



Project Name: Improving Agricultural Production and Access to Water, Sanitation and Hygiene for Drought Affected Population in Masvingo province

Baseline Report: OFDA Baseline Report Covering Geographic areas of Zaka, Bikita and Chivi Districts of Masvingo Province, Zimbabwe.

August 2016- July 2017

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Commonly Used Abbreviation

AGRITEX	Agriculture Extension Services
CA	Conservation Agriculture
CCA	Climate Change Adaptation
CVCA	Climate Vulnerability and Capacity Assessment
DMC	Disaster Management Committees
DLPD	Department of Livestock Production and Development
DDRC	District Drought Relief Committee
DRR	Disaster Risk reduction
EMA	Environmental Management Agency
HHD	Household Head
NGO	Non Governmental Organisations
OFDA	Office of U.S. Foreign Disaster Assistance
OPV	Open Pollinated Varieties

VS&L	Village Savings and Lending
ZimVAC	Zimbabwe Vulnerability Assessment Committee

1.0 Executive Summary

CARE International in Zimbabwe through funding from USAID OFDA is responding to current El Niño phenomenon which affected Zimbabwe in 2015-16 Agriculture season. The El Niño induced drought is anticipated to be one of the most severe in the past 35 years. Findings from the ZimVAC Assessment (2016) indicate that food insecurity has risen to affect at least 2.4 million people (**26%** of the total rural population); Masvingo Province has one of the highest proportions of food insecure people (**32%**) in the country.

The project goal is to provide immediate assistance and recovery to drought affected populations in Masvingo Province through asset (livestock) protection, access to water, sanitation and hygiene, and improved agriculture production amongst **46345** of which **28595 (61.7%)** should be females. The number of food insecure households across the three districts exceeds **185,000** people, and the current project is reaching just **46345** people, through food security programming, or approximately **25%** of people requiring urgent assistance. CARE Zimbabwe is going to implement a set of integrated agriculture and food security, Water Sanitation and Hygiene Promotion, Economic Recovery and market systems. These interventions are aimed at reaching people affected by drought, to prevent vulnerable households from slipping further into hunger and engaging in negative coping mechanisms that will affect their health and well-being as well as render them less resilient to future shocks. The targeted districts of Bikita, Chivi and Zaka fall under agro ecological regions IV and V characterized by low, erratic rainfall and high temperatures.

From October the 3rd up to the 7th of October 2016 CARE embarked on baseline survey. The main objective of the baseline survey was to establish a reference for the implementation of the Response to Emergency Food Security recovery programme in relation to the set indicators. The survey consist of data collection on the smart agriculture practices in order to confirm the need for and value of input distribution scheme through open voucher system. Assess water and sanitation needs in order to identify desirable training needs and water source rehabilitation strategies. Data collection on the current household food security situation in the 3 district was completed through a quantitative survey representing portion of the target beneficiary population in Zaka, Bikita and Chivi district of Masvingo province. Five hundred and forty (**540**) households were interviewed representing **9%** of the target household of **6200** farmers

The survey recorded **35.7%** female headed households, with an average household size of **6** members. Average age of household head is **52** years. (**90 %**) of households have at least a

member who is between 18 to 60 years. With respect to livelihoods, vegetable sales (**46.4%**) is reported as the major income generating activity, followed by Casual Agric labour contributing (**28 %**). Main source of cereal are purchases contributing **40.1%**. The survey also revealed that **61.1%** of the respondents do practice Conservation farming. The average cereal harvest has been depleted **27.8%** no longer have reserves those with reserves it is going to last only **2** months thus from October to end of November 2016. **71%** of Household have access to improved water sources (ZimVAC 2016). **37.5%** of the households travel less than 500m to the nearest water sources that is the Sphere standards recommended maximum distance. **62.5%** travel more than the recommended distance even up to more than 3km. Focus group discussions revealed skipping meals per day, reduction of quantity of food per meal, gathering of fruits and casual labour in exchange for grain as common strategies being employed by food insecure households to prolong period covered by their meagre stocks. Breaking down of boreholes, drying up of water sources remained a challenge to the targeted communities. Livestock attrition remained a challenge too. 2016 ZimVAC report highlighted that cattle death is contributing 42% cattle attrition.

The analysis of this report will provide the baseline information for monitoring changes and outcomes of the project interventions with specific attention to the project set indicators.

1. Objectives of the Baseline

The main objective of the baseline survey is to establish a reference for implementing the response to the emergency food security needs in the three (3) districts of Masvingo province in relation to the set indicators. The survey is composed of:

- Data collection on the current household livelihood activities in order to establish the existing household coping strategies.
- Assess the use of Agriculture Smart strategies in order to improve agriculture production resulting in improved food security through provision of input using the closed voucher system
- Establish the level of community trainings in Conservation Agriculture, livestock health and pasture security levels, economic recovery, water supply infrastructure and hygiene promotion in order to align training material with training needs.

1.2 Survey Methodology

The household assessment was operationalized as follows, different data collection tools focused on different aspects of in order to extract as much detailed information as possible. Knowledge was primarily assessed through individual questionnaires, qualitative data with specific focus on attitude was assessed through focus group discussions. Practices were

assessed through observation as well as through individual questionnaires as illustrated in figure 1 below.

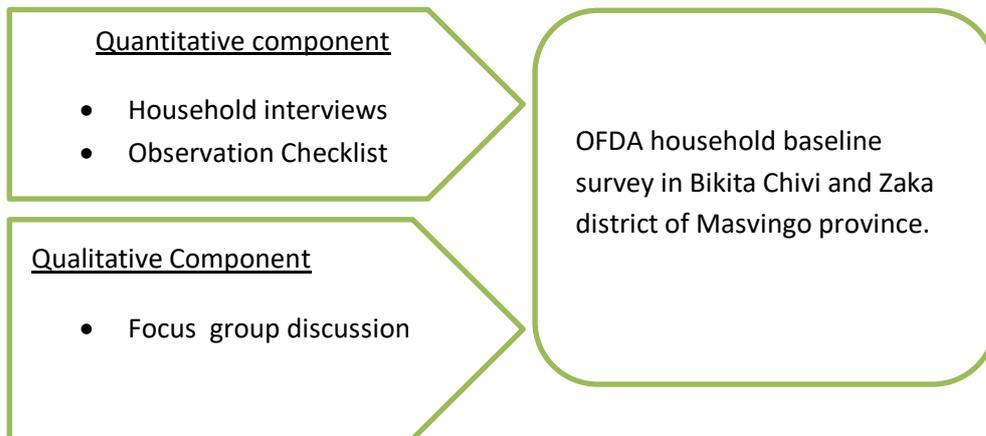
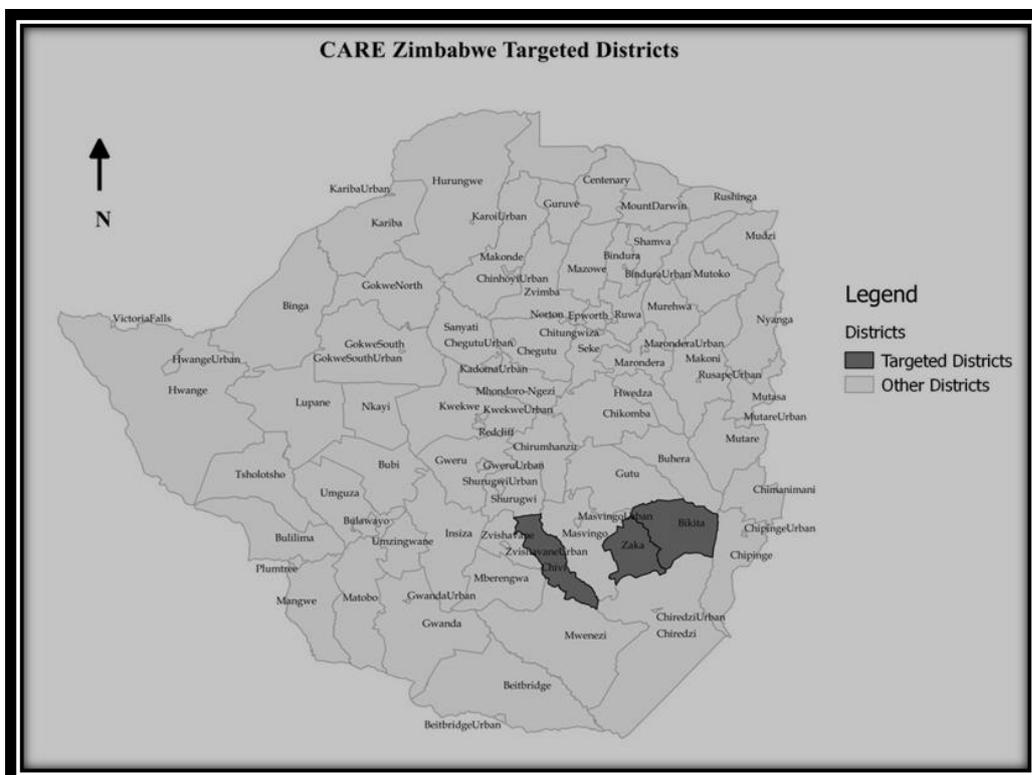


Figure 1

Implementation of the project activities started in September 2016 with the project baseline being conducted in all five (5) targeted wards per each operational district areas under study are shown in figure 2 below. A questionnaire was administered to 540 randomly selected households from 15 targeted wards.



1.3 Indicators and survey design

The selection of villages was through use of systematic random sampling starting from VIDCO up to village level. A population proportion size principle was applied at ward level. The sample size was determined by food security indicators using a **95%** confidence level. The study adopted a beneficiary based sample survey of the households in targeted wards. The study focused on three project sectors' key indicators for tracking progress and results of the programme extracted from the project proposal, which will lead to the development of the Programme Performance Measurement Framework. Three qualitative focus groups were conducted one per each district, secondary data reviewed and observations were also used as data collection methods. The questionnaire included 63 qualitative questions with critical questions being asked in multiple ways in order to verify data.

1.4 Data preparation and Analysis

All primary data was captured using CSPro by three data capture clerks(DCC) recruited specifically for the baseline and project beneficiary registrations .CSpro was selected for data accuracy and minimum data entry manipulation at data capturing level. The data was converted to excel for cleaning purposes and then converted to SPSS for analysis.

2.0 :INTRODUCTION

The project goal is: to provide immediate assistance and recovery to drought affected populations in Masvingo province through asset (livestock) protection, access to water, sanitation and hygiene and improved agriculture production

The project aims at achieving this goal through three sectors which are further divided into sub sector, the three subsectors include :

Sector1: Agriculture and Food security

- Improving Agricultural production /food security
- Livestock

Sector 2: Economic Recovery and Market systems

- Micro finance

Sector 3: Water Sanitation and Hygiene

- Water supply infrastructure and
- Hygiene promotion

3.Data Analysis, Results and Discussion

The analytical framework comprised of the following main components

3.1. Analysis of the household demographic composition and vulnerability status

3.2. Analysis of household livelihood activities

3.3. Analysis on key project sector specific activities include improving agriculture production through, conservation farming, livestock, community training, water sanitation and hygiene and economic recovery and market systems.

Section A: Demographic Description of the sample

1 Demographic analysis: gender, Age of HH head and average household size

<i>Total number of respondents</i>		568
<i>Gender of HH Head</i>	% Male	64.3
	% Female	35.7
<i>Average age of household head</i>		52.18
<i>Average household size</i>		6

- The average age of the household head of **52.18** is almost similar to the average ZimVAC average household age of 48.8 years. The average household head age group can still manage to participate in different economic activities in supporting their households hence this economically age is trends have shown that they are now more stable in terms of migration hence the age group provide a good opportunity for the adoption of the project activities especially the conservation Agriculture concept
- Child headed households i.e. being headed by age group up to 18 years comprised of **1.1%** whilst up to 21year comprises of **2.3%**.the elderly headed above 65years comprises of **23.4%**..The majority of these households fall outside the project targeted households because they are labour constrained especially the child headed households.
- The average household size is 6 . This figure is slightly above the ZimVac 2016 results which was 5.5.The increase in household size is a positive indicator to the availability of labour in targeted wards considering that the 2nd majority is between 19 and 60 years.

11: Marital status

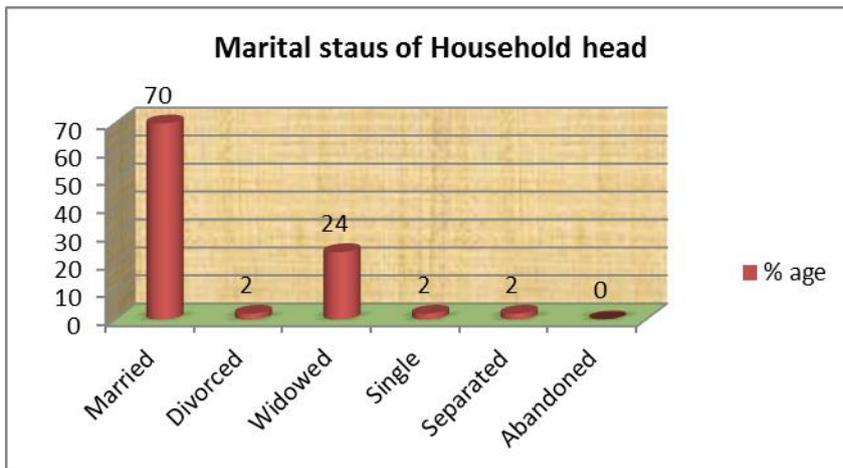


Figure 1 Showing marital status of interviewed households

111: Population distribution by age group

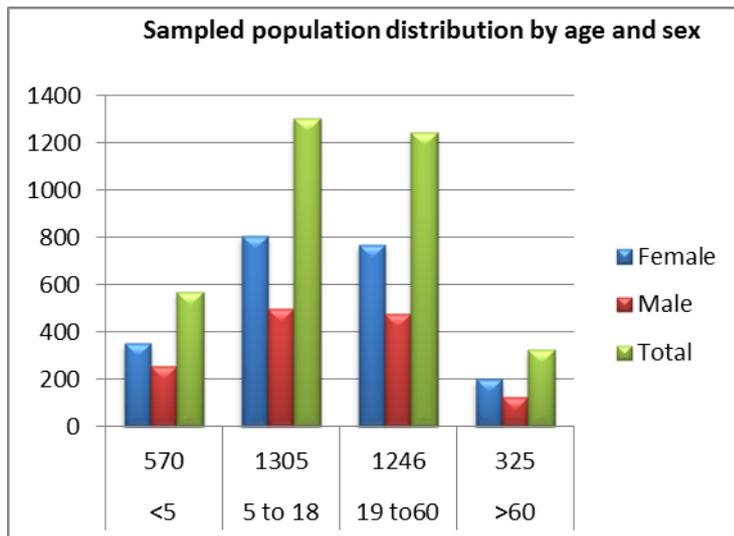


Figure 2 Shows population distribution by age

- The highest population group in the sampled households was in the 5 to 18 which had 37.9% followed by age group 19- 60 which had 36%. This is slightly different from the normal trend where by 19 to 60 age group usually occupy the highest percentage.
- This may be due to the exclusion of the urban wards where this age group has high concentration due to the pull factor of employment opportunities and the majority of this age group have migrated to neighbouring countries in search of greener pastures in form of employment opportunities.
- The age group between 5 to 18 is the school going age hence their migration levels are very low as they are still at school.
- 36% of the age group between 19 to 60 is still plausible as the targeted areas show that there is adequate labour to carry out farming activities in order to improve food security which is the thrust of this OFDA funded project.

1V: Chronically ill or mentally/physically disabled

- Only two (2) households within the age group 19 to 60 indicated that they have someone who is chronically ill. This is a clear sign that minimum expenses are directed towards health issues and the available labour force is strong enough to provide labour from the age group 19 to 60 as 99.6% are not chronically ill or physically disabled.

V: Availability of non-Labour constrained households

Demographics of the selected households also show that there is availability of Non labour constrained households as 90% of the households have at least a member who has been

staying in the households for the past 3 months who is between age group 18 to 60 years. As shown in the table 1 and pie chart figure2

Number of individuals in a household who are able bodied.	Number of repondents (HHLDs)	% able bodied
0	56	9.9
1	103	18.1
2	227	40
3	103	18.1
4	45	7.9
5	22	3.9
6	4	0.7
7	5	0.9
8	3	0.5

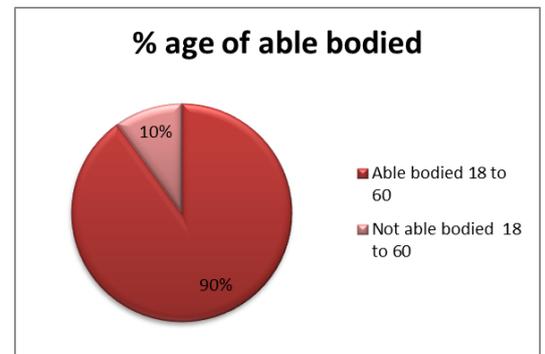


Figure 3 Shows % of able bodied members

Table 1 Shows able bodied members

- Only 56 households do not have someone who is between 18 to 60 years.
- **227** households consist of 2 individuals followed by **103** households with 3 individuals who are between 18 and 60 years.

Section B: House hold livelihood activities

1:Household Main livelihood activities

The sampled population showed that **46.4%** of the households are actively engaged in Vegetable production and sales as the main household livelihood activity followed by Casual agric labour(28%) and then Casual Non agric labour**25.6%** as illustrated below figure3

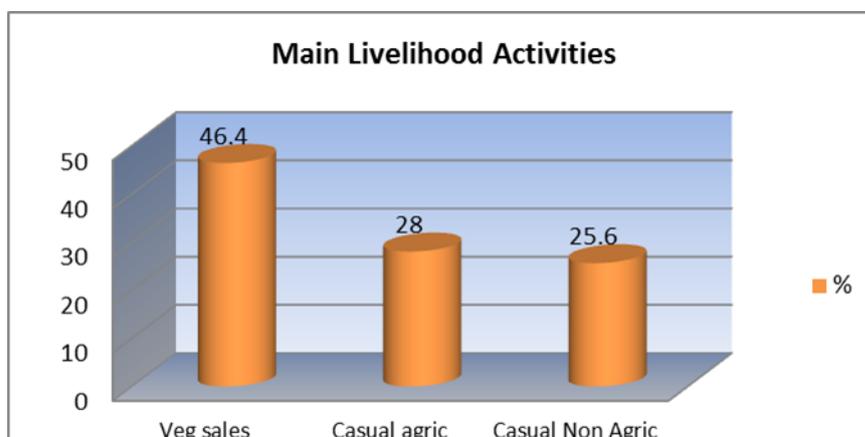


Figure 1Shows main livelihood activities

A number of other livelihood activities included Livestock production sales and remittance although not an activity, also contributed a lot in the sustenance of households. The dominance in agriculture activities shows that it will not be a challenge to roll out the OFDA funded Agriculture and food security project as targeted communities are already engaged in an agriculture based type of an economy.

11: Household Earnings

The average earning per household in 6 months period is **\$67.44** as shown in table 2 below. This culminates to **\$11.24c** per month this is very low as compared to USD62 the national average of April 2016 when ZimVac was conducted. This implies that the majority of respondents live below the poverty datum line with an income of 30cents per day per individual far below \$2 per person/per day. To some extent this also signifies cash liquidity problems in rural communities that can be augmented by cash transfer interventions.

Table 2 Shows house hold earnings

Amount Earned \$	%age
Less than \$50	67.60%
\$51-100	18.60%
\$101-\$150	5.10%
\$151-\$200	2.50%
\$201-\$250	1.20%
\$251-\$300	3%
>\$301	2.50%
total	100%



Figure 2 A histogram showing average house hold income. The average monthly income per hhd is \$11. Further calculations will show that an individual will remain with 30cents per day which is far below poverty datum line hence chances are very high that farmers in these targeted communities will not manage to raise cash for agriculture inputs hence the OFDA funded input scheme came at the correct time although figures show that targeting should have increased considering cash challenges and dwindling economic fabrics.

111: Household Main expenses

Purchasing of staple food remains the main household expense across the three targeted districts. The targeted households statistics show that only 0.5% is channel towards agriculture inputs this suggest that farmers end up resorting to recycling seed inputs and this is prone to reducing total farmer yields .The provision of seed as voucher input scheme remain very relevant to farmers especially considering that 78% of the financial resources are currently being channelled towards purchasing of staple food and other non- food items and also in processing food.

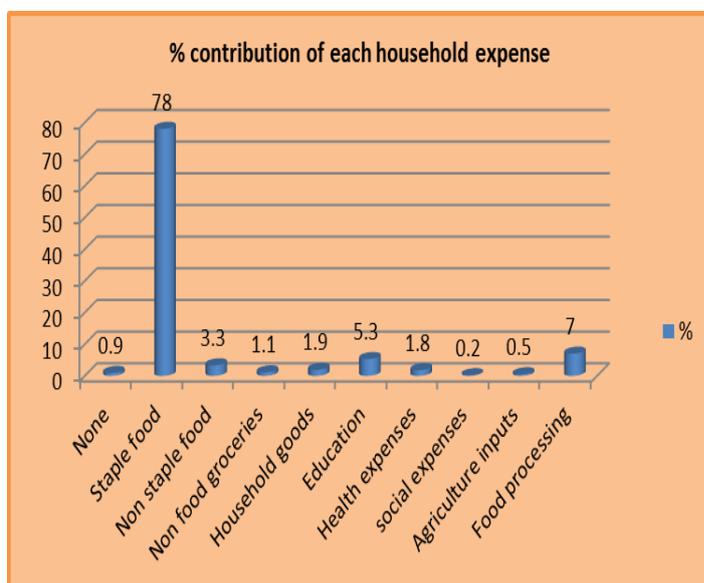


Figure 3 Shows house hold main expenses .buying of staple food dominated the main household expenses, 0.5 % of the household expenses is allocated to agriculture inputs this will really compromise future food security as long as the consumptive drive remains the dominant household expense.

1V:Cereal consumed in a month, current source of cereal and how long will the harvest of 2015/6 season last

The graph below shows the total amount of cereal consumed in a month. The mode is 50kgs which is consumed by **125** households on a monthly basis.This contribute **22%** of the total consumption.

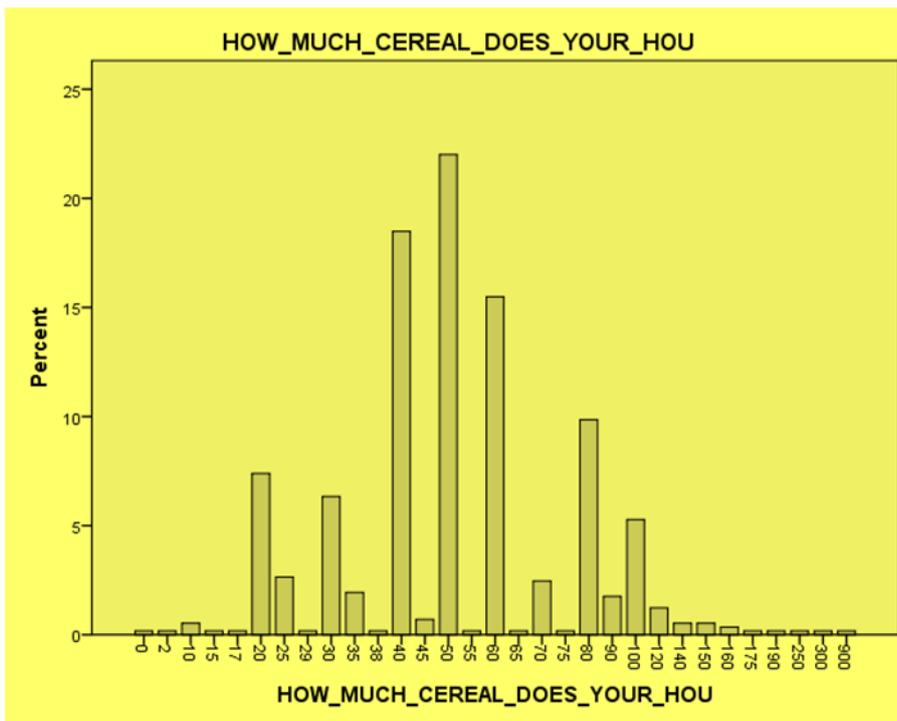


Figure 4 Shows cereal consumption in a month

There are five entries which show that at least one household consume **175 kgs** ,190,300,and 900 kgs per month. These households are likely to be engaged in pan fattening or livestock feeding..

V: Month cereal will last

- 158 interviewed cases representing **27.8%** no longer have cereal reserves. These households are now relying on purchases , food for asset schemes a govenment initiatives and social welfare food distributions.

- On average **2.5** months are only the remaining months for those who still have reserves. This is actually a challenge to farmers as they don't have adequate reserves to sustain them during the cropping season which is about to start. Heavy reliance on supplements from government and other different players is advised to enable farmers to soldier ahead during the coming cropping season.

V1) Current source of Cereal

228 (40.1%) households rely on purchases. This result compliments purchase of staple food which topped the list with 78%. This clearly shows that own food security level is almost zero to the majority of the households as shown in table 3 below

Table 3 below shows sources of cereal

Sources of cereal	Number of hhlds relying on this source	% relying on the cereal source
No resource	5	.9
Own harvest	86	15.1
Casual labour	70	12.3
Gifts	16	2.8
Free food aid	131	23.1
purchases	228	40.1
Borrowed	1	.2
Remittances	29	5.1
Others	2	.4

SECTION C: Improving Agriculture and Food Security

1: Awareness of Conservation Farming

The project intends to increase agriculture food security through promoting conservation agriculture. **90.7%** of the farmers have a general knowledge of conservation agriculture only **9.7%** were totally ignorant of conservation farming. This can be attributed to the efforts made by preceding programs in the target areas. Baseline Survey results show that **75.2%** intend to practice conservation farming during the 2016/17 agriculture season. If intentions are converted to practice CA will greatly assist in the provision to recovery to droughts.

11:Conservation Farming Methods and Principles

The survey results demonstrate that Conservation farming basins method is common amongst farmers. Results also show that there is need of sharing more information on other conservation farming methods as there is widespread ignorance on other farming methods as demonstrated in figure 7. Farmers have more than **70%** information on basins but less than **10%** information on Mulching, dead line contours, and pot holes. This shows a great gap in training.

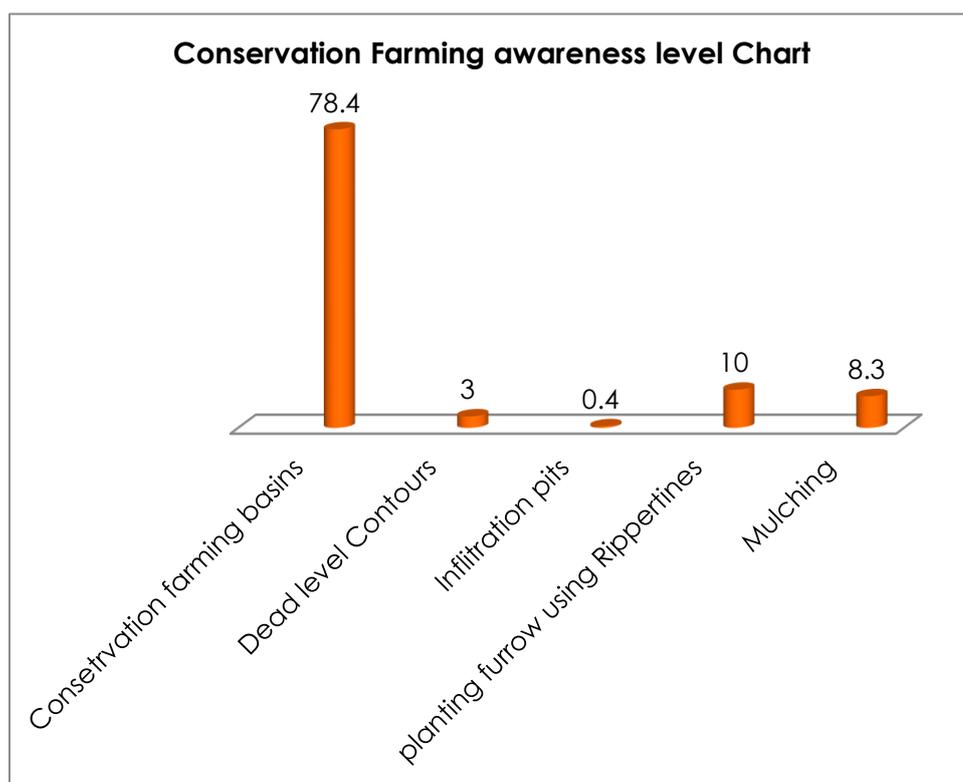


Figure 5 Conservation farming awareness level .The results demonstrate wide spread information on conservation farming basins whilst there is a very high information gap in other conservation farming methods. This shows the need of more training to ensure that farmers have a full package of conservation farming in order to realise results in conservation farming implementation.

Survey results are pointing towards a call for more investment towards the uptake of the CA principles. Generally there is a gap between awareness and practice as **38.9%** of the farmers are not practicing CA although they are aware of some CA methods and principles. **44.9%** of the farmers are using only one CA principle (minimum soil disturbance) other CA principles are not being even practiced. Table 4 clearly show that only **9.2%** of the farmers are using mulching they cited lack of mulching materials as one of the limitations in adopting the principle. The project is advised to use intercropping as a method of enhancing soil moisture retention.

Table 4: shows use of CA principles

CA principles	Frequency	Percentage
Minimum Soil Disturbances	255	44.9
Mulching	52	9.2
Timeliness of activities	9	1.6
Crop rotation	31	5.5
Not practicing CA	221	38.9
Total	568	100.0

Table 4 above shows that **38.9%** of the farmers are not practicing CA. Strategies are to be used to close the gap between awareness and practice.

111:Benefits of Conservation farming

Farmers attach importance of conservation agriculture towards moisture retention which has **71.7%** as shown in table 5. This shows that there is need for training to enable farmers to realise all other benefits which can be attained through practising conservation agriculture

Table 5:Benefits of Conservation Agriculture

	frequency	% age
Moisture retention	407	71.7
Preservations of soil structure	15	2.6
Enhanced soil fertility	9	1.6
Timely planting	3	.5
Increased yields	26	4.6
Distribute labour evenly across	4	.7
Promotes intensive crop production	5	.9
Other	2	.4
Not practicing CF	97	17.1

The need for conservation agriculture learning hubs or farmer field schools is clearly demonstrated by inadequate knowledge displayed by farmers towards value of conservation agriculture at baseline level.

Existence of conservation agriculture schemes

Information gap is proving to be in existence as **30%** of the farmers are not sure whether there are farmer field schools in their areas as shown in figure 8 below. This shows the importance of training lead farmers in order to establish sustainable learning centres within farming communities.

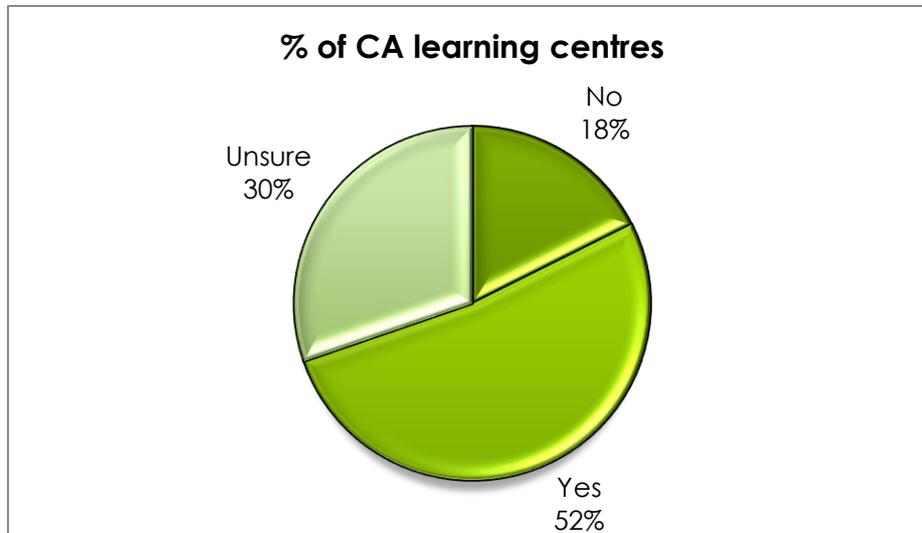


Figure 6 Show the existence of agriculture learning centres in communities

Table 6 Shows hectares to be planted for each crop.

Type of crop	Hectares to be planted
Sorghum	0.825
Maize	0.271
Rapoko	0.342
Millet	1.18

Focus group discussions have shown that brewing of local beer and chicken rearing are some of the upcoming popular economic activities across the districts. These activities have encouraged farmers to grow small grains as they have ready markets across the three districts. The small grains are also become a substitute to maize meal .In Zaka ward 26 a certain farmer clearly explained to members of his group that a number of households were going as far as Chilonga in Chiredzi district in search of Millet and Rapoko despite the two

areas experiencing almost similar climatic conditions. Promotion of small grains is actually a positive direction towards improving food security levels.

Quantity of Seed to be planted

Baseline results show that farmers are planning to plant Maize seed (15.34kgs) Sorghum (**9.26kgs**) Legume (**11.32kgs**) in 2016/17 agriculture season. Hectares covered by maize seed are less than legume and sorghum seed. This aligns well with ZimVAC 2016 trend which recorded a general decrease in maize seed planted in 2015/2016 agriculture season. The project through its voucher input scheme is going to distribute 5kgs of both legume and Sorghum seed this is slightly less than **50%** of the desired seed. This shows a positive response to the needs of the farmer in a bid to acquire a food security status.

Cost of seed

Sampled farmers showed that they planted seed of an average cost of USD\$34.33c. The highest frequency cost (The mode) was USD30 representing **68%** of the farmers. The upper limit was **USD\$200** and the lower limit was seed of just a dollar and only 1 (one) farmer bought seed at this cost. With the challenges of cash currently being experienced input voucher scheme will definitely help to improve use of certified seeds and at the same time improving agricultural production and food security.

Sources of Seed in 2015/16 cropping season

The level of preparedness of farmers was also checked through the sources of seed they planted Highest quantities of planted seed (**68%**) was certified purchased from local shop. **18%** came from own harvest and **1.6%** from NGOs as shown in figure 8 below. This really shows that the Agro dealer concept is effective in ensuring that farmers can easily access their inputs. The OFDA project is going to distribute **243 MT** of Sorghum, Ammonium nitrate Cow peas, Velvet beans and some farming implements to **6860** farmers through **29** (17 males) agro dealers across the three districts. The \$1 storage fee paid to the Agro dealers by farmers for storage fee is expected to be reinvested into agriculture inputs by the community selected and assessed agro dealers.

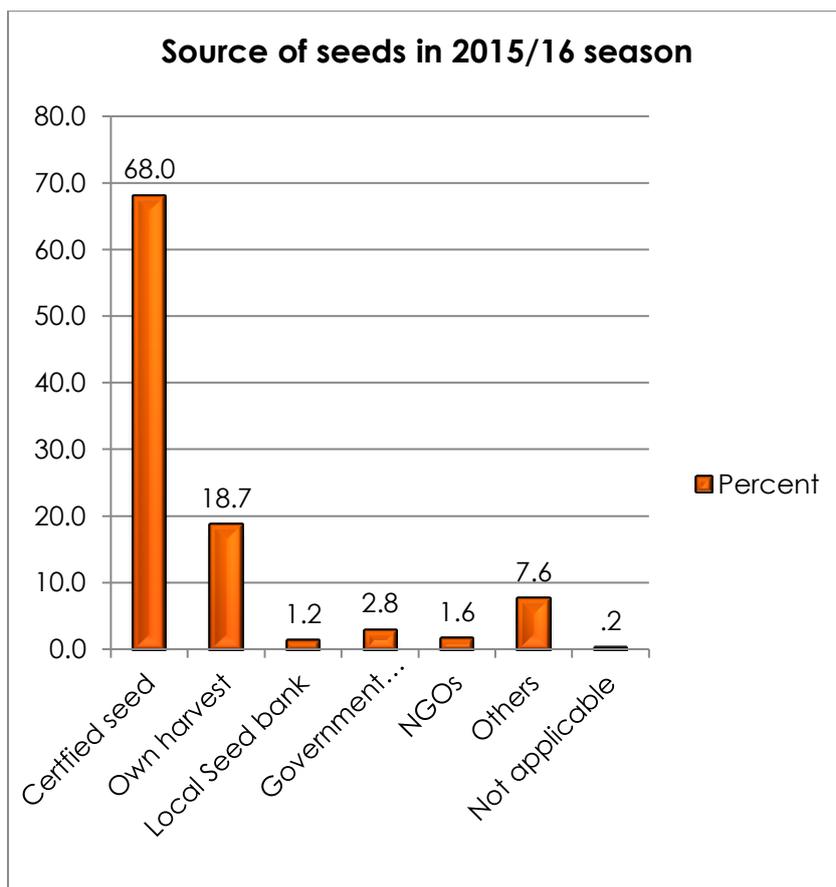


Figure 7 Shows sources of inputs to farmers in the three OFDA districts .Farmers in 2015/16 agriculture season managed to procure certified seed a scenario which is likely to be different in 2016/17 season as statistics showed that only 0.5% of the total household expenses is reinvested towards the purchase of agriculture inputs.

Planting

Only **12.5%** of the farmers planted in September and October. Some of these farmers were likely to be under irrigation. **48%** of the farmers planted in November and **38%** planted in December and January. This suggest that input distribution should be completed by midday November for the effectiveness of input distribution scheme to be effective enough to improve agricultural production with sole purpose of creating stable food security reserves

Livestock ownership

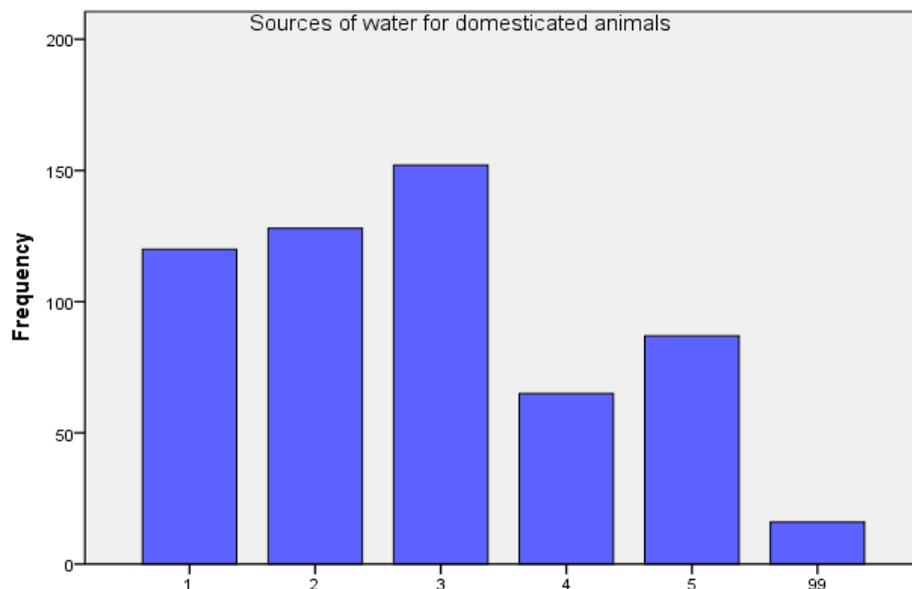
The survey results show that **59.7%** own cattle. This is slightly above the **44%** of the ZimVAC 2016 results which is also slightly lower than the 2016 results. Cattle play a vital role as they are the major source of drought power in the entire 3 targeted district.

Table 7: Livestock ownership

Livestock ownership	Percentage of livestock ownership per household
Cattle	59.7
Goats	20.6
Pigs	0.2
Sheep	0.4
Poultry	16.7
None of the above	1.6
Not applicable	0.9

The low livestock numbers as shown in table7 above is an indication of very low household food security levels, as selling of livestock is sometimes used as a food security coping strategy. There is really need for intentional and attitude refocusing towards improving livestock ownership and tackling livestock ownership challenges like out-break of diseases if food security levels are to be addressed holistically.

Sources of water for watering animals



1=On farm drinking troughs,2=Boreholeoutside the farm,3=Dam,4=Perennial river,5=Seasonal stream,99=NA

Footnote

Figure 8Show sources of water for watering animals

Survey results show that animals heavily rely on dam water for watering purposes but the current status show that dams have dried up. A shift towards other substitute sources became inherent. Use of boreholes as livestock watering points has become very common. This has posed pressure on already congested boreholes resulting in need of repair kits for rehabilitation purposes. Community empowerment through training of pump minders who are always ready to support the communities becomes vital.

Distance to watering points and animal health

The recommended walking distance by cattle to watering points maximum should be 4 to 6km but mainly determined by the breed. The survey has shown that cattle are travelling an average of 4.7km, although **44%** of are within a kilometre travelling range to the watering points. ZimVAC results have shown that shortage of water and drought contribute about **27%** of cattle death hence water should be made available within reasonable distances

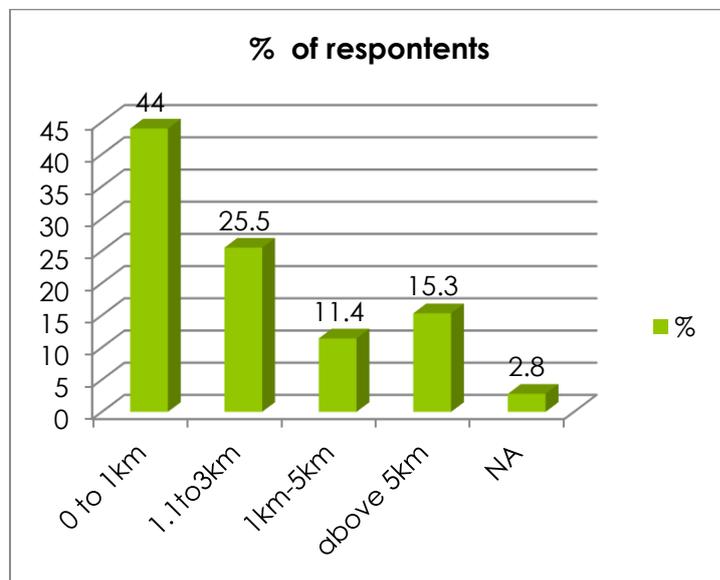


Figure 9 Shows percentage of travelling distances to the nearest water sources

According to the ZimVAC report for 2016 diseases accounted for 61% cattle death and in birds these diseases are becoming more complicated farmers had to suspend production of chickens due to out -break of chicken diseases in Bikita district. The most common cattle diseases in the three targeted districts include foot and mouth and black leg. **45.2%** of farmers pointed out that foot and mouth was the most common disease followed by black leg with **21%**. Farmers were also asked how they protect their animals from diseases and they sighted different methods as shown in table 8 below

Table 7 : Shows different methods used to protect and treat cattle from diseases.

Cattle treatment method	% of farmers using the method
Dozing	9.1
Dipping	68.1
Vaccination	12.1
Traditional method	7.4
None of the above	3.3

It is a standing act that dipping is the commonest method but this method is under infrastructural threat. Community has to get training to ensure that they rehabilitate these dip tanks as assessments have shown that about **65%** of the functional dip-tanks need some form of rehabilitation. Dozing is used by just only **9.1%**. This shows the need of para vets training in order to manage the spread of cattle diseases. ZimVAC 2016 report state that cattle death as of March April was at **9%** and **61%** of these death was due to diseases and **27%** was due to poor grazing drought and shortage of water.

Fodder preparation by farmers

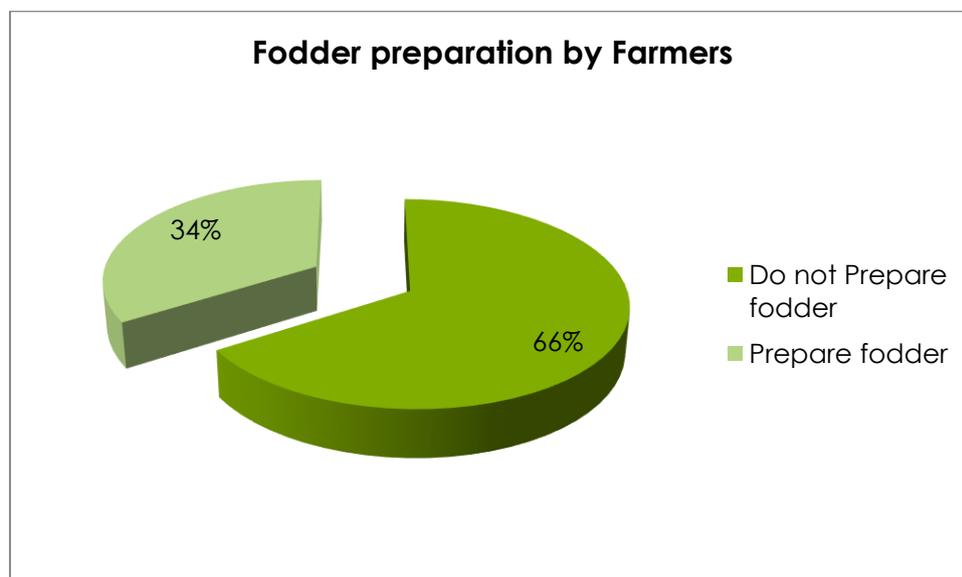


Figure 10 Shows fodder preparation by farmers. This shows that there is need of community mind set shift on fodder preparation especially in the face of the ravaging drought due to inconsistency rainfall patterns worsened by the ravaging ELNino effect

There is a real need for farmers to improve in fodder preparation for their cattle in preparation for grazing lean season as this will serve their herd and improve food security levels.

Section D: Community Training

Results from the interviews shows that there is need of imparting information in order to improve communities' performance in a number of fields shown in figure 12 below. From the data collected it is clear that all components from water and sanitation to borehole rehabilitation the sample highlighted that there is need for training as their response show that more than **50%** of the responses indicated that they had not received training in the components highlighted.

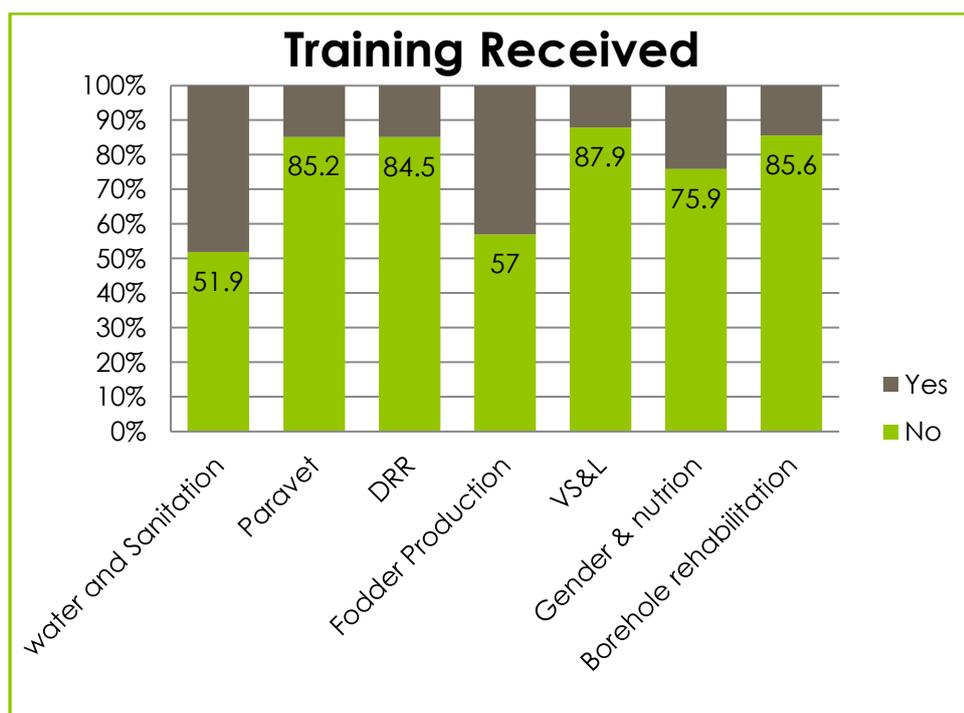


Figure 11 shows that more than 50% of the community interviewed did not receive training in all the 7 components highlighted in figure 12. The project has to ensure that training should be conducted as shown by the community response which have not received training in a number of components.

The table below is again a reflection of absence of training. **40%** stated that there is no DRR committee in the village and **39%** are unsure only of the existence of a DRR committee, **21%** confirms the existence of DRR committee in their community as shown in 8 below. Table 8 also shows the existence of DRR action plan in the community. There is a clear agreement between the existence of a DRR action plan and DRR committee. **21%** of the interviewed cases proclaim existence of DRR committee and 19% proclaim existence of DRR action plan in the community.

Table 8 below shows existence of a DRR committee

Existence of a DRR committee in the village or ward	Existence of a DRR committee in the Village or ward (%)	Existence of DRR action plan in the community (%)
No	40	37.3
Yes	21	19
Not sure	39	43.7

The results also show the importance of training as the main link to community strategies towards building community resilience. Only **7%** of the respondents indicated that there are critical hazards which are being addressed by the DRR committee and plans. Drought and Land degradation were identified as the critical hazards being addressed by the community plans. This might be due to different government social welfare programmes and environment focused projects like the Environment Protection Project which focuses on training communities on protecting the environment. The major challenge cited was lack of resources as the main challenge they face in the implementation of the DRR action plan. Different government departments are currently involved in DRR plan implementation. Different government departments have a contribution of **12.9%**, Agritex has **6%**. Lack of Information is clear evidenced by a **78.7%** Not applicable response which shows that the majority do not have information on DRR.

Treatment method applied to harvest

Farmers use both Traditional and Chemical methods when treating their harvest.

Table 9 use of both traditional and chemical methods to treat animals

chemical	Number of Users
2.Chirinda Matura	97
3.Shumba cooper	361
4.Others	5
Traditional	Number of users
1. Use of cow dung	8
2.Use of gum tree leaves	78
3.Mutochi	9
4.Others	25

Post -harvest crop management training to be conduct during the project implementation is correctly placed as post-harvest management all directed towards enhancing food security levels.

Section: E Water Sanitation and Hygiene Management

Improving Agricultural production and Access to water, Sanitation and Hygiene for drought Affected Populations in Masvingo province project has one of its objectives as to improve water and sanitation facilities as well as hygiene practices. The baseline study partly focused on availability of clean and safe water at manageable distances.

Distance travelled to fetch water round trip

37.5% of the responses travel less than 500m to the nearest water sources for domestic use. The 37.5% are within the standard distance recommended. According to the sphere standard guidelines the maximum distance that an individual household should travel to the nearest safe water point is 500m. figure 13 shows that **62.5%** of the house-holds are travelling distances beyond the reasonable sphere standards. This mean to say there is need of increasing more water sources in order to reduce travelling distances.

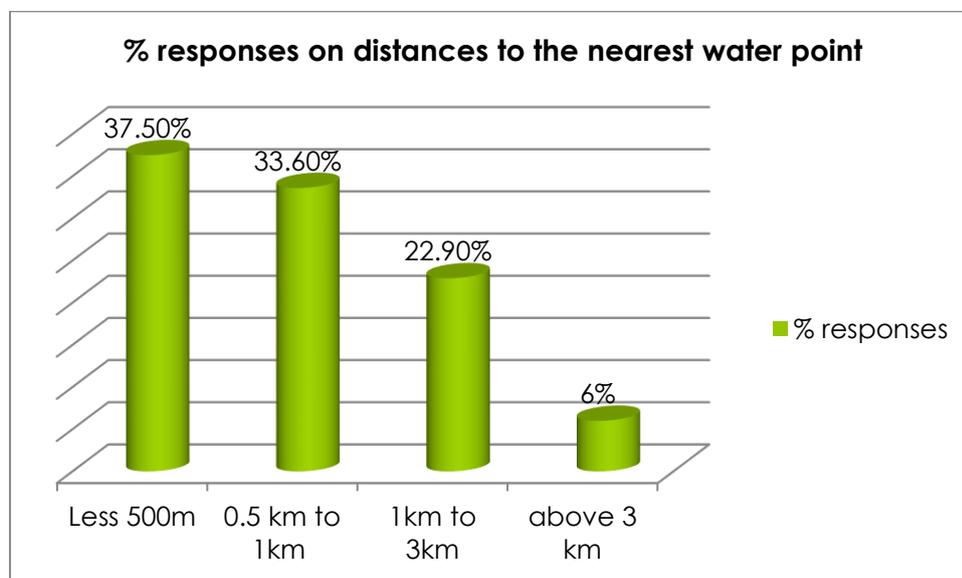


Figure 12 Show distances travelled to the nearest water sources only 37.5% are within 500m sphere standards.

The travelling distance reflect that more time will be spend on fetching water instead of investing that time towards doing other productive activities which might help in improving community food security. Time spend is further explained in figure 14 whereby **56.9 %** take more than 30 minutes to even more than 2hrs to travel to and from the nearest water point.

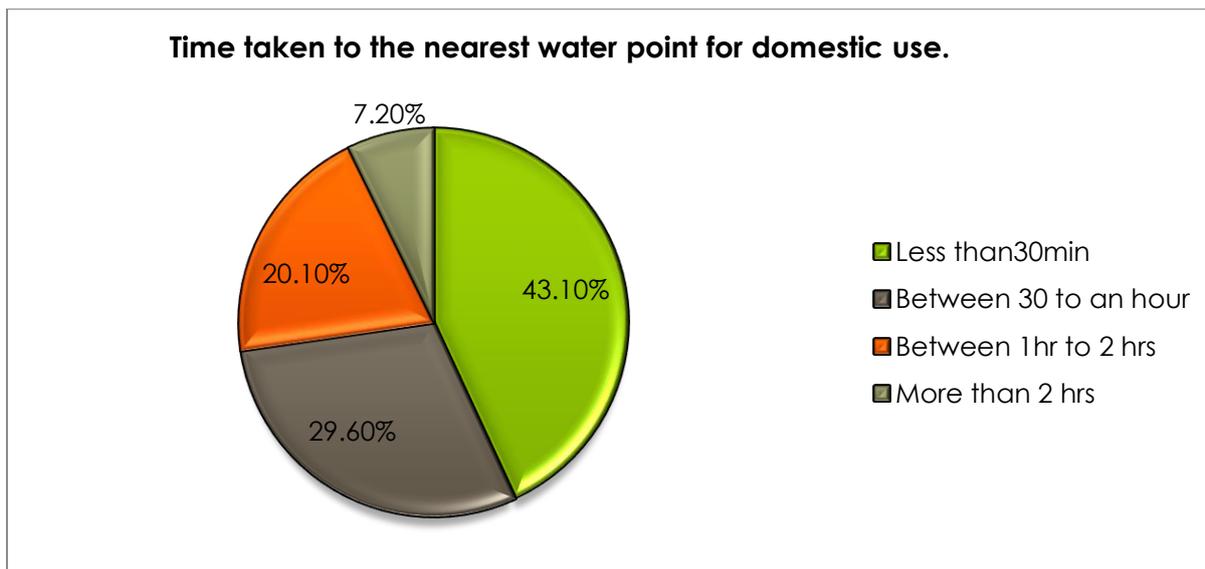


Figure 13 Productive time is spend travelling to the nearest water sources. 43.1% are within reasonable time limits when travelling to and from the nearest water sources.

The 6% have to travel even more than 2hrs .This mean to say these people will spend more than 2hrs fetching water compromising labour for other activities. This is likely to result in compromising food security levels. Distances are further compromised by the breakdown of boreholes.20.6% of the respondents highlighted that local boreholes had broken down. Suggest that community members will have to travel more distances until the borehole is repaired. Showing the importance of prioritizing rehabilitation of water points. The project is aiming at rehabilitating 60 water points across the three districts. This will help in reducing travelling distances to water points and then availing more time to other productive activities, which might even enhance food security levels.

Number of time boreholes have been rehabilitated in 2015 -16

Boreholes have been continuously breaking taking into consideration that 55% of the respondents highlighted that their boreholes have been rehabilitated two(2) to five (5) times within a period of a year as shown in table 9 below

Table :Shows number of times boreholes have been rehabilitated

Number of times boreholes have been rehabilitated	% of respondents
less than 2 times	19
2-4 times	32
5 and above	23
4 No information	17
5 NA	10

This reflects the need of more trained pump minders considering number of times boreholes have been breaking down ..Repair kits need to be ever available.The selected agro dealers must take advantage of such market niche by ordering borehole repair kits as there is a ready market. The availability of bore hole repair kits and trained pump minders is the only way these communities will continue to access clean and safe drinking water.**40.7%** of the respondents' do not have trained pump minders. The project intends to train **15** pump minders. Statistics show that **29.1%** of the respondents point out that Village pump minders were last trained before 2013 .**3.2 %** says that they were last trained in 2016.Considering the rate of breaking down of boreholes more trained pump minders are a necessity. Community sustainability strategies have to be strengthened especially through water point committees.**67.1%** of the respondents pointed out that they did not receive training of water point committee in their areas since 2012. The project is directly responding to such community needs by targeting to train **420** water point committees in the three targeted districts.

Community health clubs

65% of the respondents confirm the existance of health clubs this is a health environment for the coordination of activities .The thrust should be on strengthening and establishing more health clubs

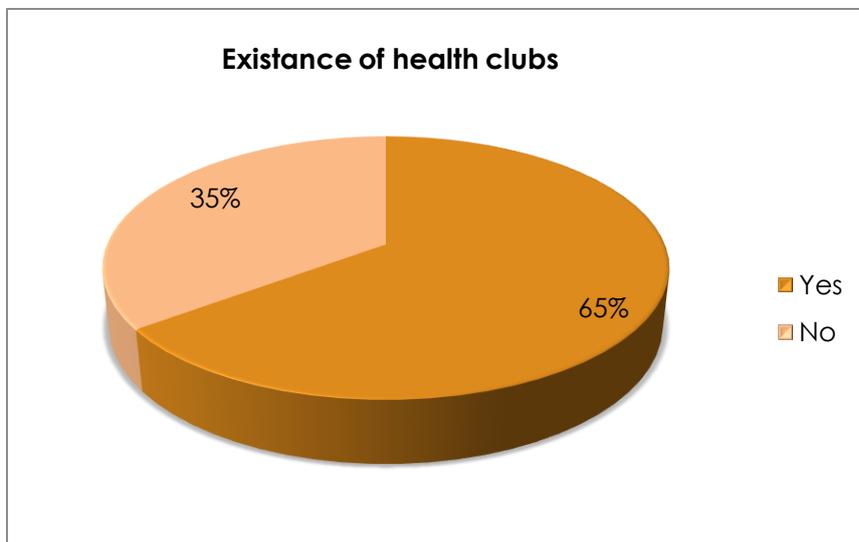


Figure 14 shows 65% existance of health clubs .Focus should be on both strengthening and training more health clubs to cover the 35% who confirmed absence of health clubs.

Observing critical times of washing hands

The most critical times observed is when after visiting the toilet with **42,45%**.followed by before taking any food with **33.4%** .Little attention is given to washing hands before breast feeding with **1.1%** .Attention is also given after changing Nappies by **16%** of the sampled population.

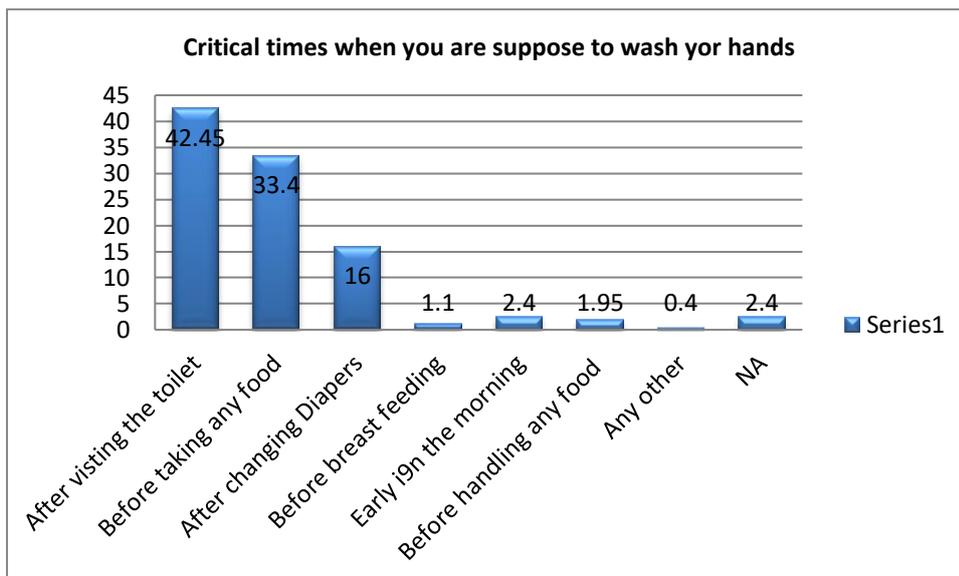


Figure 15 Critical times observed when you are supposed to wash your hands

Storage of water for domestic use

Water storage show some high level of hygiene **88.7%** store their water in a bucket with a lead whilst only **2.3%** store in a closed Jerry cane. **3.9%** store in traditional pots without lids and **6.3%** in a bucket without a lid. This shows that plastic bucket with a lid are proving to be a common storage. Plastic containers are healthier because they do not corrode.

Treatment of drinking water

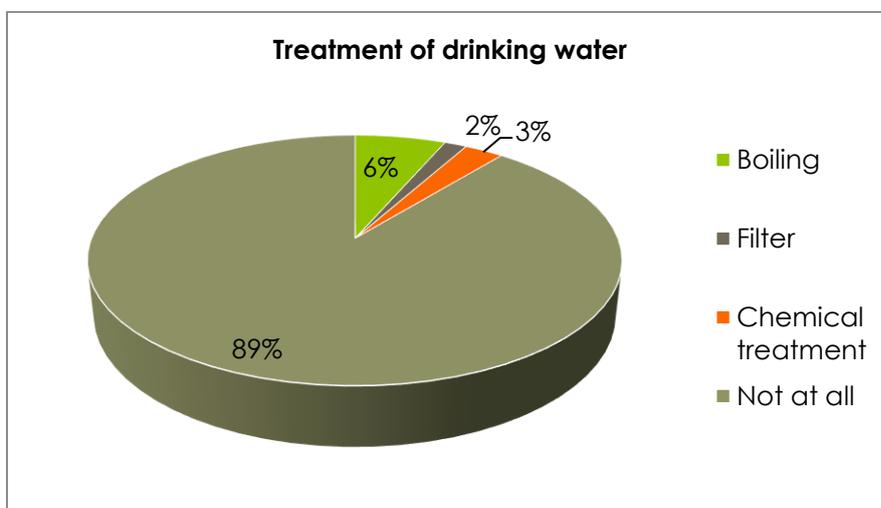


Figure 16 Shows treatment of drinking water .It shows that more promotion of household water treatment is practices a crucial if communities are to drink safe water.

89% do not treat drinking water at all. Collecting clean water does not necessarily mean that it is safe for drinking purposes. Water can be contaminated along the water chain. It is

important to boil or use water guards to water for drinking purposes. More hygiene promotion and training sessions are still very necessary. This should also be promoted in schools .Unfortunately only **110 (19.3%)** out of 568 interviewed have their children of school going age who belong to school health clubs. Promotion of school health clubs by the project has adequate space in promoting health standards in schools as statistically supported by the learning from the baseline.

Hygiene promotion behaviours

Hygiene promotion behaviours is at the centre of WASH as all other hygiene interventions will not achieve desired health benefits in the absence of good hygiene

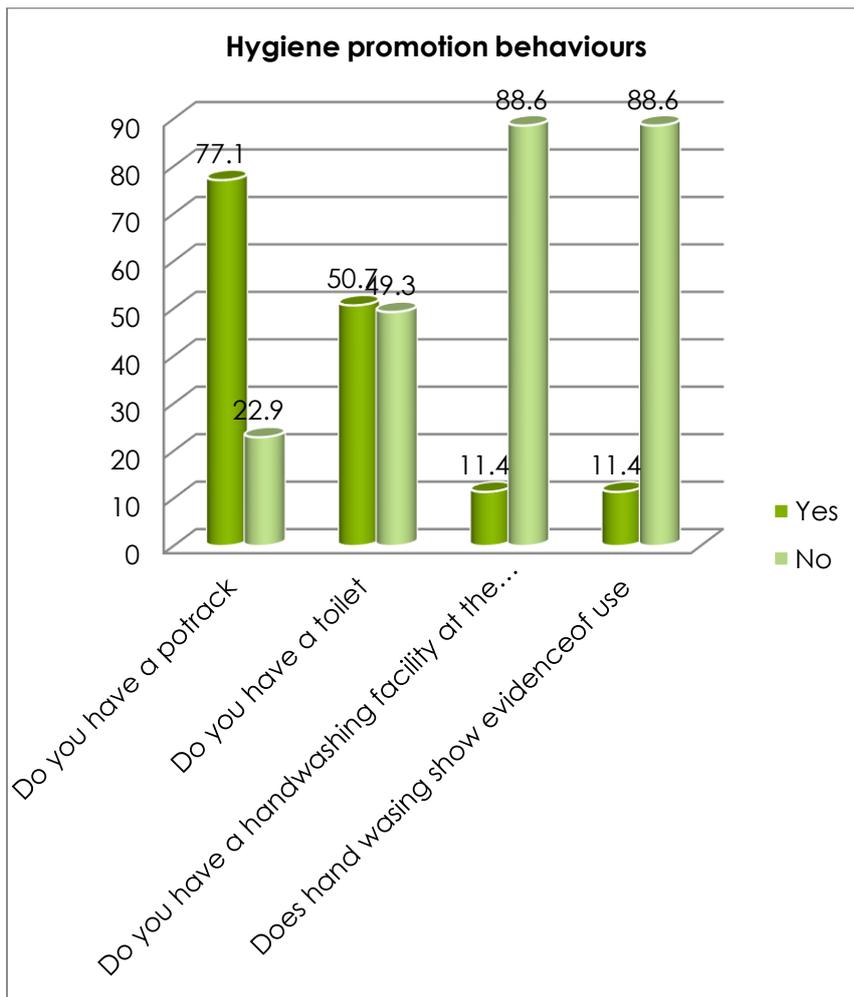


Figure 17 shows the hygiene promotion behaviour. The targeted communities are still on the lower end of sanitation ladder.

Health promotion interventions have plenty of space in the three targeted districts as the selected wards show that communities are still on lower level of the sanitation ladder as shown by just **50.7%** availability of toilets. **88%** do not have hand washing facilities even to those with hand washing facilities there is no evidence. There was correct targeting in terms

of ward allocation as the communities targeted really need all components of Participatory Health and Hygiene Education (PHHE)

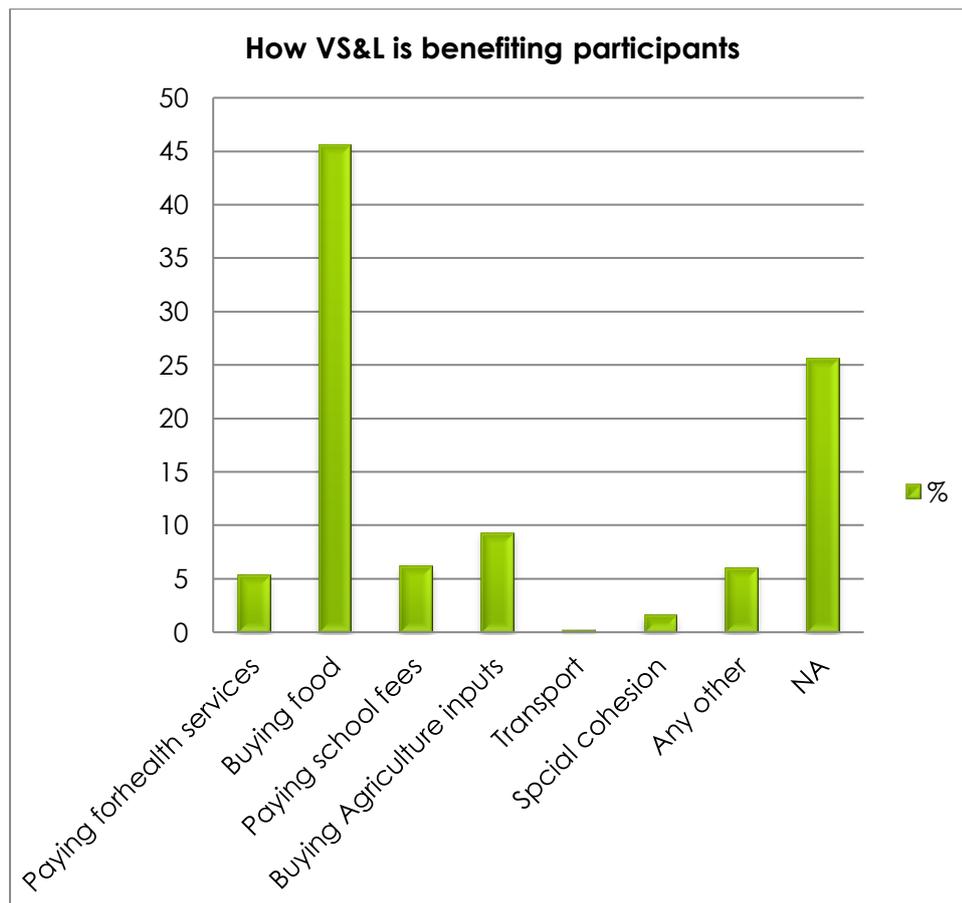
Section F: Economic Recovery and Market Systems

Microfinance sector

The project’s sustainability plan hinges on resuscitating of old groups and on-going support to 150 Village Savings and Lending VS&L groups. The survey results revealed that 76.9% of the interviewed members confirmed the existence of VS&L groups whilst only 29% proclaimed that no VS&L groups existed in their communities.

Benefits of VS&L to participants

45% of the financial benefits are channelled towards buying of food. This is confirmed by house hold main expenses where by purchasing of staple food had 78% of the total expenses. ZimVAC national food expenditure is 59% .This shows the importance of the VS&L in supporting household food security.



Village Savings and Lending resources channelled towards purchase of food is lower than the National average and even all household expenses. This is actually very positive because some of these resources are supposed to be channelled towards reinvestment of the income generating projects.

Marketing of products from Income Generating Activities.

Most VS&L clients are involved in income generating activities(IGAs) in order to sustain house hold financial cycle. Vending and road side marketing are the most common marketing strategies being used by **43%** of the clients. Contract farming is mainly used by irrigation farmers contributing **1.2%**.

A number of challenges are faced when farmers are marketing their products topping the list is the unavailability of markets with **23%**. Competition and price fluctuation affecting are also major marketing challenges contributing **10.2%**. This suggest that as a sustainability strategy towards future food security farmers should to be trained on engaging in different economic activities in order to increase house hold food security levels.

Recommendations

- The El Nino –induced drought that ravaged the three districts under study and Zimbabwe at large highlighted the importance and urgency of building community resilience in food security strategies
- Rural food insecurity levels is projected to be **42%** during the peak hunger period which is from September up to the next harvesting in April 2017. The government and other partners should try to aid farmers in this food lean period for them to have enough energy reserves highly needed during the crop production period until the next harvest.
- Farmers should be encouraged to use climate smart strategies and grow crops which are locally climatic friendly like the small grains otherwise the food security levels will continue to dwindle.
- Provision of agriculture inputs at the correct time can help to build farmer food security levels considering that most of the resources are currently being channelled towards purchasing of the staple food hence sparing resources towards agriculture inputs is not a priority and this can cause another food insecurity challenge post 2016.
- Cattle feed lots have been heavily compromised hence farmers should ensure that establishment of fodder banks is made a priority if livestock are to continue to contribute to community food security
- Hygiene promotion behaviours should be prioritised as it is at the centre of all WASH activities

- VS&L should continue to be promoted as it plays an important part in financing Household food security.

Conclusion

The study revealed that the majority of households are headed by males. Vegetable production plays an important part in household economy as it is the major livelihood activity in the 3 targeted districts of Bikita Chivi and Zaka. There is a high level of awareness in CA concepts. A lot still need to be done on adoption and general knowledge by farmers on benefits accrued through use of the wholesome CA package. Training component is vital in all the three project sectors as farmers still need real appreciation if they are to realise the benefits of agriculture and food security, the economic recovery drive and the improvement in water sanitation and hygiene practices. Baseline results shows that through a fully integrated community based program of mutually reinforcing activities Improving Agricultural Production and Access to Water, Sanitation and Hygiene for Drought affected Populations in Masvingo project can play a pivotal role in positively enhancing community food security levels.