VALUE CHAIN FINANCING

SMALLHOLDER FARMING

SENTINEL SURVEY
(LONGITUDINAL IMPACT MONITORING)

ROUND TWO

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Acronyms

CREATE	Credit for Agricultural Trade and Expansion
CZI	Confederation of Zimbabwe Industries
DANIDA	Danish International Development Organisation
HIVOS	Humanistic Institute for Development Cooperation
NSSA	National Social Security Authority
RARP-CSF	Rural Agriculture Revitalisation Programme- Commercialisation of Smallholder Farming Programme
SHF	Smallholder Farmer
SNV	Netherlands Development Organisation
ZADT	Zimbabwe Agricultural Development Trust

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Introduction

In August 2013 ZADT and SNV commissioned a longitudinal impact study (Sentinel Survey) aimed at establishing and demonstrating programme effectiveness and impact throughout the course of implementing the Rural Agriculture Revitalisation Programme- Commercialisation of Smallholder Farming (RARP-CSF) Programme that is funded by DANIDA, UKAid and Ford Foundation. This report presents key findings from the Second Round of the Sentinel Survey conducted in September 2014. The Sentinel Survey seeks to improve programme management and monitoring of programme impacts at the smallholder farmer level and enhance public accountability as well as demonstrate programme effectiveness and ensure optimum value for money. The survey provides decision makers critical information necessary for steering the programme towards the achievement of set objectives on smallholder farming in Zimbabwe.

Background

Following a multiplicity of socio-economic factors affecting the agricultural sector in Zimbabwe, ZADT was established in October 2010 by SNV and HIVOS to contribute towards the recovery and improvement of smallholder farming, food security and incomes of rural households in Zimbabwe. This objective was to be achieved through provision of value chain catalyst finance in the form of soft loans targeted at agro-input and output value chain intermediaries that promote the participation of smallholder farmers.

The main goal of ZADT is to reduce poverty through promotion of business growth, job creation and access to finance. This is measured through the following performance and impact indicators;

i) Percentage of people linked to the project living on less than $2 per day

ii) Percentage increase in annual household agricultural incomes of beneficiaries linked to borrowing intermediaries

iii) Cumulative number of intermediaries borrowing from the participating banks

iv) Number of beneficiaries linked to the borrowing intermediaries

v) Growth in turnover of agribusinesses as a result of the credit facility

This survey focuses on outcomes at the smallholder farmer level. Hence, this report will highlight programme results on impact indicators (i) and (ii).

Survey Methodology

A total of 16 sentinel sites were identified for participation in the 2014 survey. These comprised of 13 sites from 2013 and three new sites identified in 2014. The intermediary companies were involved in contract farming, output marketing and provision of agricultural inputs, equipment and tillage services.

A household questionnaire was administered by three enumerators to a total of 483 participants targeted by the borrowing companies. The participants distributed in 20 districts across seven provinces included smallholder farmers (69%), agro-dealers (10%) and livestock traders (21%).

Key Findings

Demographic Profile of Respondents

About 38% of respondents interviewed were female. The average age of the respondents is 49.8 years. On average, households had 5.9 members with about 2.7 members involved in agricultural/agribusiness activities. These figures are almost similar to the profile of households in the 2013 Survey.

Employment

There was a general decline in employment opportunities in the agricultural sector within or outside the farming household, as shown by the following figures;

- About 17.2% of households were involved in paid agricultural work outside their household plots in 2014. In 2013, about 21.3% of households participated in paid agricultural work.
- Average number of permanent workers engaged by the respondents in 2013 was 2.01. In 2014, the respondents had an average of 1.61 workers.

Ownership and Disposal of Household Assets

A slight decline in cattle ownership has been noted in 2014 compared to 2013. The proportion of people owning goats and poultry is almost the same for the two years. On the other hand, there has been an increase in livestock purchases in 2014 as compared to 2013. Conversely, livestock sales have been on a decreasing trend since 2013. When there are limited social pressures compelling households to sell their livestock, smallholder farmers tend to focus on rebuilding their stocks that had diminished critically over the past decade.

The project is yet to make significant contribution to accumulation of household assets. The proportion of households purchasing productive and non productive assets has been on a downward trend with fewer households having been able to purchase assets in 2014 as compared to 2013.

Household Livelihood Activities and Income

Agricultural based livelihood activities did not perform better than non farming livelihood activities. Compared to 2013 Sentinel Survey, the average household incomes from gardening and crop production were significantly lower in 2014. On average SHFs realised $1 463 from field crop production in 2014 compared to an average of $3,367 realised in 2013. Only income from livestock production was higher than the average income realised in 2013. In 2014, households realised an average of $1,428 from livestock production compared to an average of $859 realised in 2013.

The average household income for the SHF from all livelihood activities in 2014 is $1,887.39. About 30.25% of households interviewed in 2014 had incomes below the threshold of $2 a day. Although the proportion of households living on less than $2 per day is significantly lower than the baseline value (at 46.1%), there is actually a marked increase from the First Round Survey value that was pegged at 24.6%.

However, a comparison of average incomes for SHF that accessed services/products provided by intermediaries shows that linked SHF had higher incomes than farmers not actively supported by intermediaries. SHFs that received support from intermediaries realised about $1,945.84 on average whilst those not actively supported by intermediaries had an average of $1,731.53. This demonstrates that there is great potential for the project to improve the livelihoods of SHFs given functional relations with intermediaries.

Agricultural Production

An increase in area under crop production was recorded for peas, groundnuts, potatoes and bananas. A decreasing trend for area under crop production has been recorded for the following crops since the baseline; maize, garlic, beans, tomatoes and cucumbers. The changes are largely attributed to a farmer's response to market price fluctuations. However, when compared to baseline levels, maize, beans, garlic, groundnuts and cowpeas had higher productivity per hectare. This may be due to enhanced access to inputs. For instance, farmers growing maize under contract had higher yield levels (2.2 tonnes per hectare) compared to 1.9 tonnes/ha realised by non contracted maize farmers.

Respondent's Relationship with Intermediary

About 57% of respondents indicated having worked with intermediaries for at least 3 years. There is a general downward trend in farmer satisfaction with intermediary working relations. In 2013, about 89% of farmers were happy with the existing relations with only 11% being dissatisfied. In 2014 about 62% of respondents were happy with the intermediary whilst 38% were not happy. Consequently, about 28% of respondents indicated they had since stopped or will not be working with the same intermediary. Respondents had since stopped working with four intermediaries (Aman Obrie, Daeco Holdings, Leonard Mazivire and Packers International). In the absence of improvement on relations and conditions, respondents indicated they will not be working with four other companies (Carswell Meats, Nzarayapera, Reylands and Sidella).

Key Changes in Smallholder Farmer Livelihoods

About 29% of respondents interviewed did not realize any change as a result of the contractual relationship with the intermediary. Despite the challenges highlighted, the programme has great potential to enhance household food security, income generation and household accumulation of assets.

Conclusions and Recommendations

Given the prevailing depressed socio-economic environment, the ZADT programme has a pivotal role to resuscitate and commercialise smallholder agriculture in Zimbabwe through value chain financing. With adverse climatic changes and faltering industry due to macro-economic challenges, the programme would require more innovative programming and value chain financing approaches if the goal of poverty reduction and employment generation is to be realised. Below are the key conclusions from the Sentinel Survey Round Two.

Conclusions

1. Given the prevailing macro-economic challenges adversely affecting small business operations, the ZADT intervention is quite relevant in the resuscitation of SHF in Zimbabwe. Some demonstrable successes have been noted where cordial relations existed between farmers and intermediaries.
2. Through the operations of intermediaries, for instance provision of irrigation equipment, SHF production significantly improved and this has led to marketing challenges that may not have been provided for at the design stage.
3. SHFs actively supported by intermediaries have comparatively higher incomes compared to farmers without functional relations with intermediaries.
4. The survey has managed to highlight key factors affecting agricultural production and related income generation using the experience and perspective of the SHF.
5. The Sentinel Survey approach to impact monitoring remains a useful cost effective tool in assessing programme contribution to poverty alleviation and employment generation. However, effective participation of key stakeholders (particularly SHFs and intermediaries) in subsequent phases of the survey requires commitment of the sampled SHFs and the intermediaries.

Recommendations

1. ZADT and partners should continue supporting the intermediaries providing critical long term services to the SHFs and pay special attention to intermediaries with viable innovative strategies that effectively address the macro-economic and climatic challenges. This may entail reviewing/strengthening of the programme's institutional framework and processes to effectively respond to diverse socio-economic and climatic challenges.

   The programme can also institute a rigorous intermediary selection and capacity building exercise that is coupled with intensive monitoring for timely identification of challenges requiring management attention.

2. There is scope to further enhance the effectiveness of the programme and ensure optimum value for money when the programme considers supporting other components of the value

chain likely to be affected by the intermediary's input. The programme should consider holistically all implications of the support rendered on all the other components of the value chain (from production to marketing) likely to be affected by the intervention.

There is need to consider prioritising companies that provide a more holistic, long-term and comprehensive range of services/ products to the SHF or availability of other existing leveraged resources for a comprehensive package to be provided.

3. For a comprehensive picture on the key issues affecting agricultural production by SHF, it is important to undertake a detailed study focusing on the experience and perspectives of intermediaries in the agricultural value chain. This also serves purposes for triangulation of information arising from the Sentinel Survey.

4. For future phases of Sentinel Survey it is recommended that participating SHF fully understand the purpose of the survey and the need for them to continuously provide information for the duration of the programme. This may entail participants signing consent forms that provide full information on the purpose and duration of the studies.

1. Introduction and Background

1.1. Introduction

With increasing expenditure constraints and growing demands for public accountability, the need to demonstrate the effectiveness of programmes and ensure optimum value for money is at the centre of development debate. This requires development managers to adopt a Management for Results approach that entails a concerted focus on results (rather than mere inputs and activities) throughout all the phases of the programming cycle. A results based approach requires managers to regularly think through the extent to which their implementation activities and outputs have a reasonable probability of attaining the outcomes desired, and to make continuous adjustments as needed to ensure that outcomes are achieved.

It is under this context that ZADT and SNV commissioned a longitudinal impact study (Sentinel Survey) under the Rural Agriculture Revitalisation Programme- Commercialisation of Smallholder Farming (RARP-CSF). This programme is funded by the Danish International Development Agency (DANIDA), UKAID and the FORD Foundation. The three year programme (2013-2015) seeks to enhance household food security, generate employment and improve household income through the commercialisation of smallholder farming across eight rural provinces of Zimbabwe.

This report presents key findings from the Second Round of the Sentinel Survey conducted in September 2014. The First Round of the Sentinel Survey was conducted in August 2013.

1.2. Background

The Fast Track Land Reform Programme of the year 2000 had a far-reaching negative impact on smallholder agricultural production in Zimbabwe. The ensuing economic challenges (that included the unprecedented hyperinflationary environment) adversely affected the operations of all agricultural value chain actors. The transition into a multiple currency economy in 2009 had its own challenges such as lack of credit for supporting the ailing agricultural sector. It became increasingly difficult to attract medium and long term financing for the revitalization of the agricultural sector. Financial institutions have been facing liquidity problems that resulted in short lending periods and high interest rates. With poor loan performance, financial institutions have become extremely risk averse and require collateral security which the rural agricultural value chain actors do not have.

It is under this backdrop that the Zimbabwe Agricultural Development Trust (ZADT) was established in October 2010 by the Netherlands Development Organization (SNV) and the Humanistic Institute for Development Cooperation (HIVOS). The main objective of ZADT is to contribute towards the recovery and improvement of smallholder farming, food security and incomes of rural households in Zimbabwe. The specific objectives of ZADT are;

- To provide soft capital to value chain actors in which SHFs meaningfully participate.
- To provide soft capital to financial services providers for lending to agricultural input and output value chain actors who ultimately benefit SHFs.

ZADT, through the Credit for Agricultural Trade and Expansion (CREATE) Fund established in February 2012, provides value chain catalyst finance in the form of loans targeted at agro-input and output value chain intermediaries that promote the participation of SHFs. These include input wholesalers, traders, contract smallholder producers, processing companies and transporters. The Fund is on-lent through three funding windows:

- The Inputs window,
- The Output/Marketing window, and
- The Storage/Processing window.

ZADT has been working with financial institutions (Steward Bank, NMB, FBC and BancABC[1]) to enhance access to credit for intermediary technology upgrades and working capital so as to allow the agricultural value chain actors to increase the scope of their outreach. Table 1 presents a summary of ZADT results and indicators as reflected in the programme logical framework.

Table 1: ZADT Key Results and Indicators

Key Results	Indicators
Impact: Reduce poverty through promotion of business growth, job creation and access to finance	i) Percentage of people linked to the project living on less than $2 per day ii) Economic growth in Zimbabwe (GDP)
Outcome: Improved access to finance for intermediaries in the rural agriculture and food value chains.	iii) Percentage increase in annual household agricultural incomes of beneficiaries linked to borrowing intermediaries iv) Cumulative number of intermediaries borrowing from the participating banks v) Number of beneficiaries linked to the borrowing intermediaries vi) Growth in turnover of agribusinesses as a result of the credit facility

This report focuses on programme performance as measured by impact indicators (i) and (iii). The other indicators are outside the scope of this survey.

[1] Banc ABC was engaged in June 2014 and at the time of the survey, the bank had not yet disbursed any loans to intermediaries

2. Survey Methodology

The Sentinel Survey seeks to track the impacts of ZADT financing of agricultural value chains at the smallholder farmer level. A sentinel survey is a longitudinal study of a representative sample of households within a given sentinel site[2] for purposes of tracking changes in SHFs' livelihoods (that includes changes in income and production levels). The study is crucial for tracking changes at the household level that can be correctly attributed to the programme interventions. The concentration of resources in defined geographical areas produces a rich source of information that would be cost-prohibitive if implemented on a national scale.

The primary goal of the ZADT Sentinel Survey is to *better understand and monitor impacts at the smallholder farmer level associated with Value Chain Financing and to provide decision makers with relevant information for steering the programme towards the achievement of set objectives* on smallholder farming in Zimbabwe.

2.1 Sentinel Sites

A sentinel site in this study is the borrowing intermediary serving a selected group of SHFs within defined geographical locations. Selected farmers doing business with the intermediary are referred to as sentinel site participants.

In 2013 a total of 15 sentinel sites out of a possible 89 sites were purposively sampled for the First Round of the Sentinel survey targeting randomly selected households. In 2014, a total of 16 sentinel sites participated in the survey. Two sites (Leo Marketing and Rosgate) have been dropped for the 2014 survey whilst three new sites have been added. The new sites are; Nico Orgo, Sidella Trading and Tanganda Tea Company.

The new and old sentinel sites were selected on the basis of a four point criteria as follows:

i) The borrowing intermediary has or will be willing to have a long working relationship with the same small holder farmers (for at least 3 years).
ii) The borrowing intermediary has a direct relationship with SHFs e.g. through direct purchase of farmer's produce
iii) The smallholder farmer's relationship with the borrowing intermediary forms a significant part of the smallholder farmer's livelihood strategy
iv) The sentinel site is a fair representation of the value chain and ecological region of Zimbabwe

[2] A sentinel site is a community from which in-depth data is gathered and the resulting analysis is used to inform programs and policies affecting a larger geographic area.

Table 2: Sentinel Survey 2014 - Selected Intermediaries and Line of Business with SHF

	Company/ Borrowing Intermediary	Business Concept	Link with SHF	District	Wards
AGRO-INPUTS/ IMPLIMENTS/ TILLAGE SERVICES					
1	**Forster Irrigation**	Sell and service irrigation equipment	SHF produce horticultural crops under irrigation sold & serviced by company	Gwanda	11,12
2	**Jotham Zvidzai Chidavaenzi**	Tillage services and transport	Offering tillage services and transport to SHFs	Marondera Seke	14 9,16
3	**Tanganda Tea Company**	Tea production	Provides inputs and markets to smallholder tea outgrowers and buys SHF produce	Chipinge	14,19
4	**Nico Orgo**	Organic and chemical fertilizer manufacturing	Sells organic and chemical fertilizers & other agric. inputs to SHFs	Goromonzi	17,18,19
5	**Ryelands**	Stocks Agro-dealers with inputs	SHF buys inputs from dealers closer to their farms	Mberengwa, Zvishavane	4, 10, 20, 3, 7, 10, 11,24, 25
OUTPUT MARKETING					
6	**Montcase**	Horticulture retailing	Buys various horticulture products from SHFs	Murehwa	11
7	**Mupangwa/ Nzarayapera**	Mupangwa borrowed for banana irrigation development. Nzarayapera buys bananas from group.	Producing bananas. Provision of inputs on credit, technical and agronomic support as well as markets for the produce.	Mutasa	7
8	**Packers International**	Poultry	Buys poultry and poultry products from SHF	Goromonzi	11
9	**Marcedale**	Buying cattle from SHF from all Districts in Mat North and South.	Selected farmers sell their own beasts. Provides platform through which others sell their beasts in various Districts	Binga	3,16, 17,21
10	**Carswell Meats**	Buying cattle through village middle man	Buys livestock. Provides market for the SHFs.	Mwenezi, Chivi,	3, 2 23,25,26
11	**Daeco Holdings**	Buys cattle from SHF for fattening	Buys cattle. Provides market for the SHFs.	Beitbridge	3,4,5,7,8, 9
12	**L. Madzivire**	Horticulture	Buys Potatoes	Nyanga	15
13	**Aman O'brie**	Grain buying	Grain buying	Insiza	1,2,3,4,5, 6,7,9,10, 16,17
CONTRACT FARMING					
14	**Global Import and Export**	Processing canned food	Contract Farming - Farmers sell produce to company (provides ready market for horticultural produce) and company also provides seed, transport and extension services	Bulilima Mzingwane	5 18
15	**Northern Farming**	Grain broking	Contracts farmers in maize production, provides inputs, technical and agronomic support, as well as market for the produce.	Mazowe/ Chiweshe	7,8
16	**Sidella Trading**	Contract growing of cowpeas	Provides inputs to smallholder cowpeas growers and buys the harvested crop.	Muzarabani	3, 8, 9

Household Questionnaire Interviews

Some minor modifications were made to the 2013 household questionnaire (Annex1). It is important that the questionnaire remains the same throughout the various phases of the Sentinel Survey for comparability of findings. At least 35 households were targeted per site for the interviews. The rationale was to maintain, wherever possible, a statistically significant figure of not less than 30 households per site during all rounds of the longitudinal impact study. Table 3 presents the number of households interviewed in 2014 by site.

Table 3: Number of Households Interviewed by Site

Intermediary	Category of Respondents	Targeted Households	No. of HHs Interviewed	Variance
Mupangwa/ Nzarayapera	Farmers	18	21	117%
Jotham Zvidzai Chidavaenzi	Farmers	37	35	95%
Montcase	Farmers	42	36	86%
Leonard Mazivire	Farmers	35	14	40%
Packers International	Farmers	29	37	128%
Northern Farming	Farmers	36	33	92%
Tanganda Tea Company	Farmers	35	37	106%
Global Import & Export	Farmers	36	34	94%
Marcedale Devondale	Livestock Traders	35	35	100%
Aman O'Brie	Agro-dealers	28	28	100%
Carswell Meats	Livestock Traders	37	35	95%
Forster Irrigation	Farmers	36	36	100%
Ryelands	Agro-dealers	18	19	106%
DAECO Holdings	Livestock Traders	35	34	97%
Nico Orgo	Farmers	35	12	34%
Sidella Trading	Farmers	35	37	106%
TOTAL		**527**	**483**	**92%**

The survey team managed to reach 92% of the targeted 527 households for the interviews in 2014. However, the total number of households interviewed under two intermediaries (Mazivire and Nico Orgo) failed to reach 50% of target. For Nico Orgo, out of a list of 123 farmers reported to have benefitted from the company in Goromonzi, only 25 farmers were verified by the community members to have accessed Nico Orgo services (that include provision of agricultural inputs and output marketing).

Of the 25 farmers, 18 were reported to be residing in Goromonzi whilst the other 7 were outside the district. At the time of the study visit, it was not possible to find all the 18 farmers in the district for the interviews. However, it is possible that some farmers that had defaulted in repaying their input loans to Nico Orgo could have feared coming out in the open.

As for Mazivire, relations with the farmers in Nyanga district had since broken down. According to SHFs interviewed, the intermediary had failed to deliver inputs (fertilizers) as promised.

It is important to note that when farmers fail to realize benefits from the intermediaries, their cooperation even in the sentinel survey will be compromised. Whilst enumerators managed to interview some farmers during the 2014 survey it would be difficult to get their cooperation in the next round of the survey if relations with some intermediaries do not improve from the current status. A meeting has since been held between Mazivire, ZADT and SNV to discuss the circumstances surrounding the broken linkages with the SHFs. With regular monitoring it should be possible for the programme to timely address any emerging challenges in the farmer –intermediary relationship.

Data Capturing and Analysis

The data from household questionnaire interviews was initially captured by enumerators in Excel sheets. The data was exported to the Statistical Package for Social Sciences (SPSS Version 16) to enhance analysis. To establish trends in programme effects/ impacts, results from the 2014 survey were compared to the findings from the 2013 survey.

3. Key Findings

3.1 Demographic Profile of Participants

Distribution of Respondents

A total of 483 respondents were interviewed for the 16 intermediaries. These were drawn from 20 districts across 7 provinces of Zimbabwe (Manicaland, Mashonaland Central, Mashonaland East, Masvingo, Matabeleland North, Matabeleland South and Midlands). Figure 1 shows the geographical distribution of respondents by province.

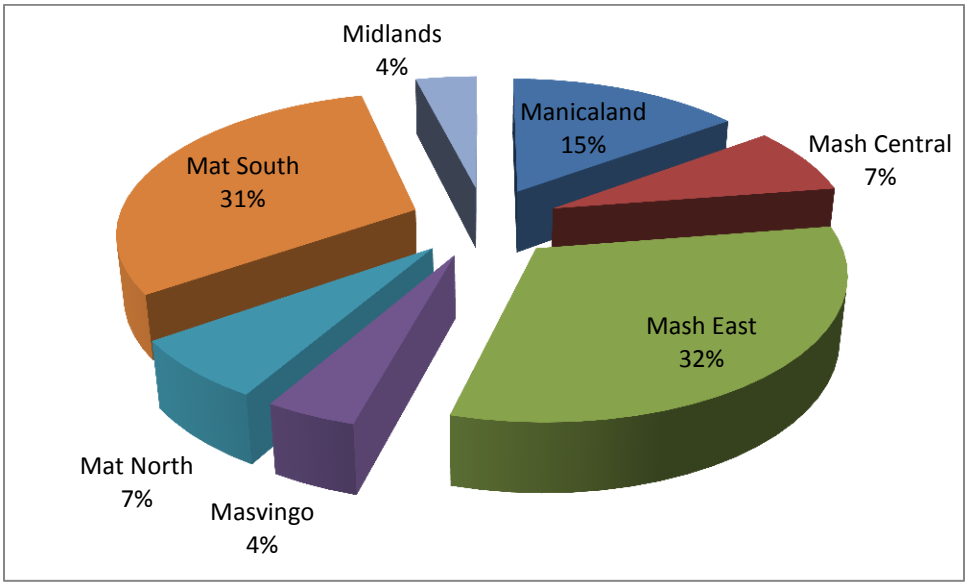

Figure 1: Distribution of Respondents by Province

Mashonaland East and Matabeleland South provinces had the highest proportion of respondents (32% and 31% respectively). The provincial distribution of respondents is similar to that of the First Round Sentinel Survey in which the two provinces had the highest number of respondents.

Figure 2 shows that 69% (332) of respondents in 2014 were SHFs, 21% (104) were livestock traders whilst agro-dealers constituted 10% (47) of the total respondents. In 2013, SHFs interviewed represented 61% (296) of respondents and 22% (107) were livestock traders whilst agro-dealers constituted 17% (80) of the total respondents.

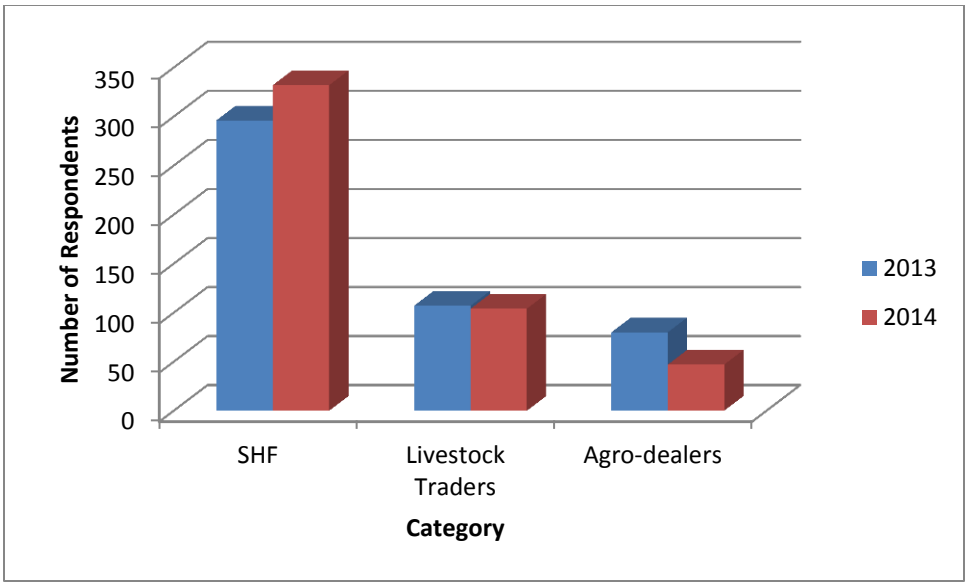

Figure 1: Number of Respondents by Category (2013 & 2014)

About 38% of respondents interviewed in 2014 were female. In 2013, about 44% of respondents were female. The reduction in the proportion of female respondents could be due to new sites (such as Tanganda) with low representation of women (About 19% of respondents from the Tanganda site were female).

The average age of respondents was 49.8 years, whilst the age range was from 19 years to 88 years. This is also comparable to the 2013 survey age range (18-86 years) and average age (50.4 years).

The average size of the household was 5.9 people in 2014. In 2013 it was 5.5 people. The average number of household members involved in agricultural/ agri-business activities (2.7 people) did not change as compared to the 2013 Survey.

3.2 Employment

Smallholder agricultural production is largely labour demanding. A change in the number of employees (permanent or temporal) has implications on the overall production figures. The change can be caused by a farmer increasing or decreasing acreage or farming activities. There has been a general decrease in the number of workers (permanent or temporal) engaged by the farmers in 2014 compared to 2013. Table 4 shows that in 2013 households employed an average of 2.06 permanent workers whilst in 2014, the average number of permanent employees decreased to 1.61.

Table 4: Number of employees hired in 2013 and 2014

Variable	Number of Permanent Employees		Number of Temporal Employees	
Year	2013	2014	2013	2014
N (Number of respondents)	84	84	172	167
Mean	2.06	1.61	4.59	4.29
Minimum	1	1	1	1
Maximum	8	5	25	20
Std. Deviation	1.434	0.822	3.840	3.538

About 17.2% of households were involved in paid agricultural work outside their household plots. This is also a marked reduction from the 21.3% recorded in 2013. This could be due to reduced opportunities for paid agricultural work outside the household or increased demand for labour within the household.

These figures indicate a general decline in employment opportunities in the agricultural sector within or outside the farming household.

3.3 Household Assets

Livestock

The accumulation or disposal of household assets, particularly livestock, by SHFs can be used as proxy indicator for changes in household incomes. Table 5 shows that 61% of SHFs interviewed in 2014 owned cattle, 62% owned goats, 10% owned sheep and 89% owned poultry. The proportion of SHFs owning cattle and sheep was marginally higher in 2013 than 2014. Proportion of households owning goats and poultry was almost the same for the two years. It is however rather too early to note significant changes in livestock ownership that can be attributed to the project over a short period such as one year.

The average number of cattle, goats, sheep and poultry purchased was higher in 2014 as compared to 2013 purchases. The fewer number of livestock sold in 2014 compared to 2013 indicates a tendency towards restocking or it could mean there were less pressing needs necessitating disposal of livestock assets.

Table 5: Livestock Ownership and Purchases by SHFs (2013 and 2014)

Livestock Assets		2014	2013
Cattle	% HH owning cattle	61%	66%
	Average Number Owned	6.7	6.4
	Average Number Purchased	2.2	1.4
	Average Number Sold	0.5	1.2
Goats	% HH owning goats	62%	61%
	Average Number Owned	6.4	5.6
	Average Number Purchased	2.9	1.6
	Average Number Sold	0.2	1.8
Sheep	% HH owning sheep	10%	17%
	Average Number Owned	4.3	3
	Average Number Purchased	4.5	3
	Average Number Sold	0.3	0
Poultry	% HH owning poultry	89%	89%
	Average Number Owned	16	21.3
	Average Number Purchased	52.3	47
	Average Number Sold	1.6	30

Purchase and Disposal of Productive Assets

The accumulation of productive and non productive assets by households has been on a downward trend. About 19.1% of respondents indicated having bought productive assets in the 2014 survey. In the 2013 Survey 34.5% of respondents bought productive assets over the 12 months period. In 2013, about 33.8% of respondents bought non productive assets whilst in 2014 fewer respondents (25.8%) bought non productive assets. This shows limited investment in productive assets that would ultimately affect the farmer's production capacity. The decline in the purchase of non-productive assets reflects the challenges experienced by households in generating adequate financial resources to meet both the productive and non productive requirements.

Table 6 shows the value of productive assets bought in 2013 and 2014.

Table 6: Value of Productive and Non Productive Assets Purchased (2013 and 2014)

Variable	Productive Assets		Non-productive Assets	
	2014	2013	2014	2013
N	89	157	111	155
Mean	$902.68	$763.6	$346.39	$495.46
Minimum	$5	$5	$5	$5
Maximum	$12,000.00	$29,000.00	$11,000.00	$10,000.00
Std. Deviation	1918.58	2,581.47	1104.35	1,115.09

Although fewer people purchased productive assets in 2014 than 2013, the average value of assets bought in 2014 ($902.68) is quite high compared to the average amount ($763.60) spent by respondents in 2013. This may be indicative of the household's desire to invest limited income in high value productive assets. However, a Third Round of the Sentinel Survey should be able to establish conclusively the investment behaviour of households.

3.4 Household Livelihood Activities and Income

To avoid statistical distortions and ensure correct attribution, agro-dealers and livestock traders have been excluded in the analysis of household income from agricultural based livelihood activities for the years 2013 and 2014. Table 7 shows that mean income from field crop production has gone below recorded 2013 income and even the baseline income. Similarly, average income from gardening activities has been declining over the years from a baseline average of $3750.70 to $556.68 in 2014. However, baseline figures may be overstated due to the inclusion of high earning agro-dealers and livestock traders.

Only livestock production recorded a significant increase (about 66%) from an average income of $859 in 2013 to an average of $1428 in 2014. Whilst the average number of livestock sold in 2014 was lower than the 2013 average, the value of livestock sold in 2014 was significantly higher than 2013. It is however important to collect market prices of livestock and agricultural commodities in subsequent rounds of the Sentinel Surveys to track the effect of price changes on the livelihoods of SHFs.

Table 7: Livelihood Activities and Income Generation

Livelihood Activity	Period	% of HH involved	Minimum Income (USD)	Maximum income (USD)	Mean Income (USD)	Standard Deviation
Field Crop Production (2014 & 2013 data excludes agro-dealers and livestock traders)	2014	46.4	0	$16 000	$1 316.8	2326.64
	2013	41.0	0	$45000	$3367.4	4578.98
	Baseline	-	$30.00	$30 000.00	$2138.08	-
Livestock Production (2014 & 2013 data excludes agro-dealers and livestock traders)	2014	11.2	$50	$7200	$1427.98	1534.58
	2013	8.5	$30	$5200	$859.02	955.24
	Baseline	-	-	-	-	-
Gardening (2014 & 2013 data excludes agro-dealers and livestock traders)	2014	29.0	$20	$6000	$556.68	882.80
	2013	20.3	$20	$20000	$901.00	3277.90
	Baseline	-	$10.00	$30 000.00	$3750.70	-
Formal Employment	2014	9.1	$150	$60 000.00	$5717.05	8668.64
	2013	5.8	$50	$31200	$3529.6	5867.65
	Baseline		$624.00	$10 000.00	$3666.80	
Informal Employment	2014	7.87	$72	$10 000.00	$899.92	1657.02
	2013	3.3	$60	$4000	$868.8	1187.15
	Baseline		$360.00	$7 200.00	$2160.29	
PettyTrade	2014	12.0	$40.00	$10 000.00	$1375.78	2218.51
	2013	16.4	$100	$108 000	$13 446.5	20527.34
	Baseline		$600.00	$3 600.00	$1,733.33	
Small Business	2014	16.15	$250	$11 000.00	$2,671.28	2013.66
	2013	4.3	$20	$107814	$11,826.4	26101.81
	Baseline		$20.00	$160 000.00	$18,575.0	
Other (e.g. Remittances)	2014	8.9	$50	$420000	$888.37	992.79
	2013	3.5	$100	$10000	$1,353.5	2387.779
	Baseline		$350.00	$24 000.00	$6,882.50	

Average income from formal employment has been higher than the baseline and First Round Sentinel Survey Results. Whilst average income from informal employment is higher than the average income realized in 2013, it is however very low compared to the baseline average income.

Table 8 shows that the average household income for all respondents in 2014 ($3,266.98) is less than half the average income realized in 2013 ($7,718.00). However, this figure overstates the actual average income of SHFs as this includes incomes from agro-dealers and livestock traders that are significantly high. The average income for SHFs in 2014 is $1,887.39 whilst in 2013 SHFs had a higher average income of $3,411.80.

Table 8: Average Annual Household Income by Respondent Category

Respondent Category	Period	% of HH involved	Minimum Income (USD)	Maximum income (USD)	Mean Income (USD)	Standard Deviation
Total Household Income (*All Respondents*)	2014	96.69	0	$64 680	$3,266.98	4866.98
	2013	99.4	$25	$112 506	$7,718.00	13288.43
Household Income *(SHFs)*	2014	66.0	$50	$24 000.00	$1,887.39	2679.16
	2013	60.7	$25	$45 000.00	$3,411.80	5018.87
Household Income (*Agro-dealers & Livestock Traders*)	2014	30.0	$400	$64 680.00	$6,369.68	6831.69
	2013	38.5	$32	$108 000.00	$13,938.01	17024.3

Agro-dealers and livestock traders have an average income of $6,369.68 in 2014. In 2013, the agro-dealers and livestock traders had $13,938.00 on average.

At baseline 46.1% of households linked to the project were living below an income of $2.00 per day. The 2013 Sentinel Survey showed an improvement in household income with 24.6% of households living below $2.00 a day. The 2014 survey has 30.25% of households living below the threshold of $2 a day. Although this shows an improvement from the baseline figure, it is a notable decrease from the 2013 survey.

Whilst the decline in household income may also be due to the prevailing macro-economic conditions that include the credit crunch, of much concern however is the decline of income from agricultural based livelihood activities (with the exception of livestock production) which constitute the main focus of the programme.

Annual Incomes for SHFs Linked to Intermediaries

Some intermediaries did not actively provide expected services or products to SHFs or agro-dealers in 2014. This negatively affected the incomes realised by the farmers and agro-dealers. Table 9 presents a comparison of average incomes by participants linked to intermediaries versus the income of those not actively linked. SHFs that received services/products through intermediaries realised average household income of $1,945.84 whilst those not actively linked to intermediaries had $1,731.53. The same scenario applies to agro-dealers and livestock traders.

Table 9: Average Incomes of participants actively linked or not linked to intermediary

Participant	Linked to Intermediaries		Not actively linked to Intermediary	
	N	Mean Income	N	Mean Income
SHF	232	$1,945.84	87	$1,731.53
AD/ Livestock Trader	70	$6,930.97	75	$5,845.80

These results indicate that despite a general decrease in incomes realised by SHFs, the programme is making a positive contribution to farmers who managed to access services/products from intermediaries. The decline can be attributed to external factors, particularly the depressed macro-economic environment that adversely affects the operation of intermediaries.

3.5 Agricultural Production

The ZADT programme is expected to contribute towards improved SHF agricultural production in terms of area under crop production or productivity per hectare.

3.5.1 Area under Crop Production

Table 10 shows an increase in area under production for the following crops:

- Peas
- Groundnuts
- Potatoes
- Bananas

A decreasing trend of average area under crop production since baseline has been recorded in 2014 for the following crops:

- Maize
- Garlic
- Beans
- Tomatoes

Besides access to affordable inputs, it is also important to note that farmers are very responsive to output market fluctuations. With favourable markets, farmers respond positively by increasing area under production. Market experiences in the past season usually determine current or future cropping patterns by SHFs.

Table 10: Average Area Under Crop Production (2013 & 2014)

Crop	Period	Minimum (hectares)	Maximum (hectares)	Mean (hectares)	Std. Deviation
Maize	**Baseline**	0.2	70	2.8	6.2
	2013	0.4	7	2.2↓	1.4
	2014	0.03	6	1.3↓	1.03
Beans	**Baseline**	0.2	5	0.8	0.9
	2013	0.02	1	0.4↓	0.3
	2014	0.1	1	0.3↓	0.27
Peas	**Baseline**				
	2013	0.05	0.2	0.1↑	0.1
	2014	0.1	0.4	0.2↑	0.1
Garlic	**Baseline**	0.01	220	40.5	58.9
	2013	0.001	0.5	0.1↓	0.1
	2014	0.01	0.1	0.04↓	0.03
Groundnuts	**Baseline**	0.2	2	0.6	0.5
	2013	0.2	0.4	0.3↓	0.1
	2014	0.2	2	0.8↑	0.64
Tomatoes	**Baseline**	0.08	6	1.2	1.5
	2013	0.08	0.4	0.2↓	0.1
	2014	0.1	0.2	0.13↓	0.06
Potatoes	**Baseline**	1	11	5.7	5.0
	2013	0.1	4	0.6↓	0.7
	2014	0.1	15	1.8↑	3.8
Bananas	**Baseline**	0.25	1.5	0.7	0.4
	2013	0.3	2.5	0.9↑	0.6
	2014	0.5	2	0.95↑	0.6
Cucumbers	**Baseline**	0.08	0.4	0.2	0.1
	2013	0.02	0.33	0.2↑	0.1
	2014	0.01	0.1	0.01↓	0.03
Cowpeas	**Baseline**	-	-	-	-
	2013	-	-	-	-
	2014	0.2	5	1.0	1.05
Sesame	**Baseline**	-	-	-	-
	2013	-	-	-	-
	2014	0.2	3	1.1	0.9

Crops grown on contract include maize, cowpeas, sesame and banana. Whilst there is no data on sesame and cowpeas in previous surveys, crops grown on contract have generally not performed better than non contracted crops. The non adherence to contractual provisions, largely by contracting companies, has had adverse effects on crop production. These include failure by companies to pay set

prices or collect all agricultural produce as originally planned. This is despite the fact that farmers commit significant area for contracted crops due to expectation for input assistance as well as guaranteed viable markets. For instance, about 60% of maize farmers grew the crop under contract. On average contracted maize farmers committed about 1.5 hectares to the maize crop while non contracted maize farmers had on average 0.9 hectares under maize production.

3.5.2 Production Rates

When compared to baseline levels, maize, beans, garlic, groundnuts and cowpeas had higher productivity per hectare as shown in Table 11. Crops with productivity per hectare higher than last season include beans, peas, garlic and groundnuts.

Table 11: Crop Productivity per Hectare by Period

Crop	Productivity by Period (kg/ha)		
	Baseline	2013	2014
Maize	247.2	2963.1	2114.88
Beans	628.8	1616.9	5422
Potatoes	9313	19050.2	5626
Sesame	657.3	-	414
Peas	-	2157.6	5275
Garlic	1.1	890.9	3610
Groundnuts	1448.5	1250	1700.9
Cowpeas	419.8	-	812
Tomatoes	25843.2	9861.1	6450
Banana	37923.6	14977.2	7807.7

Productivity per hectare for maize grown under contract was higher than non contracted crop. On average contract maize farmers realized 2.2 tonnes per hectare whilst non contracted farmers had an average yield of 1.9 tonnes per hectare.

3.6 Livestock Marketing

Farmers served by four intermediaries (Packers International, Marcedale, Daeco Holdings and Carswell Meats) involved in livestock trading, participated in the 2014 Sentinel Survey. The main livestock targeted by the companies were poultry and cattle. About 10.6% of respondents were involved in livestock marketing activities. Table 12 shows a decreasing trend in average number of cattle sold and accrued income.

Table 12: Livestock sales (2014)

Livestock Quantities & Sales		N	Mean	Minimum	Maximum	Std. Deviation
Cattle	2014 Quantity	51	53	6	168	44.56
	2013 Quantity		98	1	480	120
	Baseline Quantity					
	2014 Sales	51	$3,557.69	420	$11,760.00	2737.11
	2013 Sales		$11,266.30			
	Baseline Sales		$5,500.00			
Poultry (Layers)	2014 Quantity	37	348	48	1200	280.01
	2013 Quantity		41	29	76	
	Baseline Quantity					
	2014 Sales	37	$1,394.16	$122.00	$4,800.00	1101.85
	2013 Sales		$1,090.80			
	Baseline Sales		$2,007.50			

As for poultry the average number sold dramatically increased from last season. Although average sales have marginally increased from last season they are still far below the recorded baseline levels.

3.7 Other Agricultural Services

Sixty eight (68) SHFs interviewed were supported by two intermediaries providing agricultural services. The intermediaries are;

1. Forster Irrigation who provides services in the installation and maintenance of irrigation equipment, and;
2. Jotham Chidavaenzi who provides tillage services.

Forster Irrigation accessed funds from ZADT to support the establishment of solar powered irrigation schemes in Gwanda, Matabeleland South Province. Farmers in Pelele and Tshongwe areas produce and sell horticultural produce that include carrots, cabbages and tomatoes. Key services provided by Forster Irrigation in 2014 to the farmers include the supply and installation of irrigation equipment as well as servicing of the same. All farmers interviewed were happy with the services provided by the company.

Farmers indicated having improved household food security. However, in the absence of baseline data on food security status of the farmers the reported improvement needs further interrogation.

The main challenge highlighted by the farmers was access to a viable market for their produce with some farmers reportedly walking up to 10 kilometres to sell their produce. *It is therefore important to ensure that interventions that seek to enhance production also incorporate aspects of market linkages.*

Jotham Chidavaenzi provides tillage services to farmers in Chihota and Marondera. This includes tractor ploughing (at $90 per hectare) and disking at $70/ha. The costs of tillage services per hectare have remained constant over the last two years. On average, farmers paid $210 in 2014 for the tillage services. This is almost similar to the average cost of $211.76 paid by farmers for ploughing services in 2013. Over 90% of the farmers indicated having realized higher yields as a result of the tillage service. *This data needs to be substantiated by computing crop yield levels per hectare. No crop yield data was collected for this intermediary in 2013 and 2014 sentinel surveys. It is important that such data be collected in future phases of impact monitoring.*

3.8 Respondent's Relationship with Borrowing Intermediary

Figure 3 shows that most of the respondents (57%) have worked with the intermediaries for at least three years. This may mean that the intermediaries have a long term interest in working with the farmers or the farmers perceive or realize the benefits of continuing the relationship.

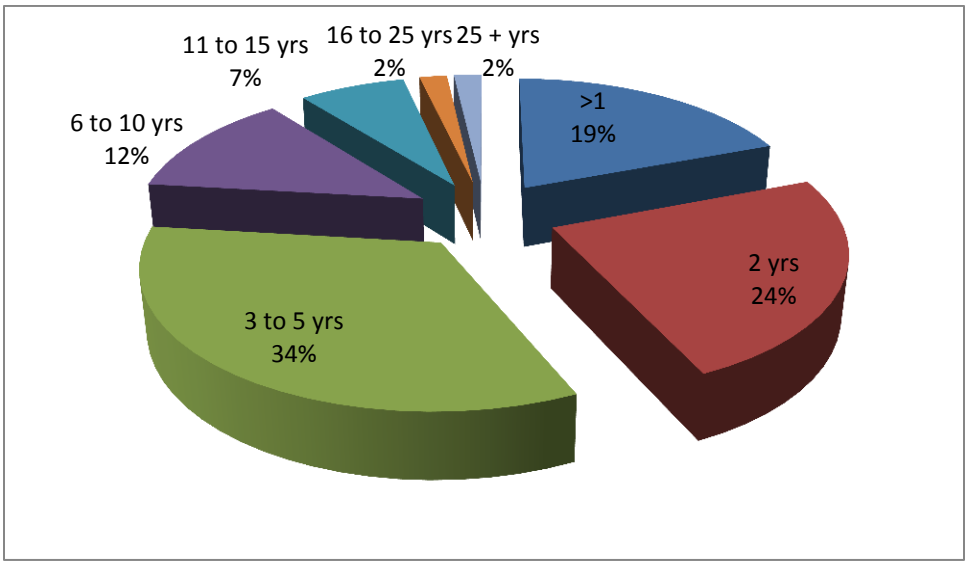

Figure 2: Proportion of Respondents by number of years working with company

Further analysis shows that about 62% of respondents were happy with their relationship with the intermediary whilst 38% were not happy at all. Overall, there is a general downward trend in farmer

satisfaction with the relationship with intermediaries. Figure 4 shows that in 2013, about 89% of farmers were happy with the relationship with only 11% being dissatisfied.

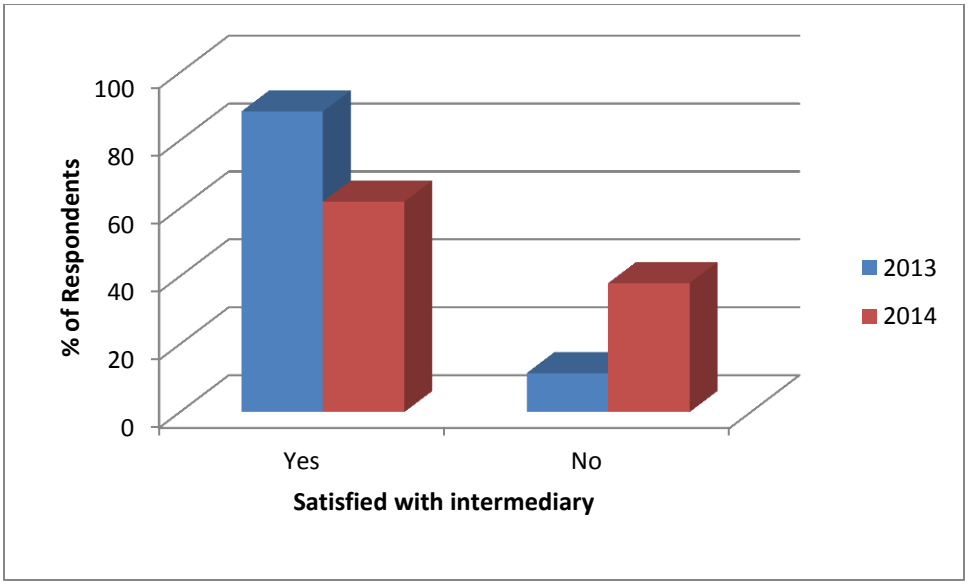

Figure 3: Proportion of farmers satisfied with intermediary relations (2013 & 2014)

The main reasons cited contributing to dissatisfaction among the farmers include:

- Lower prices offered by the company for farmer's produce
- Company not purchasing farmer's produce regularly
- Company not respecting terms of contract (e.g. company not providing full service as paid for by farmer, reducing initially agreed purchase price)
- Delayed provision of services/ inputs
- Delayed payments by contractor
- Company no longer buying produce
- Failure to pay for inputs by farmers due to a number of reasons, including low yields

It is also important to note that some farmers who defaulted in repaying the intermediary for services/ products provided expressed dissatisfaction or unwillingness to continue with the intermediary as a way to escape their obligations. There is, however, need to triangulate and validate the assertions by farmers through interviewing the intermediaries.

In the absence of any remedial action to address disintegrating relations, most of the companies will fall out of favour with the farmers. Figure 5 shows that more respondents (28%) will not be continuing with the same arrangements as compared to 2013 where about 12% had since given up.

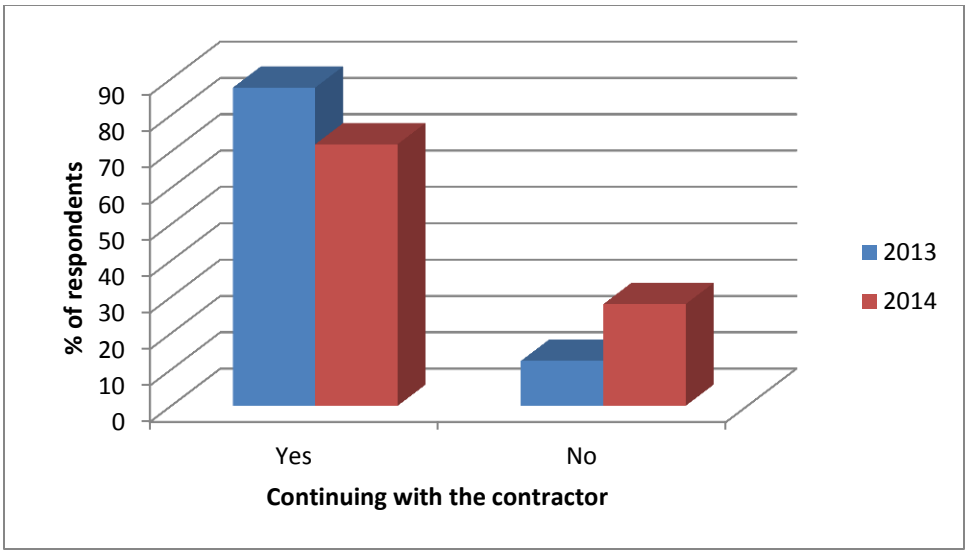

Figure 4: Proportion of respondents continuing with the contractors

Table 13 shows that only 7 intermediaries (about 44%) that participated in the sentinel survey had active loans. Nine companies had matured loans; two in 2013 and the rest in 2014. The rationale of the project is that after the loan support, the intermediaries should be in a better position to continue providing services/products to the SHFs. However, experience from this survey shows that this is not always the case. Respondents indicated having stopped working with four companies, namely; Aman Obrie, Daeco Holdings, Leonard Mazivire and Packers International. Leonard Mazivire's loan was still active at the time of the survey whilst Packers International loan had just matured.

It should also be noted that the cessation of relations between respondents and intermediaries does not necessarily mean the intermediary has ceased to operate. For instance, whilst traders have stopped dealing with Daeco, the company is still actively involved in cattle trading.

However, if relations and conditions do not improve, respondents are unlikely to continue working with the following companies in the future;

i) Carswell meats
ii) Nzarayapera
iii) Reylands
iv) Sidella

The situation for Sidella is quite unique. Whilst 85% of the farmers interviewed in Muzarabani were not happy with the company's services they expressed willingness to work with the company in the future. This could be due to the intervention's potential to improve smallholder farmer productivity and income generation especially when the challenges experienced are fully addressed.

Table 13: Number of respondents happy with intermediary and continuing the relationship

Company	Loan Status (As of 1 August 2014)	Happy with Intermediary		To Continue with Intermediary	
		Yes	No	Yes	No
Carswell	Active Loan Maturing 09 Feb 2015	21	3	21	11
Forster Irrigation	Active Loan Maturing 30 Mar 2015	36	0	36	0
Global Import & Export	Matured on 15 June 2013	19	3	23	1
Jotham Chidavaenzi	Matured on 08 Feb 2014	30	5	33	2
Marcedale	Matured on 31 March 2014	35	0	35	0
Montcase	Matured on 13 Sep 2013	33	3	34	2
Northern Farming	Active Loan Maturing 12 Jan 2015	29	4	26	7
Nzarayapera/ Mupangwa	Matured on 24 Apr 2014	1	20	4	3
Reylands	Matured on 30 Nov 2013	6	11	8	10
Tanganda Tea	Active Loan Maturing 19 Jan 2015	32	5	37	0
Nico Orgo	Active Loan Maturing 12 Apr 2015	8	4	9	3
Sidella	Active Loan Maturing 9 Feb 2015	5	29	29	6
Aman Obrie	Matured on 7 June 2014	All respondents no longer working with company			
Daeco Holdings	Matured				
Leonard Mazivire	Active loan maturing 22 Aug 2014				
Packers International	Matured 18 July 2014				

Most farmers were generally happy with the services provided by the following companies:

i) Forster Irrigation
ii) Global Import and Export
iii) Jotham Chidavaenzi
iv) Marcedale
v) Montcase
vi) Northern Farming
vii) Tanganda Tea

Four of the companies (Global Import & Export, Jotham Chidavaenzi, Marcedale and Montcase) despite having matured loans at the time of the survey, continued to provide services/products to the satisfaction of the respondents. Whilst this shows positive contribution of the CREATE Fund to the intermediary operations, the sustainability of the respective intermediary service/product provision to SHFs in the absence of the Fund's support needs to be ascertained.

There is need to conduct an in-depth assessment of the operations of intermediaries supported by the programme with the ultimate objective of identifying factors that are critical for improved smallholder farmer productivity and income. Annex 2 provides a summary of the intermediary performance and effect on SHFs.

General Performance of Industry in 2014

A review of literature on industry performance shows that companies in Zimbabwe continue to face serious liquidity challenges. The 2014 Mid Term Fiscal Policy Review sums up the challenges as follows:

> *'Overall challenges to industry relate to antiquated and obsolete machinery, influx of imports, high cost of borrowing and weak demand due to liquidity constraints'.*

According to the Confederation of Zimbabwe Industries (CZI) Zimbabwe's manufacturing capacity utilisation, a measure of the extent of factories' use of their installed productive potential - is expected to fall by almost ten percentage points to around 30 percent in 2014.

The National Social Security Authority (NSSA), as quoted in the Financial Gazette, highlighted that at least 10 firms have been closing down every month since the beginning of the year. This is indicative of an accelerated economic crisis characterised by a liquidity crunch that has seen domestic companies failing to recapitalise to deal with competition from cheap imports. Plummeting disposable incomes and failure by the fragile banking sector to support industries has worsened the situation.

The intermediaries supported by ZADT are, however, not immune to the prevailing economic conditions. As this Sentinel Survey does not focus on the borrowing companies, but the targeted SHFs, it is important that ZADT commissions an in-depth assessment of the intermediaries to establish their performance in the context of the prevailing macro-economic conditions.

3.9 Key Changes in Smallholder Farmer Livelihoods

About 29% of respondents interviewed indicated having realized no change as a result of their relationship with the intermediary. The majority of these (over 85%) were not happy with the services provided by the company.

However, despite a diverse range of challenges experienced by the farmers, some positive changes in livelihoods attributed to the linkages with intermediaries were noted. These livelihood changes could however be further strengthened when highlighted challenges are addressed.

Respondents highlighted key changes in their lives that can be attributed to their participation in the programme. These include food security, increased income, assets, ability to pay school fees and accumulated knowledge. Figure 6 shows the key changes attributed to the programme by respondents. The changes are interlinked and can be organised in a results chain. The output level changes being increased knowledge and enhanced access to market. Outcome level changes include ability to pay for school fee and purchase inputs. These lead to longer term changes such as increased incomes, increased assets and improved food security status of households.

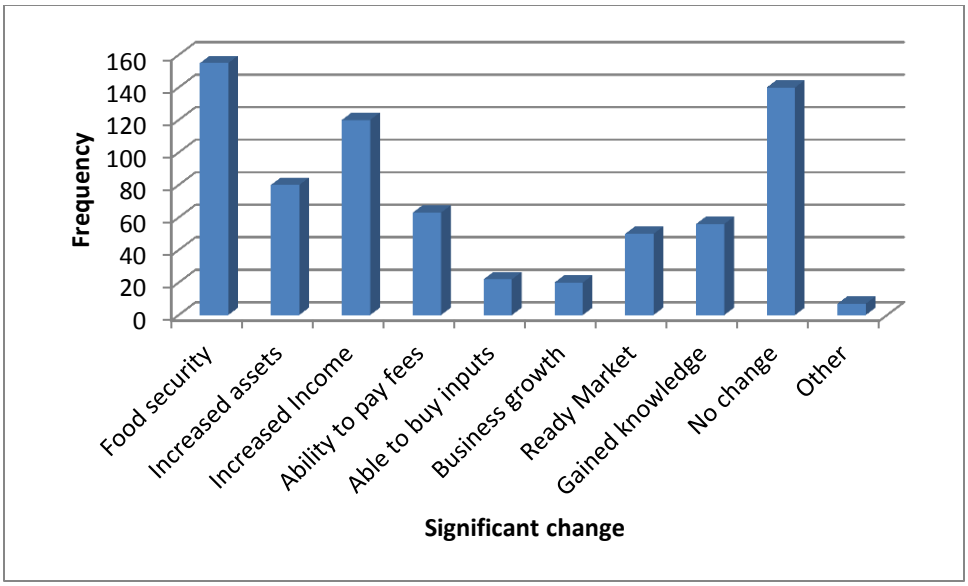

Figure 5: Socio-economic Changes Attributed to the Programme by Respondents

This scenario shows that the programme has great potential to reduce poverty and improve the well being of SHFs.

4. Conclusions and Recommendations

The intervention by ZADT to financially support intermediaries in the agricultural value chain is without doubt, increasingly becoming more relevant and needed for the revitalisation of smallholder agriculture in Zimbabwe. With prevailing macro-economic challenges as manifested in lack of credit and the closure of many companies, the CREATE fund plays a critical role in resuscitating the agricultural sector.

This study has been able to identify the extent at which ZADT is moving towards the realization of its objective of reducing poverty through promotion of business growth, job creation and access to finance.

However, it should be noted that the general operating socio-economic and climatic environment is quite dynamic and unpredictable; more so the environment of the SHF that is quite vulnerable and sensitive to fluctuations in the market. Hence, it is not always given that through the intervention, there is a progressive change in the livelihoods of SHF. It is a general finding of the 2014 sentinel survey that the livelihoods of SHFs have not changed significantly for the better as compared to 2013. The Table below provides a summary of the key conclusions from the survey and recommendations for ZADT to consider if the programme is to have significant impact on the lives of SHFs in Zimbabwe.

Conclusions	Recommendations
1. Over the last year the programme has recorded successes in some components of the value chains (such as increased production) despite challenges affecting the operations of intermediaries. However, recorded successes by some intermediaries may not have translated into significant improvements in the livelihoods of SHF due to unaddressed components of the value chain. For instance, where production has been improved through irrigation equipment, the need for viable market linkages becomes imminent but, unfortunately, may not be within the mandate and capacity of the intermediary.	The programme needs to consider supporting companies that provide a more holistic, long-term and comprehensive range of services/ support to the SHF from production to marketing. The selection of intermediaries based on this criteria is critical if the Sentinel Survey is to be conducted in subsequent years. This is also necessary for the programme to realise its objectives. In addition, ZADT and partners need to institute a thorough assessment of the applicants' business proposals and ensure that all effects of supporting one component of the value chain are reasonably catered for the ultimate benefit of the SHF.
2. Challenges in the macro-economic environment as well as erratic weather patterns adversely affects the operations of agricultural value chain actors and SHF productivity. Under such an environment, farmers actively supported by intermediaries are better off (in terms of annual average incomes) as compared to farmers without any support.	ZADT and partners should continue supporting the intermediaries providing critical long term services to the SHFs and pay special attention to intermediaries with viable innovative strategies that effectively address the macro-economic and climatic challenges.
3. About 50% of intermediaries did not meet their obligations or have fallen out of favour with the SHF. This adversely affects the realization of programme outcomes as this entails identified challenges in the value chain remain unaddressed. About 63% of intermediaries with strained relations with respondents had matured loans. This may indicate that the loans may not have been adequate to fully capacitate the intermediaries to continue providing services/products without an active loan facility. But for companies with active loans failing to satisfy the requirements of the respondents, this could be lack of capacity to effectively utilise the loan facility, or a change of focus/ target area by company.	There is need for the programme to institute a rigorous assessment and screening exercise of companies as well as an intensive monitoring system in the early phases of the contract. This should also be accompanied by a specific capacity building programme aimed at addressing capacity challenges identified in the initial assessment. There is need to revisit the lending periods and also allow companies to access additional loans upon fully servicing preceding loans. This should be done until the intermediary is fully capacitated to continue providing services/ products in the absence of a running loan facility. A comprehensive capacity assessment prior to loan approval is recommended. This should be supported with a targeted capacity building programme.

	On the other hand, farmers would express dissatisfaction with the intermediaries as an escape mechanism to avoid meeting their obligations such as paying for the services/products rendered.	An in-depth assessment of intermediaries is crucial for triangulating findings from the sentinel survey.
4.	A number of farmers had since stopped working with some intermediaries. This could be due to the fact that some farmers have established other viable markets or the companies faced capacity challenges to fully service the farmers as initially agreed. However, for livestock (particularly cattle) sales conducted at Auctions, it may not be possible for the farmer to easily develop a linkage with the final purchaser (or intermediary). Cattle sales by SHFs are often not a frequent occurrence to warrant regular tracking or the establishment of binding relationship between the borrower and SHF.	The sentinel approach is based on the concept that intermediaries are willing to pursue a long term relationship with the farmers. It is only when farmers realize benefits from the relationship that they are willing to cooperate in longitudinal studies, unless the farmers have a mutual understanding of the purpose of the survey. This understanding/assurance needs to be strengthened not only during the first contact but also at subsequent phases of the survey. It should be noted that support on some value chains (such as livestock) may not have immediate impacts on the livelihoods of SHF. These may require longer time frames and more investments towards restocking.
5.	The survey largely paid attention to those components that were directly supported by the intermediaries. For instance, if an intermediary was dealing with a livestock component, specific details on the farmer's cropping activities (such as acreage by crop) were not being attended to since the First Round of Sentinel Survey.	Future surveys should seek to provide a more comprehensive picture of a household's livelihood activities as changes in one livelihood activity may have an effect on other livelihood components.
6.	The survey has managed to highlight key factors affecting agricultural production and related income generation using the experience and perspective of the SHF	For a comprehensive picture on the key issues affecting agricultural production by SHF, it is important to undertake a detailed study focusing on the experience and perspectives of intermediaries in the agricultural value chain. This also serves purposes for triangulation of information arising from the Sentinel Survey.
7.	The Sentinel Survey approach to impact monitoring remains a useful cost effective tool in assessing programme contribution to poverty alleviation and employment generation. However, effective participation of key	For future phases of Sentinel Survey it is recommended that participating SHF fully understand the purpose of the survey and the need for them to continuously provide information for the duration of the programme.

stakeholders (particularly SHFs and intermediaries) in subsequent phases of the survey requires commitment of the sampled SHFs and the intermediaries.	This may entail participants signing consent forms that provide full information on the purpose and duration of the studies. Furthermore, frequent feedback meetings and incentives (where possible)for the Sentinel Survey participants as well as all the other stakeholders are important if sustained stakeholder collaboration is to be realised

Annex 1: Sentinel Survey Round Two Questionnaire

ZADT Sentinel Site Questionnaire 2014								
HH Code (Eight digit code: Province, District, Ward and Household number This number will be used for this HH throughout the project.								

Section A: Site and Location(*write the response in the space provided*)			
Company Name			
A1 Enumerator's name		**A2** Date:	
A3Province	**A4**District	**A5**Ward Number	**A6**Village

Section B: Demographics of the Contract Holder/ SHF			
B1.Name			
B2. Sex	1=Male	2= Female	
B3. Year of Birth (e.g. 1980)			
B4. Number of people in the HH at time of survey	Adults: Male_____ Female_____		
	Children (Below 18): Male_____ Female_____		
B5. How many household members are involved in agricultural activities?			
B6How many people outside your household did you employ during the season	Permanent	Temporal	Total
B7. Were there any other household member(s) involved in paid agricultural work during the season (e.g. middleman, piece work)	1=Yes 2=No	If Yes, indicate number:	

Section C: Assets (How many of each of the following assets does the household own or keep)			
C1. Livestock			
Asset	**Total**	**How many did you buy in the past 12 months**	**How many did you sell in the past 12 months**
1=Cattle			
2=Goats			
3=Sheep			
4=Poultry			
5=Pigs			
C2. Household Assets			
6=Did you buy any productive assets in the last 12 months e.g. hoes, carts, wheelbarrows, vehicles	1=Yes 2=No	Value of asset/s US$_____	
7=Did you buy any non-productive assets in the	1=Yes		

last 12 months e.g. radio, cell phones, sofas etc.	2=No	Value of asset/s US$_____
8=Did you sell any productive/ non-productive assets in the last 12 months?	1=Yes 2=No	Value of asset/s US$_____
9. If yes to Q8, specify the reason for selling		

Section D: Household Income

(Indicate the collective income for the household from the various activities for the last 12 months)

Livelihood Activity	Annual Income	Livelihood Activity	Annual Income	Livelihood Activity	Annual Income
1 = Field Crop Production		**5** = Informal employment		**9** = Petty Trade	
2=Livestock		**6** = Fishing		**10** = Small business	
3 = Gardening		**7** = Formal Mining		**11** = Other (Specify)	
4 = Formal employment		**8** = Informal mining			
Total Annual Income (US$)					

Section E: Production and Marketing

E1Crop Production and Marketing

Which crops did you grow this season (Use codes below)	Was crop grown on contract or not 1=Yes 2=No	Area Planted (ha)	Total Harvest (kg)	Quantities delivered for the contract in the past 12 months (kg)	Income from sales (US$)	Quantities for household consumption (kg)	Surplus Quantities for sale to other buyers

Crop codes: 1=Maize; 2=Cotton; 3=Tea; 4=Tobacco; 5=Tomatoes; 6=Potatoes; 7=Bananas; 8= soya bean; 9=Beans; 10= Groundnuts; 11= cowpeas; 12=Sesame; 13=garlic; 14=peas; 15=Cucumbers; 16=Carrots; 17=Butternuts; 18=Green pepper; 19=Green beans; 20=Wheat; 21=Chillies; 22=Other (Specify)

E2 Livestock Production and Marketing (Fill in if HH is supplying livestock, if not skip to E3)

Livestock Type *(Use codes below)*	Are animals reared on contract or not 1=Yes 2=No	Number of animals owned	Quantities sold over the last 12 Months	Total Income from sales (USD)

Livestock Code: 1=Cattle; 2=Goats; 3=Sheep; 4= Poultry; 5=Pigs; 6= Other (Specify)

E3Agricultural Services (*Fill-in if HH is receiving agricultural services***)**

Type of Service you are getting from company (*Use codes below*).	Number of times service was given in the past 12 months	Amount paid for the service	Impact of service to household agricultural production

Service Codes: 1=Transport; 2=Tillage; 3=Harvesting; 4=Abattoir; 5=Artificial Insemination; 6=Storage; 7=Pest Control; 8= Marketing; 9= Other (Specify)

Section F: Contractual Issues

F1. Are you still working or dealing with this Company?	1=Yes 2=No
F2. How long have you been working with the company (In years)	
F3. Are you happy with the business relationship with company?	1=Yes 2=No
F4. If No why?	
F5. Do you see yourself continuing with the relationship in the next year/season?	1=Yes 2=No
F6. If No why?	
F7. What major changes have happened in your life due to the relationship you have with the company? (*Multiple Response*) Codes: 1=Food security; 2=Increased assets; 3= Increased Income; 4=Ability to pay fees; 5=Able to buy inputs; 6=Business Expansion; 7=Ability to pay rent; 8=Ready Market; 9=Gained Knowledge; 10=No Change; 11= Improved access to capital; 12=Improved Health; 13=Other (specify)	
F8. Enumerator General Comments; including human interest story on programme impact (positive or negative)	

END

Annex 2: Summary of Intermediary Performance and Effect on SHFs

	Company/ Borrowing Intermediary	Support provided to SHFs	General Performance and Effect on SHF Production
	AGRO-INPUTS/ IMPLIMENTS/ TILLAGE SERVICES		
1	Forster Irrigation	Sell and service irrigation equipment	Company delivered and installed irrigation equipment that has now boosted SHF production. Farmers are now facing marketing challenges for their increased produce.
2	Jotham Chidavaenzi	Tillage services and transport	Company has been providing tillage services for over four years. There is often a high demand for the service during peak farming periods that surpasses the company's capacity. SHF end up accessing services from other companies to avoid late planting
3	Tanganda Tea Company	Provides inputs to smallholder tea outgrowers and buys the produce.	Company has established long term relations with the farmers spanning over 15 years. Farmers supplied with inputs and irrigation equipment as per individual need. Not all farmers accessed the inputs/equipment. The main challenge faced by the farmers is the low price of tea offered by the company that confines them in the poverty cycle.
4	Nico Orgo Organic Fertilizers	Provided agricultural inputs, technical services and access to markets for SHF	Fertilizer was delivered late in the season such that some farmers did not use it. Farmers realized low yields due to late fertilizer application and poor rains. Hence most could not repay the loan.
5	Ryelands	Stocks Agro-dealers with inputs	The company delivered very late into the season hence the agro-dealers did not realize any sales. Agro-dealers generally not happy with company services.
6	Montcase	Buys various horticulture products from SHFs	Company was not consistent in buying horticultural products from the farmers. Hence farmers still face product marketing challenges.
7	Mupangwa/ Nzarayapera	Mupangwa borrowed for infrastructure/ irrigation development • Nzarayapera buys bananas from the group	Nzarayapera has established good relations with the farmers but farmers were not happy with the current prices for bananas. Farmers are currently repaying loan for irrigation equipment and this leaves them with little disposable income. Through banana irrigation farmers are beginning to realize improved productivity of bananas.
8	Packers International	Buys poultry and poultry products from SHF	The company is no longer purchasing eggs from the farmers. Farmers have since identified other markets and also receive support from other NGOs.
9	Marcedale	Buying cattle from SHF from all Districts in Mat North and South.	The company has continued to maintain good relations with the farmers and has significantly improved its payment period.
10	Carswell Meats	Buying cattle through village middle man	Although the company is still operational, farmers have found alternative markets and were not willing to disclose their incomes from cattle sales.
11	Daeco Holdings	Buys cattle from SHF for fattening	Farmers no longer work with the company although the company is still very functional.
12	Leonard Madzivire	Buys potatoes from	Farmers no longer work with the intermediary. The

		farmers	intermediary failed to deliver on earlier promise to supply the farmers with fertilizer.
13	Aman O'brie	Supplying inputs to agro-dealers	Company failed to meet its promises that include supply of inputs to agro-dealers
14	Global Import and Export	Farmers sell produce to company and company provides seed, transport and extension services	The company has continued to provide services to horticultural farmers who are realizing increased household income.
15	Northern Farming	Contracts farmers in maize production	The company has good relations with the farmers who are realizing improved food security and income generation. However, poor rains experienced over the last season affected crop production that also had a negative impact on loan repayment by farmers. The company has also since introduced crop insurance to the farmers to mitigate the effects of adverse weather conditions.
16	Sidella Trading	Provides inputs to smallholder cowpeas growers and buys the harvested crop.	The company failed to purchase all contracted crop from the farmers. In addition the company did not abide by contractual obligations reducing agreed purchase price of cow peas by more than 50%. For the farmers whose crop was purchased there was significant improvement in household income.