECTION H: FOOD CONSUMPTION

HDDS 1 Has the household consumed any of the following food items in the last seven days? If no -> next item	Yes = 1 No = 0	On how many separate days did your household consume [FOOD] in the last seven days?
	HDDS1	HDDS2
Cereals (bread, rice, maize, barley, sorghum, millet, etc.)	[_]	
Tubers (potatoes, sweet potatoes, cassava, etc)	[_]	
Pulses and nuts (beans, lentils, peas, peanuts, etc.)	[_]	
Vegetables	[_]	
Fruits	[_]	
Meat and fish (all types)	[_]	
Dairy products (milk, yoghurt, cheese, etc)	[_]	
Sugar, honey	[_]	
Oil, fat, butter	[_]	

SECTION I: HOUSEHOLD HUNGER

#	Question	Code	Response
HH1	In the past 30 days was there ever no food to eat of any kind in your house because of a lack of resources to get food? If no -> H3	Yes = 1 No = 0	[_]
HH2	How often was there no food in your house in the past 30 days?	Rarely (1-2 days) = 1 Sometimes (3-10 days) = 2 Often (more than 10 days) = 3	[_]
HH3	In the past 30 days did you or any household member go to sleep at night hungry because there was not enough food? If no -> H5	Yes = 1 No = 0	[_]
HH4	How often did a household member go to sleep at night hungry because there was not enough food?	Rarely (1-2 days) = 1 Sometimes (3-10 days) = 2 Often (more than 10 days) = 3	[_]
HH5	In the past 30 days did you or any household member go a whole day and night without eating anything at all because there was not enough food? If no -> next section	Yes = 1 No = 0	[_]

HH6	In the past 30 days did you or any household member go a whole day or night without eating anything at all because there was not enough food?	Rarely (1-2 days) = 1 Sometimes (3-10 days) = 2 Often (more than 10 days) = 3	[_]

FIES01	During the past 12 MONTHS, you or others in your HH were worried you would not have enough food to eat due to the lack of money or resources? [WORRIED]	Yes 1 No 2	2→FIES03
FIES02	Has this happened during the past 30 DAYS too?	Yes 1 No 2	
FIES03	During the past 12 MONTHS, you or others in your HH were unable to eat healthy and nutritious food due to the lack of money or resources? [HEALTHY/NUTRITIOUS FOOD]	Yes 1 No 2	2→FIES05
FIES04	Has this happened during the past 30 DAYS too?	Yes 1 No 2	
FIES05	During the past 12 MONTHS, you or others in your HH ate only a few kinds of foods due to the lack of money or resources?	Yes 1 No 2	2→FIES07
FIES06	Has s this happened during the past 30 DAYS too?	Yes 1 No 2	
FIES07	During the past 12 MONTHS, was there a time when you or others in your household had to skip a meal because of a lack of money or other resources to get food?	Yes 1 No 2	2→FIES09
FIES08	Was this happened during the past 30 DAYS too?	Yes 1 No 2	
FIES09	During the past 12 MONTHS, was there a time when you or others in your household ate less than you thought you should because of a lack of money or other resources?	Yes 1 No 2	2→FIES10
FIES10	Was this happened during the past 30 DAYS too?	Yes 1 No 2	
FIES11	During the past 12 MONTHS, was there a time when your household did not have food because of a lack of money or other resources?	Yes 1 No 2	2→FIES13
FIES12	Was this happened during the past 30 DAYS too?	Yes 1 No 2	

FIES13	During the past 12 MONTHS, was there a time when you or others in your household were hungry but did not eat because there was not enough money or other resources for food?	Yes 1 No 2	2→FIES15
FIES14	Was this happened during the past 30 DAYS too?	Yes 1 No 2	
FIES15	During the past 12 MONTHS, was there a time when you or others in your household went without eating for a whole day because of a lack of money or other resources?	Yes 1 No 2	2→S1
FIES16	Was this happened during the past 30 DAYS too?	Yes 1 No 2	

SECTION J: COPING STRATEGIES

	FOOD BASED COPING STRATEGIES					
FCP101	Were there any days in the past 30 days that your household faced difficulties in accessing enough food to eat and how often did your household resort to using one or more of the following strategies in order to deal with the food access difficulties?					
	COPING STRATEGIES (Circle one answer per strategy)	NEVER	SELDOM (<1 day/week or 1-3 days 30 days)	SOMETIMES (1-2 days per week)	OFTEN (3 or more days/week)	DAILY
	a. Skip entire days without eating?	0	1	2	3	
	b. Limit/reduce portion size at mealtimes?	0	1	2	3	4
	c. Reduce number of meals eaten per day?	0	1	2	3	4
	d. Borrow food or rely on help from friends or relatives?	0	1	2	3	4
	e. Rely on less expensive or less preferred foods?	0	1	2	3	4
	f. Purchase/borrow food on credit?	0	1	2	3	4
	g. Gather/hunt unusual types or amounts of wild food?	0	1	2	3	4
	h. Harvest immature crops?	0	1	2	3	4
	i. Send household members to	0	1	2	3	4

	eat elsewhere?					
	j. Send household members to beg?	0	1	2	3	4
	k. Reduce adult consumption so children can eat?	0	1	2	3	4
	l. Rely on casual labour for food?	0	1	2	3	4

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES			SKIP
	LIVELIHOOD AND ASSET BASED COPING STRATEGIES				
FCP102	During the <u>past 30 days</u> did anyone in your household have to do the following activities to buy food?	1=Yes→FCP104 2=No→FCP105 FCP103	If YES, What was the main reason of this activity to buy food? [SEE CODES BELOW] FCP104	If NO, why not? [SEE CODES BELOW] FCP105	
	a. Sold household Assets/goods (radio, furniture, mobile phone, television, etc.) to buy food?	☐	☐	☐	
	b. Reduced non-food expenses e.g., spending on clothes, pots and pans, travel, medicines, education etc. to buy food?	☐	☐	☐	
	c. Sold productive assets or means of transport	☐	☐	☐	

	(scotch cart, plough, sewing machine, wheelbarrow, bicycle, motor cycle, car etc.) to buy food?				
	d. Spent savings on buy food?	☐	☐	☐	
	e. Borrowed money from a formal lender/bank (e.g., from savings group, friends or relatives, local money lender, micro finance institution or took food on credit etc.) to buy food?	☐	☐	☐	
	f. Leased out land to buy food	☐	☐	☐	
	g. Withdraw children from school because of hunger or to help work for food?	☐	☐	☐	
	h. Sold <u>last female</u> breeding livestock to buy food?	☐	☐	☐	
	i. Begging to get food	☐	☐	☐	
	j. Sold more animals (non-productive) than usual to buy food?	☐	☐	☐	
	<u>CODES FOR B201b:</u> 1= No reason (Neutral), 2= Because of regular food scarcity (Stress), 3= Because of bad situation/no other ways to buy food (Crisis), 4= Emergency need to buy food (Emergency) CODES FOR B201c: 1 = Because I did not face a shortage of food, 2 = Because I already sold those assets or have engaged in this activity within the last 12 months and cannot continue to do it, 3= I don't have assets				

SECTION K: AGRICULTURAL PRODUCTION TECHNOLOGIES

NO.	QUESTIONS AND FILTERS			
	Practices [Ask each item one by one]	Are you familiar with this Practice ? 1= Yes 2= No → Next practice (a)	Did you use this practice in the past 12 months? 1=Yes 2=No (b)	Have you or others in your HH received any training/ orientation on this practice? 1=Yes 2=No→ Next (c)
AP01				
	1. Quality certified seeds [Package seeds with germination rate 80% or more, collected from a trusted source]	☐	☐	☐
	2. Community seed banks	☐	☐	☐
	3. Adapted, suitable Improved Varieties (e.g., Maize, g'nuts, beans [High yield varieties, disease/drought tolerant varieties;	☐	☐	☐
	4. Growing small grains (sorghum, millet, rapoko etc.)]			
	5. Crop rotation [Cultivate cereals (maize, sorghum, millet, rice, wheat etc.) this season and legumes (cowpeas, ground nuts etc.) in next season, by turn]	☐	☐	☐
	6. Intercropping	☐	☐	☐

	[Cereals in one row and cowpeas/groundnuts/pumpkins in another row]			
	7. Cover cropping (e.g., star grasses, vertiva legumes, [A cover crop is planted to manage soil erosion, soil fertility, soil quality, water, weeds, pests, diseases, biodiversity and wildlife in an agro-ecosystem. Cover crops may be an off-season crop planted after harvesting the cash crop. The cover crop may grow over winter.]	☐	☐	☐
	8. Mulching [This improved technology is used to retain soil fertility and conservation. It is also used for maintain soil moisture. Mulching technology involves deliberate efforts to cover the soil surface of a piece of land prepared for purposes of cropping using organic materials. Organic material may be crop residues left from the previous crop, crop residue imported from another field, grasses, leaf litter or a combination of any of these in any proportion	☐	☐	☐
	9. Integrated Pest Management [process of scouting, identification, monitoring, action appropriate pest/disease control method on monitoring (action) and evaluation after the action]	☐	☐	☐
	10. Compost/Organic fertilizer [Compost is not only cattle or animal manure; it is prepared through a process with manure, soil, crops residue etc.]	☐	☐	☐
	11. Drip/Micro Irrigation [Micro-irrigation is potential to save water and nutrients by allowing water to drip slowly to the roots of plants, either from above the soil surface or buried below the surface. The goal is to place water directly into the root zone and minimize evaporation.]	☐	☐	☐

	12. Plant Density (Including mixing small grain seed with sand or fertilizer before planting) [Use of appropriate amount of seeds planting/appropriate number of plants/appropriate plant distance in a particular piece of land]	☐	☐	☐
	Practices [Ask each item one by one]	Are you familiar with this Practice ? 1= Yes 2= No → Next practice (a)	Did you use this practice in the past 12 months? 1=Yes 2=No (b)	Have you or others in your HH received any training/ orientation on this practice? 1=Yes 2=No→ Next (c)
AP02	A. IMPROVED LIVESTOCK PRACTICES			
	1. Improved livestock breeds	☐	☐	☐
	2. Improved animal shelters (goats, poultry or cattle) [Enough space, well ventilation, protected from afternoon sun, dry floor]	☐	☐	☐
	3. Water infrastructure for livestock at homestead (e.g., water trough)	☐	☐	☐
	4. Routine vaccinations by Veterinary Officer or Paravet	☐	☐	☐
	5. Home vaccinations (Farmer administered vaccinations	☐	☐	☐
	6. Castration	☐	☐	☐
	7. Deworming	☐	☐	☐

	8. Dipping	☐	☐	☐
	9. Spraying livestock at home or other practice to control ticks	☐	☐	☐
	10. Use of services of community animal health worker (Paravet)	☐	☐	☐
	11. Homemade animal feeds made with locally available ingredients including legumes (e.g., homemade feed formulation for poultry)	☐	☐	☐
	12. Animal fodder production for ruminants (e.g., velvet bean, lablab, forage sorghum, bana grass, mucuna, Brachairia and desmodium/silver leaf.)	☐	☐	☐
	13. Animal Fodder preservation for ruminants (e.g., Silage making))	☐	☐	☐
	14. Survival feeding (Feeding of productive livestock in lean season)	☐	☐	☐
	15. Animal feed supplied by feed companies	☐	☐	☐
	16. Artificial insemination	☐	☐	☐
	17. Pen fattening (feeding) [Pen fattening) involves the feeding of cattle with a protein balanced, high-energy diet for a period 45 -70 days under confinement to increase live weights and improve degree of finish and thus obtain better grades at the abattoir]	☐	☐	☐
AP03	B. VALUE CHAIN PRACTICES			
	1. Marketing and distribution			
	a. Access Agriculture inputs through agro-dealers and/or agriculture cooperatives, contract farming, government input schemes, loans in kind)	☐	☐	☐

	b. Receiving market information on prices, demand or product quality requirements through collection centers, traders, private sector, extension officers, E platforms (e.g., Ecofarmer, Kulima mali, Agrishare, emkambo, Enduna) or other market actors	☐	☐	☐
	c. Use of formal organised marketing systems for crops/livestock and/ vegetables /fruits etc.	☐	☐	☐
	d. Marketing produce through commodity associations/producer groups/ cooperatives/ farmer organisation	☐	☐	☐
	2. Post-harvest handling and storage			
	Practices [Ask each item one by one]	Are you familiar with this Practice ? 1= Yes 2= No → Next practice (a)	Did you use this practice in the past 12 months? 1=Yes 2=No (b)	Have you or others in your HH received any training/ orientation on this practice? 1=Yes 2=No→ Next (c)
	a. Improved granary at household	☐	☐	☐
	b. Store in bag with artificial chemicals at the household	☐	☐	☐
	c. Community Granaries	☐	☐	☐
	d. Temperature and humidity control (hermetic bag, air-tight box, metal silo)	☐	☐	☐
	3. Value added-processing			
	a. Improved quality control technologies (sorting, grading)	☐	☐	☐
	b. Drying, packaging, storage	☐	☐	☐
	c. Food processing (peanut butter, oils, amarula jam, honey)	☐	☐	☐
	d. Branding and labeling (e.g., of honey, peanut butter)	☐	☐	☐

AP04	WATER AND SOIL CONSERVATION TECHNIQUES AND NATURAL RESOURCES MANGEMENT			
	1. Minimum tillage (e.g., planting basins, ripper, 2-wheel tractor)	☐	☐	☐
	2. Use of contour ridges/Contour planting	☐	☐	☐
	3. Planting of fodder trees (e.g., Moringa, Leucaena)	☐	☐	☐
	4. Management or protection of the watershed (e.g., vertiva, sisals, star grasses, gulley reclamation, fodder trees)	☐	☐	☐
	5. Sustainable harvesting of forest products (e.g., NTFPS, marula, baobab, mopane worms, honey, etc.)	☐	☐	☐

SECTION L: SHOCKS

Shock	During the past 12 months did your household experience a shock that affected your household in particular Yes = 1 No = 0 If no -> next item	How often did [SHOCK] occur during the past 12 months? Once = 1 Twice = 2 Three or more times = 3	What were the main impacts of [SHOCK] Record all that apply, see codes overleaf Put each code in a bracket ()	What types of assistance did you household receive to cope with [SHOCK]? Record all that apply, see codes overleaf Put each code in a bracket ()	How severe was [SHOCK] on your households food consumption? Remained the same = 1 Moderate decline = 2 Severe decline = 3 If 1 -> S7	To what extent was your households' food consumption able to recover from [SHOCK]? Fully recovered and better than before =1 Fully recovered, same as before =2 Partially recovered =3	How did you cope with [SHOCK]? Record all that apply, see codes overleaf Put each code in a bracket ()	Who did [SHOCK] affect in your community? Own household only = 1 Some other households in community = 2 Most household in the community =3 All households in the

						Have not recovered at all =4		community =4
	S1	S2	S3	S4	S5	S6	S7	S8
Floods								
Dry spells/variable rainfall								
Drought								
Deforestation								
Livestock disease								
Crop disease or pests								
Reduced soil productivity								
Crop damage/destruction from wildlife								
Livestock damage/death from wildlife								
Increase in the price of food								
Sharp decrease in the price of cash crops								
Sharp increase in livestock prices								
Sharp decrease in livestock prices								
Diarrhoea outbreak								
Chronic illness (HIV, cancer,								

diabetes) or malaria								
Migration of main income earner								
Loss of employment								
Death of main income earner								

SHOCK CODES

Shock impact codes (S3)	Shock assistance codes (S4)	Shock coping codes (S7)
Loss of life = 1	Did not receive assistance = 1	Did nothing to cope with shock = 1
Loss of labour for household activities =2	Food aid (from gov't / NGO) = 2	Send livestock in search of pasture =2
Loss of agricultural land =3	Food transfers (food/cash-for-work from gov't / NGO) = 3	Sell livestock = 3
Loss of communal pasture/forest/water=4	Food from friend, relative, etc = 4	Slaughter livestock = 4
Destruction or damage to the home =5	Food in exchange for work from friend, relative neighbour, etc =5	Lease out land = 5
Loss of livestock =6	Cash gift = 6	Migrate (only some members) = 6
loss of crops =7	Cash loan = 7	Migrate (whole household) = 7
Loss of drinking water sources =8	Unconditional cash transfer = 8	Send boys to stay with relatives or other households = 8
Decline in crop production = 9	Clothing = 9	Send girls to stay with relatives or other households = 9
Decline in livestock production =10	Household items = 10	Traditional remedy = 10
Loss of household assets =11	Shelter/housing materials = 11	Take children out of school = 11
Household member migrated =12	Seed =12	Move to less expensive housing = 12
Household was displaced =13	Labour to rebuild/repair structures = 13	Reduce food consumption = 13
Reduced ability to buy food/basic household items =14	Agricultural or livestock inputs = 14	Take up new wage labour = 14

Damage to critical infrastructure (roads, markets, health clinics, etc) = 15	Agricultural labour = 15	Sell household items = 15
Loss of income = 16	Childcare = 16	Sell productive assets = 16
	Land parcel = 17	Take out loan from NGO = 17
		Take out loan from bank = 18
		Take out loan form money lender = 19
		Take out loan from friends or relatives = 20
		Send children to work for money = 21
		Receive money or food from relatives / friends within community = 22
		Receive food aid from gov't = 23
		Participate in food-for-work (gov't/NGO) = 24
		Use money form savings = 25
		Receive money or food from relative/friends outside the community = 26
		Food in exchange for work form friend, relative, neighbour etc = 27

FUTURE SHOCKS

	What do you think you can do to protect yourself from future shocks? Tick all that apply
	S10
Nothing	[_]
Create household savings fund	[_]
Store food and/or grain	[_]
Store water	[_]

Create a household emergency plan	[_]
Plant different crops	[_]
Purchase different cattle breeds	[_]
Expand goat herds	[_]
Change livelihood	[_]
Add other sources of income	[_]
Purchase crop insurance	[_]
Relocate	[_]

SECTION L: ACCESS TO MARKETS

	Question	Codes			Response
M1	How far away from this community is the MAIN market where you would sell agricultural products? KILOMETRES				
M2	Have you had to change where you sell agricultural products in the past 12 months? If no or did not sell crops -> M4	Yes = 1 No = 0 Did not sell crops = 3			[_]
M3	How has where you sell agricultural products changed in the last 12 months? Record all that apply	Travelled farther than before = 1 Travelled less than before = 2	Same distance but different market = 3 Selling different products (need different market) = 4	Did not produce enough to sell = 5 Payment method changed from cash to eco-cash = 6	
M4	How far away from this community is the MAIN market where you would buy agricultural inputs?				

	KILOMETRES				
M5	Have you had to change where you buy agricultural inputs in the past 12 months? If no or did purchase inputs -> M7	Yes = 1 No = 0 Did not purchase inputs = 3			[_]
M6	How has where you purchase agricultural inputs changed in the last 12 months? Record all that apply	Travelled farther than before = 1 Travelled less than before = 2	Same distance but different market = 3	Purchasing different products (need different market) = 4	
M7	How far away from this community is the MAIN market where you would buy/sell livestock? KILOMETRES				
M8	Have you had to change where you buy/sell livestock in the past 12 months? If no or did not sell crops -> next section	Yes = 1 No = 0 Did not sell crops = 3			[_]
M9	How has where you buy/sell livestock changed in the last 12 months? Record all that apply	Travelled farther than before = 1 Travelled less than before = 2	Same distance but different market = 3 Buying or selling different livestock (need different market) = 4	Did not produce enough to sell = 5 Payment method changed from cash to eco-cash = 6	

SECTION M: ACCESS TO INFORMATION

	In the last 12 months, did you receive any information on any of the following? Yes = 1 No = 0 If no -> next item	Who was your main source of information about [INFO]? See codes below	Was the information about [INFO] useful for household decision making? See codes below	Do you trust [SOURCE] as a source of information? Yes = 1 No =0
	I1	I2	I3	I3
Rainfall/weather prospects for the coming season	[_]			
Weather-related agricultural recommendations (crop, seed variety, timing)	[_]			
Animal health/husbandry practices	[_]			
Current market prices (food, crops, livestock)	[_]			
Alternative livelihood strategies	[_]			
Opportunities for borrowing	[_]			
Government services/responsibilities/processes	[_]			
Early warning for natural hazards (floods, cyclones, etc.)	[_]			

Source codes (I2)	Decision codes (I3)
No one in particular = 1	No decision were made based on the information = 1
AGRITEX = 2	Decision benefited the household = 2
Traditional leaders =3	Decision was detrimental to the household = 3

Religious leaders = 4	Decision had no effect = 4
Formal school teachers = 5	
Neighbours or friends = 6	
Political/government officials = 7	
Family members = 8	
Community group (savings, burial, coop) = 9	
NGO = 10	
Formal organisations (Farmers unions, etc) = 11	
Private company/business = 12	
Radio = 13	
Informal farmers groups = 14	

SECTION N: ACCESS TO FINANCE

	Question	Codes		Response
F1	Do you or any household member have cash savings? If no ->F4	Yes = 1 No = 0		[_]
F2	How are your household cash savings mainly used by the household? Tick all that apply		Basic/essential household items (food, soap, cooking fuel, etc)	[_]
			Luxury and non-essential items (electronics, jewellery, cigarettes, alcohol, etc.)	[_]
			To recover from a shock (replace assets, health costs, repairing damage, etc)	[_]
			Investments in the future (education, agriculture, small business)	[_]
			Social and religious ceremonies	[_]
			Loan repayment	[_]
			To fund migration	[_]
F3			Formal savings account (state/commercial bank, post-savings, etc.)	[_]

	How are you or your household members' savings currently being held? Tick all that apply		Eco-cash			[_]
			Village Savings and Loans Committee (VSAL)			[_]
			Friends or family			[_]
			In cash in some safe place			[_]
			Other (specify)			[_]
F4	How have your household savings changed over the last 12 months?	Had no savings = 1 No change = 2 Increased lot = 3		Increased slightly = 4 Decreased = 5 Savings wiped out = 6		[_]
F5	Have you or any household member taken out a loan in the last 12 months? If yes -> F7	Yes = 1 No = 0				[_]
F6	What is the main reason why you or household member did not take a loan in the last 12 months?	Didn't need = 1 Couldn't find a loan that met my needs = 2 Not aware of possibility = 3		Afraid I couldn't pay it back = 4 Afraid of losing collateral = 5 Interest rate too high = 6	No loan providers in my area = 7 Cannot qualify (e.g., no collateral) = 8 Process is too long = 9	[_]
F7	Which household members have borrowed	Adult males 1 Adult females 2				

	money or taken out a cash loan during the last 12 months? [MULTIPLE RESPONSE]	Male youth 3 Female youth 4			
F8	What was the source(s) of the loan(s)? [MULTIPLE RESPONSE]	A. Money lender.....01 B. Relative/Friend/neighbour .....02 C. Micro finance institutions .....03 D. Banks .....04 E. ISAL/VSAL/SACCO.....10 F. Private business – inputs on credit for contracted crop .....11 G. Private business – feeder finance for pen fattening.....12 H. Local trader/shop.....13 I. Farmers organizations.....16 J. Others (specify) .....18 K. Don't know.....99 Refused 88			

F8	How was the loan(s) mainly used? Tick all that apply		Basic/essential household items (food, soap, cooking fuel, etc)	[_]
			Luxury and non-essential items (electronics, jewellery, cigarettes, alcohol, etc.)	[_]
			To recover from a shock (replace assets, health costs, repairing damage, etc)	[_]
			Investments in the future (education, agriculture, small business)	[_]
			Social and religious ceremonies	[_]
			Loan repayment	[_]
			To fund migration	[_]

SECTION O: SOCIAL CAPITAL

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP

	SOCIAL CAPITAL (INFORMAL, LINKING, BONDING, BRIDGING AND FORMAL SOCIAL SUPPORT)		
	INFORMAL SOCIAL CAPITAL		
SC01	If your household had a problem and needed help urgently (e.g., food, money, labor, transport, etc.), who IN THIS COMMUNITY could you turn to for help? [MULTIPLE RESPONSE] [READ RESPONSES]	A. Relatives 1 B. Non-relatives 2 C. No one 3 D. Don't know 8 E. Refused 9	
SC02	If your household had a problem and needed help urgently (e.g., food, money, labor, transport, etc.), who OUTSIDE THIS COMMUNITY could you turn to for help? [MULTIPLE RESPONSE] [READ RESPONSES]	A. Relatives 1 B. Non-relatives 2 C. No one 3 D. Don't know 8 E. Refused 9	
SC03	Compared to one year ago, has your ability to get help from anyone within or outside of your community: [READ RESPONSES]	Increased 1 Stayed the same 2 Decreased 3 Don't know 8 Refused 9	
SC04	Who INSIDE THIS COMMUNITY would you help if they needed help urgently (e.g., food, money, labor, transport, etc.)? [MULTIPLE RESPONSE] [READ RESPONSES]	A. Relatives 1 B. Non-relatives 2 C. No one 3 D. Don't know 8 E. Refused 9	
SC05	Who OUTSIDE THIS COMMUNITY would you help if they needed help urgently (e.g., food, money, labor, transport, etc.)? [MULTIPLE RESPONSE] [READ RESPONSES]	A. Relatives 1 B. Non-relatives 2 C. No one 3 D. Don't know 8 E. Refused 9	
	D2. LINKING SOCIAL CAPITAL		

SC06	Do you or does anyone else in your household has contact with any government officials?	Yes 1 No 2 Don't know 8 Refused 9	2,8,9→ SC09
SC07	How do you (or another household member) start the link with the government officials? Through: [MULTIPLE RESPONSE]	A. Myself B. Family members or relatives 1 C. Friend 2 D. Neighbor 3 E. By chance 4 F. Other (specify) 5 G. Don't know 8 H. Refused 9	
SC08	Could you ask the government officials to help your family or community if help was needed?	Yes 1 No 2 Don't know 8 Refused 9	
SC09	Do you or does anyone else in your household have a contact with an NGO?	Yes 1 No 2 Don't know 3 Refused 9	2,8,9→ SC12
SC10	How do you (or another household member) start contact with the NGO? Through: [MULTIPLE RESPONSE]	A. Family members or relatives 1 B. Friend 2 C. Neighbor 3 D. By chance 4 E. Other (specify) 5 F. Don't know 8 G. Refused 9	
SC11	Could you ask the NGO to help your family or community if help was needed?	Yes 1 No 2 Don't know 8 Refused 9	
	BONDING SOCIAL CAPITAL		

SC12	Has your household given assistance to anyone WITHIN THIS COMMUNITY in the last 12 months?	A. Relatives 1 B. Non-relatives 2 C. No one 3 D. Don't know 8 E. Refused 9	
SC13	Within the last 12 months, has your household received assistance from anyone WITHIN THIS COMMUNITY?	A. Relatives 1 B. Non-relatives 2 C. No one 3 D. Don't know 8 E. Refused 9	
	BRIDGING SOCIAL CAPITAL		
SC14	Within the last 12 months, has your household given assistance to anyone OUTSIDE THIS COMMUNITY?	A. Relatives 1 B. Non-relatives 2 C. No one 3 D. Don't know 8 E. Refused 9	
SC15	Within the last 12 months, has your household received assistance from anyone OUTSIDE THIS COMMUNITY?	A. Relatives 1 B. Non-relatives 2 C. No one 3 D. Don't know 8 E. Refused 9	
	FORMAL SOCIAL SUPPORT		
SC16	Are there any organizations (government, NGO religious) that provide social support the community?	Yes 1 No 2 Don't know 8	2,8→SC18
SC17	In the last 12 months, did you or your household receive any government or NGO support?	Yes 1 No 2 Don't know 8	2,8→SC18
SC18	What type of social support did this household benefit from in the last 12 months?	A. Emergency food/cash assistance 01 B. Lean Season Assistance (Food or cash transfer 02 C. Household materials and non-food items 03 D. Educational assistance04	

	[READ LIST] [MULTIPLE RESPONSE]	E. Emergency distribution of agricultural inputs (seeds, fertilizer, etc) 05 F. Emergency distribution of livestock inputs (feed, fodder, medicine, etc) 06 G. WASH (installation/repair of WASH facility) 07 H. Disaster planning/response 08 I. Safety net (FFW/CFW) 09 J. Child malnutrition/infant feeding 10 K. Other (specify) 11 L. Don't know 88	
SC19	Do you have an active Disaster Risk response/management or civil protection committee in your community?	Yes 1 No 2 Don't know 8	
SC20	Does this community have a community Action adaption planning or resilience planning committee	Yes 1 No 2 Don't know 8	

SECTION P: DIFFERENCES

	Differences often exist between people living in the same community. Do you believe that there are differences in the following in your community? Yes = 1 No = 0 If no -> next item	To what extent do [DIFFERENCES] tend to divide people in your community and cause problems? Not at all = 1 Somewhat = 2 Very much = 3 If not at all -> next item	How are these problems because of [DIFFERENCES] usually solved? These problems are not solved = 1 People work it out between themselves = 2 Family/household members intervene = 3 Neighbours intervene = 4 Community leaders mediate = 5 Religious leaders mediate = 6 Judicial leaders or community courts mediate = 7 Community groups mediate = 8
	D1	D2	D3
Differences in wealth	[_]	[_]	[_]

Differences in education	[_]	[_]	[_]
Differences between men and women	[_]	[_]	[_]
Differences between long-time inhabitants and new settlers	[_]	[_]	[_]

SECTION Q: EXCLUSION

	Do you feel that you or members of your household are occasionally denied service or have only limited opportunity to use any of the following services? Yes = 1 No = 0 If no -> next item	What are the reasons or criteria why some people are excluded from [SERVICE]? See codes below, record all that apply in brackets ()
	Ex1	Ex2
Education/schools	[_]	[_]
Health services	[_]	[_]
Job training/employment	[_]	[_]
Credit/finance	[_]	[_]
Water distribution	[_]	[_]
Agricultural extension	[_]	[_]

Income level = 1	Race/ethnicity = 6	Lack collateral = 11
Occupation = 2	Religious beliefs = 7	My farm is too small = 12
Social status = 3	Political affiliation = 8	Physical fitness = 13
Age = 4	Lack of education = 9	
Gender = 5	Community is too remote = 10	

SECTION R: TRUST

	Question	Codes			Response
T1	Do you think that in this community people generally trust one another in matters of lending or borrowing?	Do trust = 1 Do not trust = 2			[_]
T2	Do you think over the last few years this level of trust has gotten better, gotten worse or stayed the same?	Better = 1 The same = 2 Worse = 3			[_]
T3	Compared with other communities, how much do people of this community trust each other in matters of lending or borrowing?	Less than other communities = 1 The same as other communities = 2 More than other communities = 3			[_]

RESULT

	Question	Codes			Response
RESULT1	RECORD OUTCOME OF VISIT	Completed = 1 Partially complete (revisit) = 2 Partially complete (refused after starting interview) = 3	Permission refused = 4 Not available = 5 Household not eligible = 6 Long term unavailable = 7		[_]
RESULT2	Explain any reason why not completed, report any irregularities about the interview or any information HQ should know				

Annexe 4: Qualitative Tools

FGD Guide

Step 0: Welcome, Introduction and Explanation

Focus groups are divided into three different categories: 1) adult men; 2) adult women; and 3) youth (including both male and female). The FGD facilitators would:

- ✓ Welcome and thank participants for their time;
- ✓ Introduce themselves and brief on the background and purpose of the CoBRA assessment – to understand the shocks and hazards, their effect on the community, their resilience to such shocks and the contribution interventions in the communities to such resilience.

Step 1: Agree the definition of resilience

In this step, the complex concept of "resilience" is contextualized and translated into plain terms that are understandable for the focus groups. The facilitators may ask the following questions:

- ✓ What are the main crises/hazards affecting the community as a whole or large proportions of households?
- ✓ What would a 'resilient' community look like?
- ✓ What does the term, 'resilience', means for the community in local context in the face of aforementioned crises/hazards?

Step 2: Identify resilience characteristics

In this step, focus groups identify and make a long list of the key factors/characteristics contributing to their local resilience. As participants state each factors/characteristic, the relevant corresponding graphic card can be placed on the ground (or tables) in front of the group. If no appropriate graphic exists, the facilitators should draw an appropriate graphic on a blank card to represent that factor/characteristic. The facilitators may ask the following questions:

- ✓ What would the community be like if full 'resilience' was achieved?
- ✓ What makes a household resilient?

Step 3: Prioritize resilience characteristics

Once the list of factors/characteristics is complete and exhaustive enough, the FGD participants are requested to consider which of all these factors are the most important, i.e., if only three of these statements could be achieved which, would they choose. To do this, each participant receives 6 beans. Using the graphic cards, they put 3 beans for the most important, 2 beans for the 2nd most important and 1 bean for the 3rd most important.

Once all beans have been placed, the scores are counted and the cards are placed in order from highest to lowest scoring in front of the participants. The participants shall explain and give specific examples on how the three highest scored factors/characteristics have contributed to their definition of resilience.

Step 4: Identify the households in the community that have achieved (fully or partially) the resilience characteristics

In this step, the focus group participants are requested to think about the households in their community who have attained all or many of the priority resilience characteristics, and describe the common features and attributes shared among these households. The facilitators ask the following questions:

- ✓ Are there households who have attained all or many of the resilience characteristics? Describe what they are like and what they do. **INSTRUCTION: At the end participants should provide specific names of individuals. Ensure to PROBE if there are any individuals on ZRBF that have attained partial or full resilience.**
- ✓ Has the proportion of resilient households increased, declined or stayed the same in the last 5 years?

Step 5: Identify interventions that have contributed to households

In this step, the focus groups provide the list of past or ongoing interventions/changes/actions that have made the most difference in increasing resilience in this community in the last 5 years. This list may not only include development/humanitarian supports but also encompass communities' own efforts and/or external changes generated by private sector, etc. Among the long list of the interventions/changes/actions, the participants are then asked to come up jointly with the three most important ones in building resilience. They are also requested to recommend three interventions/changes/actions for the future to help build resilience further in the community. The facilitators will ask the following questions:

- ✓ What interventions have helped enhance resilience, and what additional/future interventions would help to build resilience further?
- ✓ Explain how the support has contributed/will contribute to build resilience.

IMPORTANT: During discussions note for interventions of ZRBF but do not ask for them directly such as "What about activities implemented by ZRBF?" however ask about the specific activities that could have been implemented in that village/ward e.g. *"What about provision of goats and access to markets for them?"* If any ZRBF interventions are not considered in the discussion as contributing to resilience building you will need probe with questions such as *"Why was provision of goats and support for selling not effectives in building resilience?"*

USE THE INTERVENTION CARD FOR GUIDANCE.

Key Informant Interview of Resilient Households

Following the FGD, semi-structured KII(s) is/are held with adult members of households within the surveyed communities that are identified and nominated by the FGDs as "resilient." The interviews solicit details on:

- ✓ Household composition, education level and livelihood/economic activity of each member of the household;
- ✓ Factors that have contributed to the household's resilience;
- ✓ Pathways to resilience, i.e., steps taken by the household to become resilient;
- ✓ Actions or strategies the household took to cope better with recent crises/hazards and crises affecting that community; and
- ✓ Interventions and support that would best assist others in their community to become more resilient.

General KII Guide

How long have you been working in this district? **IMPORTANT: Any KII with less than three years in the district should not be interviewed.**

Shock/Hazard Exposure

1. What shocks and hazards are common in the ZRBF target areas?
2. Have these shocks and hazards changed their frequency and intensity over the past 5-10 years? How?
    a. Is the population affected by these shocks/hazards changing? How and why?
3. In addition to activities of ZRBF have there been other initiatives (community, private sector, NGOs and government) in the past 5 years implemented to enhance the communities' resilience to these shocks and hazards?
    a. Which ones and what was done?

Operational aspect of the ZRBF

On a scale of 1-10 can you rate your knowledge of the ZRBF activities in this district.
INTERVIEW ONLY THOSE WITH STRONG KNOWLEDGE (8-10 SCORES)

- Why do you rate it this way?

4. How efficiently was the ZRBF implemented?
    a. Timely implementation
    b. Quality of activities
    c. Adequacy of activities
    d. Appropriateness of activities
5. On a scale of 1-10 what is your level of satisfaction with the ZRBF activities?

a. Why this rating?

6. On a scale of 1-10 what is your rating of the effectiveness of ZRBF interventions?
    a. Why do you say so?

7. What did not work and could have been done differently to enhance the effectiveness of ZRBF interventions?

8. What worked well that should continue? How can this be strengthened?

Institutional level impacts

9. What achievements were made by the ZRBF at the district community level?
    a. **Explore:** organisational capacities of government departments and communities to plan and respond to disasters; attitudes and behaviours towards the need for resilience building etc
    b. **Explore resilient communities**: women, men, youth
    c. **Explore**: adoption of promoted interventions.

Annexe 5: List of ZRBF Wards and Livelihood Zones

	No. of housholds	Per cent of households
Beitbridge South Western Lowveld Communal	277	8.20
Cattle and Cereal Farming	732	21.66
Central and Northern Semi Intensive Farming	226	6.69
Cereal and Low Cotton Communal	125	3.70
Eastern Highlands Prime Communal	38	1.12
Eastern Kalahari Sandveld Communal	512	15.15
Greater Mudzi Communal	56	1.66
Kariba Valley and Kariangwe-Jambezi Communal	307	9.09
Lusulu, Lupane and Southern Gokwe Mixed Agriculture	83	2.46
Masvingo Manicaland Middleveld Smallholder	138	4.08
Matabeleland Middleveld Communal	561	16.60
National Parks/Forests/Conservancy/Safari Areas	60	1.78
Northern Zambezi Valley Communal	264	7.81
Total	3379	100.00

Annexe 6: Reference List

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