

2018 Annual Report of Community Technology Development Trust (CTDT)

1.0. Administrative data

This is the annual report of the Community Technology Development Trust (CTDT) for the year 2018. This document has been approved by the Director of CTDT on the authority of the Board. The period of reporting is January – December 2018.

2.0. Reflection on past year

2.1. Introduction

In 2018 CTDT continued implementing the project supported by the Benefit Sharing Fund of the ITPGRFA administered by FAO and Seed and Knowledge initiative (SKI). In July a new project supported by Bread for the World (BftW) was commenced. This project covered a new area, Lusitu in addition to the existing three districts of Chikankata, Rufunsa and Shibuyunji. The new dry area of Lusitu is in Chirundu district but was originally under Siavonga district before the district boundaries were redrawn. In September, discussions commenced for CTDT to participate in a planned phase 2 of a Oxfam Novib funded project to commence in 2019.

During the year changes to personnel included engagement of a field officer for Shibuyunji to cater for the increasing portfolio of project activities there.

2.2. Highlights of 2018

Farmer field days were held in Nadezwe (Chikankata) and Mamvule (Shibuyunji) and Rufunsa. The field days were well attended and brought together about 200 participants at each field day. The farmers had an opportunity to interact and share knowledge on the various programmes being implemented by CTDT, some of which was also show cased in the field demonstration plots. Seed diversity fairs were also held in the three districts except Chirundu where structures were still being developed. The fairs were officiated by the respective District Commissioners or their representatives.

CTDT continued to participate actively in the Alliance on Agro-ecology and Biodiversity Conservation programmes. In May CTDT on behalf of the Alliance attended a workshop organized by the Alliance for Food Sovereignty in Africa (AFSA) in Addis Ababa, Ethiopia to discuss regional harmonization of seed laws and policies. Following this a media breakfast session was held in which the Alliance read out a statement pointing out concerns on the draft ARIPO legislation which was being planned to be adopted by member states including Zambia.

The books of accounts for 2014 were audited within the scheduled period and there were no contentious issues raised by the auditors. The preparations of the 2015 financial report will commence in January 2016 as per annual calendar of events.

CTDT continued to receive visitors for various consultations. These included a visit by the Hivos Country Manager for Zambia with whom discussions were held to update him on the programmes of CTDT and the support rendered by Hivos. This was followed by the visit of the Director of CTDT to the Hivos Country Office where a meeting of Hivos partners in Zambia was held.

A team of Bioversity International officers from Rome accompanied by their partner from the University of Cape Town visited the office and were also taken on a field visit to Rufunsa. Another team from the crop wild relatives programme of Bioversity International also visited and held consultations with CTDT staff.

Ulrike Binder of Bread for the World visited and was taken on a field visit to Nadezwe in Chikankata in October where she interacted with farmers about seed issues including community seed multiplication and seed bank programmes.

Other visitors included Rolf Shenton of Grassroots Trust, Frances Davis of the Alliance for Agro-ecology and Biodiversity Conservation and Graybill Munkombwe of the National Plant genetic Resources Centre.

In November the contract for the project under the Benefit Sharing Fund of the International Treaty for Plant Genetic Resources for Food and Agriculture was signed and initial funding instalment is being awaited and expected before end of the year.

In October the Director attended the ZAABC strategy meeting and contributed to formulating the draft.

In September the Director attended a COMESA national consultative meeting to domesticate the agreed regional seed trade regulations. CTDT provided significant inputs to the deliberations.

In August CTDT in conjunction with Bioversity International organized a training workshop on resilient seed systems and adaptation to climate change. The workshop attracted 13 participants drawn from the Zambia Agriculture Research Institute (ZARI), the University of Zambia, national and regional genebanks, NGOs working on seed systems and the Ministry of Agriculture. The training involved use of various software to conduct climate/crop modelling which involved analyzing present and predicted future climates and to determine suitable crops and germplasm for these climatic conditions. The workshop also included a visit to a CTDT site in Nadezwe where four cell analysis was conducted with farmers to analyze the maize diversity in this area.

In November the Director attended a synthesis meeting of the programme on Integrated Seed Sector Development in Africa (ISSD Africa), which was held at the International Livestock Research Institute (ILRI) in Addis Ababa, Ethiopia. The goal of this meeting was to synthesize the findings of the country case studies regarding climate resilient seed systems and access and benefit-sharing policies. The CTDT Director had drafted the Zambia case study which looked at predicted climate changes, potential sources

of adapted germplasm, and the relevant ABS policy structures and potential policy interventions to strengthen farmers' resilience to climate change.

Thereafter the Director attended the first day of the workshop 'Embedding mutually supportive implementation of the Plant Treaty and the Nagoya Protocol in the context of broader national policy goals – A workshop for national teams of policy actors', which was jointly organized by the ABS Capacity Development Initiative and Bioversity International, in cooperation with the African Union Commission and the Secretariats of the CBD and the ITPGRFA.

In April the Director and Project Manager attended a stakeholder consultation workshop on basic seed supply for key food crops in Zambia and helped to provide the farmer perspective of basic seed situation in the country.

2.3. Progress made in the achievement of the objectives

1. Objective 1: To improve household food and nutrition security

Indicator 1: The number of households that are food insecure during the hunger period reduces (by half from 60% to 30%).

The number of households that are food insecure during the hunger period has reduced from 60% to 37% across all the target areas. There was marked variations between areas due to wide differences in the rainfall pattern that also affected crop production. Table 1 shows the area based food insecurity status of the five camps based on sample surveyed households.

Table 1 Household food insecurity

District	Camp	Hhs sampled	Insecure hhs	% insecure hhs
Chikankata	Nadezwe	99	49	49%
	Simutwe	50	17	34%
Shibuyunji	Mamvule	87	37	43%
	Mukulaikwa	44	6	14%
Rufunsa	Rufunsa	19	2	11%
Total	All areas	299	111	37%

Indicator 2: The number of households that are accessing diversified sources of food increase (from 10% to 50%).

The number of households accessing diversified sources of food has risen to 75% surpassing the target of 50%. These households have a combination of starch, protein and vegetables in their diet. The commonest source of starch was still maize, while the source of protein was groundnut, beans and cowpeas. Pumpkin leaves constituted the most common vegetables together with a whole range of different cucurbits that are consumed fresh or dried for future use. Table 2 shows the range of sources of starch, protein and

vegetables used by different households. In addition households also consume animal and fish products such as eggs, chicken, fish and goat meat but this is at long intervals.

Table 2 Common sources of food

Starch	Protein	Vegetables
Cassava	Bambara nuts	African cucumber
Maize	Beans	African eggplant
Sorghum	Cowpea	Amaranths
Sweet potato	Groundnuts	Cabbage
	Mung beans	Cleome
		Gourds
		Hibiscus
		Okra
		Onion
		Pumpkin leaves
		Rape
		Sweet potato leaves
		Tomato

Table 3 shows the percentages of households that access diversified food sources in the target sites.

Table 3 household access to diversified food sources

District	Camp	Hhs sampled	Hhs accessing diversified food sources	% hhs accessing
Chikankata	Nadezwe	99	72	73%
	Simutwe	50	35	70%
Shibuyunji	Mamvule	87	65	75%
	Mukulaikwa	44	38	86%
Rufunsa	Rufunsa	19	15	79%
Total	All areas	299	225	75%

Objective 2: To increase income generation and market access.

Indicator 1: The number of farmers (male and female) reporting increased household income above K500 increases (from 20% to 50%).

About 40% of the farmers reported incomes of above K500 during 2015, mostly from maize sales. Some households supplemented this by sales of crops like groundnut and sweet potato and occasionally chicken and goats. Table 4 shows the percentages of farmers with incomes above K500 in each area.

Table 4 Percentage of households earning above K500

District	Camp	Hhs sampled	Hhs above K500	% above K500
Chikankata	Nadezwe	99	32	32%

	Simutwe	50	38	76%
Shibuyunji	Mamvule	87	28	32%
	Mukulaikwa	44	10	23%
Rufunsa	Rufunsa	19	12	63%
Total	All areas	299	120	40%

Indicator 2: The number of farmers (male and female) reporting increased volumes of marketed produce increase from (20% to 50%).

On average only 13% of households have increased volumes of marketed produce over the past one year. This also reflects the situation at national level where maize production figures were lower than that of the previous year. Most households maintained similar levels of marketed produce to that of last season.

Table 5 Increase in produce sold

District	Camp	Hhs sampled	Hhs selling more than before	% hhs selling more
Chikankata	Nadezwe	99	8	8%
	Simutwe	50	17	34%
Shibuyunji	Mamvule	87	4	5%
	Mukulaikwa	44	4	9%
Rufunsa	Rufunsa	19	6	32%
Total	All areas	299	39	13%

Objective 3: To enhance and strengthen capacity of farmers to meet their needs

Indicator 1: The number of farmer groups able to negotiate better terms for themselves in such issues as commodity prices and contractual obligations in arrangements such as out grower schemes increase from zero to five (at least one group in each target area).

Marketing for maize continued to be guaranteed by the Food Reserve Agency and even the private buyers improved on the offer prices in some cases matching that of government especially in areas that are easily accessible and not too far from Lusaka. The e-voucher system of payments for purchased maize and input provision under the Farmer Input Support Programme was introduced on a pilot basis. However complaints of late payments for purchased maize and input provision still persist.

The enterprise groups have continued to progress and there are now a total of 46 groups dealing in different enterprises as shown in Table 6.

Table 6 Number of active enterprises

Enterprise	Nadezwe	Simutwe	Mamvule	Mukulaikwa	Rufunsa	Total
Broilers	0	0	0	0	4	4
Layers	0	0	1	0	0	1
Piggery	0	2	0	2	2	6
Goat rearing	6	4	6	2	1	19
Sheep rearing	0	0	1	0	0	1
Gardening	0	1	0	0	0	1
Peanut butter	0	0	1	0	0	1
Village chicken	0	0	4	0	0	4
Produce sales	1	0	1	0	0	2
Savings and credits	1	0	0	0	0	1
Sowing and knitting	0	0	3	1	0	4
Crop production	0	0	2	0	0	2
Total	8	7	19	5	7	46

Objective 4: To improve gender balance in CTDZ Zambia programme

Indicator 1: The number of women participating in CTDZ Zambia's programmes increases to 70% from 60%.

The number of women actively participating in CTDZ programmes in 2015 was 823 which was equivalent of 65%. Table 7 shows the women participation in different camps with Mamvule and Mukulaikwa in Shibuyunji having a predominance of women with very few men.

Table 7 Active women participation in programmes

District	Camp	Total farmers	No. of women	% women
Chikankata	Nadezwe	623	320	51%
	Simutwe	132	100	76%
Shibuyunji	Mamvule	235	194	83%
	Mukulaikwa	73	67	92%
Rufunsa	Rufunsa	209	142	68%
Total		1272	823	65%

Indicator 2: The number of women realizing increased incomes increase (from 10% to 50%).

The number of women realizing an income above K500 averaged 40% of the 226 women sampled. The increase in income was mostly from field crops but also through the various enterprises after dividends.

Table 8 Women income trends

District	Camp	Women sampled	Income > K500	% with > K500
Chikankata	Nadezwe	69	33	48%
	Simutwe	35	19	54%
Shibuyunji	Mamvule	81	24	30%

	Mukulaikwa	37	12	32%
Rufunsa	Rufunsa	4	2	50%
Total	Total	226	90	40%

Indicator 3: The number of female staff and Board members in CTDZ Zambia increase to 60% for staff and 50% for Board members.

The number of staff for CTDZ includes five women and three men making it 63% women. There was one female Board member out of five, making it 20% female. Table 9 shows the CTDZ staff positions in 2015.

Table 9 CTDZ filled positions

Position	Sex
Director	Male
Project Manager	Female
Accountant	Female
Field Assistant - Simutwe	Female
Field Assistant - Nadezwe	Female
Field Assistant - Mamvule	Male
Field Assistant - Mukulaikwa	Female
Field Assistant - Rufunsa	Male

2.4. CTDZ contribution to changes in the target areas

CTDZ is contributing to changes in the socio-economics of the target areas with regard to improving patterns of agriculture production. Due to the seed multiplication programmes, there has been a marked increase in beans, groundnut and local maize production in Chikankata. Shibuyunji has also experienced an increase in groundnut and Bambara production while Rufunsa has registered increased groundnut production. Overall there has been a marked increase in the diversity of crops grown by households as well as diversity in crop varieties including both traditional and commercial ones. This has in turn contributed to climate change adaptation as farmers have experienced differential effects of climate change on different crops and varieties.

CTDZ has contributed to empowering women and building confidence in them to fully participate not just in CTDZ programmes but in all community activities and are now increasingly taking up leadership roles at community level. As can be seen in Table 10 women make up the majority of chairpersons of the farmer groups regardless of the gender composition of the groups. In 2015 there were a total of 68 farmer groups and 45 of these had female chairpersons representing 66% women chairpersons.

Table 10 Farmer group compositions and chairpersons

District	Chikankata		Shibuyunji		Rufunsa	Total
Camp	Nadezwe	Simutwe	Mamvule	Mukulaikwa	Rufunsa	
Number of groups	30	12	10	5	11	68
Number of women	320	100	194	67	142	823
Total membership	623	132	235	73	209	1272
Women chairpersons	17	9	10	3	6	45
% women chairpersons	57%	75%	100%	60%	55%	66%

2.5. Explanation of the difference between intended and realized changes

There were no major differences between intended and the realized changes during 2015. There has been continued interest by non-participating farmers to join the programmes. The design of the programme is such that membership can continue in the different groups even beyond project life as many of these groups are now in the process of formalizing their groups by registering with appropriate government authorities. CTDT is facilitating this process as a way of guaranteeing sustainability of the community programmes initiated by the project beyond the life of the project.

2.6. Reflection on validity of strategies and assumptions

As acknowledged before, the strategy to base improvement of household food security on principles of agrobiodiversity and sustainable agriculture production practices has proved to be the most appropriate approach for the small scale farmers in the target areas especially in view of changing socio-economic as well as climate change. With the continuous low rainfall now being experienced not just in Rufunsa but all target areas, diversity in crop varieties as well as in crops that farmers plant is providing a safety net because some varieties and indeed some crops do fairly well when the rains fail. More farmers have been adopting cassava which is able to produce a crop when rainfall is low. Many farmers are planting more than one maize crop variety so that they have the early maturing low yield as well as the medium and long maturing higher yield varieties. If the rain fails the early varieties provide household food and if the rain is good the medium and late varieties provide for income from sales of excess harvest. Table 11 shows that the community in all the target areas grew roughly 15 maize varieties, about 10 groundnuts and 10 sweet potatoes. This diversity helped to moderate the drastic climatic effect on individual varieties as some did very well when others fared poorly.

Table 11 maize and groundnut varieties grown in 2015

Maize			Groundnut		
Chikankata	Shibuyunji	Rufunsa	Chikankata	Shibuyunji	Rufunsa
Bbilimba	Gankata	Gankata	Kadononga	Kadononga	Kadononga
Kafwamba	Kafwamba	Pan 53	Chalimbana	Chalimbana	Chalimbana
Kenya	Kenya	ZMS 606	MGV 4	MGV 4	MGV 4
SC 513	SC 513	MRI 624	MGV 5	MGV 5	MGV 5
Pan 53	Pan 53	SC 627	Makulu Red	Makulu Red	

DK 8053	DK 8053	DK8089	Manyika	Chimandala	
Pan 413	Pan 413	Pan 67	Black nuts	Agriculture	
ZMS 606	ZMS 606	Kapetwa	White nuts	Kampongo	
MRI 624	SC 621				
SC 621	Pool 16				
SC 627	PH 524				
DK 8033	MRI 694				
DK 8090	ZMS 604				
Kamano	Popcorn				
PH G19	Tandanzala				
	Orange maize				
	SC 633				
	MRI 634				

Gankata, Pan 53 and ZMS 606 are cultivated in all the three districts while six varieties are common to Chikankata Shibuyunji. MRI 624 and SC 627 are cultivated in both Chikankata and Rufunsa while only four are cultivated in Chikankata only. At least nine maize varieties are cultivated in Shibuyunji only and only three are specific to Rufunsa.



Maize affected by drought next to Bambara



Sorghum in adjacent plot doing well, Mamvule

2.7. Results from project concrete activities

2.7.1. Local seed multiplication and distribution

Local seed multiplication and distribution has proved to be one of the most successful and popular programmes amongst the farmers as it has contributed significantly to improving farmer access to seed especially of crops that are outside the formal seed system but also for legumes including commercial varieties of beans and groundnuts. A total of 218 farmers made up of 172 women and 46 men accessed seed from the community seed banks for their use and also for further multiplication on behalf of the community. Table 12 shows details of community seed multiplication for various crops.

Table 12 Community seed growers

District	Camp	Total growers	Female growers	% female growers
Chikankata	Nadezwe	120	98	82%
	Simutwe	11	6	55%
Shibuyunji	Mamvule	19	19	100%
	Mukulaikwa	23	21	91%
Rufunsa	Rufunsa	45	28	62%
Total		218	172	79%



Groundnut seed grower, Nadezwe

These farmers planted a total of five crops composed of 11 different varieties. Table 13 shows the number of farmers that planted each crop variety in each site. These numbers are more than that shown in Table 12 because some farmers grew more than one crop or variety. In total 241 multiplication fields were planted by the 218 farmers.

Table 13 Farmers and crops multiplied

Crop	Variety	Number of seed growers					
		Nadezwe	Simutwe	Mamvule	Mukulaikwa	Rufunsa	Total
Groundnut	Kadononga	17	2	4	12	0	35
	MGV4	12	3	19	7	18	59
	Chalimbana	0	0	0	4	0	4
Maize	Bbilimba/Gankata	42	0	0	0	2	44
	Kafwamba	11	0	0	0	0	11

Beans	kabulangeti	14	1	0	2	0	14
	Solwezi	7	0	5	0	0	12
	White	3	1	0	0	0	4
	Lyambai	0	0	0	3	0	3
Bambara nut	Mixed	12	2	8	4	11	37
Cowpea	Lutembwe	5	2	0	3	8	18
Total		123	11	36	35	39	241

The harvested seed is currently being redistributed to interested farmers for their use and consequently for further multiplication in the 2015/2016 season and the rest placed in the five community seed banks that have been established in each site. Table 14 shows seeds of different crops in the seed banks after most has been distributed.

Table 14 Seeds in the community seed banks

Crop	Variety	Seed quantity in Kgs				
		Nadezwe	Mamvule	Mukulaikwa	Rufunsa	Total
Groundnuts	Kadononga	4	0	40	0	44
	MGV4	4	0	30	50	84
	Makulu Red	0	10	0	0	10
Bambara	Mixed	4	10	5	40	59
Maize	Bilimba/Gankata	650	0	0	40	690
	Kafwamba	50	0	0	0	50
Beans	Lyambai	0	0	5	0	5
	Kabulangeti	3	0	0	0	3
	Solwezi	3	0	0	0	3
Cowpeas	Lutembwe	0	0	0	10	10

In the 2015/2016 planting season it is planned that the list of crops and varieties will be expanded to include sorghum and millets and more maize traditional varieties in order to begin to respond to the changes in climate where some of the crops and varieties are beginning to perform poorly in view of reduction in rains and increasing temperatures.



Ulrike Binder of Bread for the World engaging Nadezwe farmers on community seed banks

2.7.2. Introduction of agroforestry and soil fertility improvement practices in the farming systems

Promotion of agroforestry and soil improvement practices continued in 2015 with farmers continuing to plant various soil fertility crops such as *Gliricidia sepium*, velvet beans and *Faidherbia albida*. There is an increased visibility of these legume plants in the farmers' fields in all the target areas. CTDI will compile a list of 'champion' farmers in each site for purposes of demonstrations and farmer learning and information exchanges.



Gliricidia in maize in Rufunsa

2.7.3. Promote sustainable production practices

Sustainable production practices including conservation farming is a principle that CTDT continued to encourage partner farmers in 2015. CTDT continued to face challenges due to various government programmes that often resulted in mixed messages for farmers. The continuing Farmer Input Support Programme (FISP) of government continued to have a negative impact because farmers logically opted to use the available chemical fertilizers and rely less on natural systems of maintaining soil fertility. Table 15 shows the levels of adoption of various practices in 2015. Crop rotation is now practiced by the majority of farmers but minimum tillage by just 18% and only 15% of them left portions of their land to fallow during 2014/2015 season.

Table 15 Households adopting some sustainable practices

Practice	Nadezwe	Mamvule	Mukulaikwa	Rufunsa	Total	Percentage
Pot-holing	13	24	3	6	46	18%
Ripping	14	16	4	7	41	16%
Fallowing	6	17	10	5	38	15%
Crop rotation	35	87	19	13	154	62%



Pumpkins intercropped with maize, Rufunsa



Maize field sprayed with RoundUp. No pumpkin can grow, Nadezwe

2.7.4. Demonstration plots, seed diversity fairs and field days

Demonstration plots to showcase agrobiodiversity and sustainable production practices were again conducted in all the sites and were each hosted by one of the farmers on a voluntary basis. These plots included both commercial and traditional varieties of crops and were used for farmer learnings to observe how different crops varieties fair within a particular season and climatic variables like rainfall amounts and drought intervals. These demonstration plots have helped the farmers to make the decision with regard to expanding the diversity of crops and varieties that they all grow in their individual fields.



Farmer field day, Mamvule

Field days were held in Mukulaikwa, Nadezwe and Rufunsa and were attended by Village headmen, community members and CTD farmers. These field days were also attended by the government extension staff in each site as well as personnel from the district agricultural offices and other NGOs working the area. These events therefore provided an opportunity for networking between the various organizations and the local communities.



CTDT farmers exhibiting at the Block Agriculture Show in Shibuyunji

A seed fair was held in Nadezwe and was well attended by over 200 farmers and local political, traditional and government leadership. The seed fair was also attended by participants of a workshop on resilient seed systems and adaptation to climate change which was taking place in Lusaka during the week of the seed fair. The visit was part of the field trip of the workshop programme and offered an opportunity for the trainees to relate the practical aspects of local seed systems to what they learnt in class.



Workshop on resilient seed systems and climate change

2.7.5. Restocking of goats and poultry

In 2015 activities to increase small livestock and poultry numbers by households continued to be supported. Targeted livestock included pigs, sheep, goats and chickens. The farmer groups that embarked on poultry have made progress by increasing number of stocks and also using profits for other group activities including allowing access to credit by group members. The groups that embarked on goat rearing and piggery have initiated pass-on schemes that have allowed members to benefit from this initiative.

Most of them have continued to pass-on while still maintaining a basic breeding stock that ensures that the programme is continuous.

Table 16 summarizes the current status with regard to farmer groups and their small livestock showing that they pass on only the product and maintain the core number for reproduction. For broilers and local chickens they normally sell and agree on what to use profit for while maintaining capital for another cycle.

Table 16 Farmer group livestock status

Camp	Farmer Group	Livestock	Initial number	Current number	Number passed on
Nadezwe	Muvela	Goats	12	14	15
	Kasaka	Goats	11	15	19
	Njabantu	Goats	15	0	5
	Mabula	Goats	14	3	21
	Kapata	Goats	14	4	25
	Hapuku	Goats	14	8	21
Mamvule	Luyando	Goats	8	12	0
	Mulobela	Goats	10	12	8
	Changamuka	Sheep	10	25	0
		Local chickens	10	5	0
	Kapilipili	Goats	10	13	5
		Local chickens		1	
	Tuyandane	Cattle	3	3	0
		Goats	0	0	0
Rufunsa	RR	Pigs	4	0	0
	Sambani	Broilers			
	Chiwala	Broilers			
	Mwanjeleka	Broilers			
	Kulibambila	Broilers			
	Kakoma	Goats	8	8	0
Mukulaikwa	Lesawaluse	Pigs	5	0	0
	Luyando	Goats	16	8	19
	Twelezye	Pigs	7	11	0
	Twikatane	Goats	12	7	12

2.7.6. Inventory and documentation of locally available food sources

On average about 30 crops are grown and used as sources of food in each of the target sites. The list of the common crops grown by different households is however much shorter with just about five crops which are commonly maize, groundnut, sweet potato, cassava and cowpeas. Households however grow many different varieties of these and many other crops according to individual preferences and seed availability. Households do not differentiate varieties for most of the other crops and in many cases only grow one variety. Table 17 shows the varieties of maize, groundnut and sweet potato grown in the target areas in 2015.

Table 17 Crop varieties grown

Camp	Maize	Groundnut	Sweet potato
Nadezwe	15	9	9
Mukulaikwa	11	5	8
Mamvule	15	8	8
Rufunsa	8	4	5

In addition to crop production most households keep one or more of the following livestock; cattle, goats, chickens, guinea fowl, pigeons, sheep, pigs, rabbits, turkeys, ducks and guinea pigs. Most households only keep goats and chickens and some with cattle as well. Table 18 summarizes the number of households keeping cattle, goats and chickens in 2015. The figures show that 35% of households across all target sites kept cattle while 52% kept goats and almost 90% kept village chickens. The lowest number of households with cattle is Rufunsa at 11% and highest Nadezwe at 45%. On the other hand 58% of Rufunsa households had goats and only 38% in Nadezwe.

Table 18 Number of households keeping livestock

Livestock	Nadezwe	Mamvule	Mukulaikwa	Rufunsa	Total	% of households
Cattle	45	27	14	2	88	35%
Goats	38	62	19	11	130	52%
Chickens	78	80	41	19	218	88%

2.7.7. Promoting food diversity fairs

CTDT continued to promote food diversity fairs in order to improve food nutrition security. This was through mobilizing women to come together to have cookery lessons and to exchange recipes and methods. The seed diversity fair also included the element of food diversity to publicize the various recipes of preparing food from traditional crops and wild plant species.

2.7.8. Identify existing out grower schemes and service providers involved with input provision and purchase of farm produce

The government was still heavily involved in both the input provision through FISP and in the crop marketing through the Food Reserve Agency. These two factors contributed to most farmers opting to prioritizing cultivation of maize and putting less effort in other sectors including livestock. This has reduced the potential private sector involvement as they all wait to try and maximize their own benefits from this arrangement. CTDT and others have since been advocating for the inclusion of other crops and even livestock in this type of subsidy in order to promote diversity and all the other benefits that come with it.

In view of the economic difficulties the country has been experiencing in 2015 the price of inputs has almost doubled from last year and a 50Kg bag of fertilizer costing as much as K475 in Chikankata and recommended rates for maize are four bags basal and another four top dress. This is way above the affordability of this level of farmers. Consequently the vulnerable farmers that are targeted by FISP may not be able to participate as they are required to put up an upfront amount of half of the cost of fertilizer.

CTDT has continued to explain to farmers why it is important to invest in sustainable production practices that will in the long term lead to them depending less on these chemical fertilizers.

2.7.9. Value addition including food processing and packaging

Farmers now fully recognize the importance and benefit of adding value to their produce through the experiences of groups that have been supported to develop capacity to express oil or make peanut butter as opposed to selling unprocessed nuts. Commercially, these initiatives are still at a very low scale but households are also benefiting from improved nutrition that come with wider processing options that lead to improved palatability and acceptability of food stuff.

In 2015 CTDT continued to provide training in value addition especially food processing and packaging.

2.7.10. Compile and disseminate information on market prices and buyers

CTDT has continued to provide information on inputs and markets for various produce based on prevailing conditions. Generally information was slow with government announcing the maize floor price of K75/50Kg bag of maize long after farmers had harvested and forced to sell at lower prices to the private buyers. The prices for most other commodities are also determined by the buyers and not the farmers.

2.7.11. Training in leadership skills and farmer group organization, management and functions

CTDT continued to strengthen the farmer groups by providing training in leadership skills so that farmers are not over reliant on only a few individuals that they consider natural leaders. This capacity building has led to an increase in the number of trained women who have also taken up leadership roles and consequently in 2015, out of the 68 farmer groups formed, 45 of them are led by female chairpersons. Women in these groups are also entrusted with the responsibility of treasury.

2.7.12. Farmer exchange visits

Farmers continued to be facilitated to have exchange visits during special events such as field days and seed fairs. Farmers were facilitated to attend these events taking place in a target area within the district and so Simutwe farmers attended the seed fair and field days in Nadezwe in Chikankata District. Mukulaikwa farmers also attended the field day in Mamvule in Shibuyunji District.

2.7.13. Facilitate formation of gender balanced farmer groups

Generally all the farmer groups that are formed with the facilitation of CTDT are gender balanced and tend to have more women members than men. Table 19 shows the gender distribution in the farmer groups that have been formed and that are active. In Mamvule, Mukulaikwa and Simutwe the groups are predominantly composed of women members while in the other camps the groups are more balanced with about 60% women membership. The average for the target areas is 65% women members.

Table 19 Gender balanced farmer groups

Camp	Women	Men	Total	% Women
Nadezwe	320	303	623	51%

Simutwe	100	32	132	76%
Mamvule	194	41	235	83%
Mukulaikwa	67	6	73	92%
Rufunsa	142	67	209	68%
Total	823	449	1272	65%

2.7.14. Gender awareness training workshops

All project participating farmers had by end of 2015 been provided with basic gender awareness training. In addition gender awareness is re-emphasized at each and every farmer meeting and event.

2.7.15. Facilitate creation of women clubs

From inception CTDT was guided by the principle that all the farmer groups should be composed of at least 50% women. In addition groups consisting of women only would be encouraged. Consequently about 25 out of the 68 farmer groups formed to date are women clubs, which is 37% of farmer groups. The rest have on average 60% women members.

2.8. Number of direct beneficiaries/participants

From inception the project targeted 1,500 households to be composed of 500 in each of the three districts. In terms of concrete activities including active farmer group enterprises, the project is currently reaching 1,272 direct beneficiaries in total. They are composed of 823 women and 449 men making it 65% women.

Each of these direct beneficiaries belongs to a household whose average family number is seven thereby making a total of 8,904 indirect beneficiaries.

2.9. Main changes in CTDT

There was no major change at CTDT during the year as all programmes got more entrenched and integrated into the livelihoods of target communities. CTDT and its principles of agrobiodiversity and sustainable production practices is now much more recognized and appreciated and often is called upon to provide advice and leadership especially in matters that relate to community seed systems. CTDT in 2015 entered into many more partnerships with government and non-governmental organizations thereby guaranteeing sustainability of its programmes with the farmers of Chikankata, Rufunsa and Shibuyunji districts.

2.10. Challenges

CTDT has continued to operate with the barest minimum resources and has been making efforts at improving its capacity but progress has been slow due to the diminishing availability of global resources for developmental work. Despite resource constraints, CTDT has strived and managed to fulfill its objectives and work plans. Fundraising is now an integral part of the work plan of the organization.

2.11. Conclusions or lessons learned for the next year(s)

CTDT designs its programmes and projects in such a way that key activities that contribute to achieving set objectives can continue if need be beyond project life span. The farmer groups that have been

established, trained and strengthened can continue to operate independently. Indeed many are in the process of formalizing their existence by registering with various regulators and to open bank accounts. CTD T will in future assist some of these farmer groups in fund raising so that they may access the various funding mechanisms available for community based organizations.

While CTD T in its advocacy programmes with partner organizations may have been critical of some government policies, the organization has on the other hand collaborated and partnered with government on a number of programmes of mutual interest to the two parties and of benefit to the farmer such as strengthening the involvement of communities in seed production and distribution.

2.12. Adjustment in objectives, strategies, intended results or indicators

This is the final year of implementation of the three year project “Food security and livelihoods enhancement for smallholder farmers in selected areas of Zambia through diversified and sustainable agricultural production systems”. The project has been fairly successful with most of the set objectives achieved. However CTD T will strive as much as possible to meet the expectations of farmers with regard to some unfinished business within the few months post project completion. Some of these relate to finding ways of stabilizing farmer incomes so that there is less fluctuations downwards from year to year.

3.0. Planned activities

3.1. Project activities

The three year project is coming to an end in December 2015. Beyond that CTD T will be striving to maintain and strengthen the sustainability mechanism that is inbuilt to ensure that farmer group activities continue beyond the project life and structures that have been formed such as community seed banks and their committees as well as the enterprises that have been initiated as business ventures can continue without active CTD T involvement.

3.2. Organizational activities

3.2.1. Capacity building

In the continuing efforts to develop institutional technical capacity, CTD T hosted a training workshop in August 2015 on resilient seed systems and climate change funded and co-organized with Bioversity International. Capacity was built to enable CTD T in future to improve on its mechanisms for identifying suitable crop varieties for including in farmer adaptation programmes to climate change. Climate/crop modelling techniques learned will be beneficial to future seeds work at CTD T

3.2.2. The Board of CTD T

One objective that was not achieved was to reach a more gender balanced Board by end of project. However the Board has continued to meet and monitor progress of the organization and approve technical and financial reports as well as appointing the auditors. CTD T will still remain focused towards achieving a gender balanced board.

3.2.3. Five year strategy plan

The project that is coming to an end was being implemented as part of the five year strategy action plan that covers the period from 2013-2017 and is intended to provide strategic guidelines for the implementation of the policies and programs that seek to promote and enhance the food and nutrition security as well as livelihoods of rural households in the areas that CTDT is working.

This Strategy Action Plan focuses on the following key strategic goals:

- To enhance the capacity of farmers to base their agriculture production and livelihoods on sustainable practices and conservation of biodiversity
- To strengthen the capacity of CTDT to implement its programmes

3.3. Difference between original plan and planned activities

As the project comes to an end CTDT will strive to ensure activities that follow the agricultural season of December to April will not be abruptly abandoned in January 2016. CTDT will still monitor the seed multiplication programme whose seed will be planted in December 2015 and harvested in April 2016 based on the sustainability strategies built in the project that is being concluded.

4. Budget

The total budget for 2016 is **K1,526,000** and is equivalent to **EUR117,384**. This budget will be financed by CTDT, its partners and well wishers.

Table 20 Summary budget for 2016

Item	Year 2015
1. Personnel	416,000
2. Admin. costs	272,000
3. Activity costs	688,000
4. Capital assets	150,000
Total	1,526,000

5.0. Funding plan

5.1. Expected income sources

Currently there is a three years Hivos agreement with CTDt which ends in December 2015. CTDt will be participating in a four year project with CTDt Zimbabwe and CEPA of Malawi funded by the Benefit Sharing Fund of the International Treaty for Plant Genetic Resources for Food and Agriculture to commence in January 2016. This will contribute about half of the CTDt budget requirement.

5.2. Planned fundraising activities

CTDt will continue to respond to appropriate calls for proposals and as and when announced. Consequently CTDt has had preliminary discussions with many potential partners including Bioversity International and Bread for the world.

CTDt would like to thank most sincerely the support rendered by Hivos over the last four years and hope that this partnership can continue in one way or the other to the mutual satisfaction of both parties.