

# The diversified climate-resilient business model of the Tubeleke Club

Producer organization: Tubeleke Women Club



Zambia - Climate Resilience Case Study No. 10

Juliet Machona, 2020



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Cover photo: Women of the Tubeleke Club with their basket weaving and pigs - Photos: D. Macqueen, 2020.

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## Contents

<b>EXECUTIVE SUMMARY</b> .....	<b>3</b>
<b>1. INTRODUCTION</b> .....	<b>4</b>
1.1 NAME AND VISION .....	4
1.2 LOCATION .....	4
1.3 FOUNDATION AND MEMBERS .....	5
1.4 BUSINESS PROPOSAL.....	6
1.5 MARKET CONTEXT .....	6
<b>2. THE NATURE OF THE THREAT OF CLIMATE CHANGE</b> .....	<b>7</b>
2.1 PERCEIVED CLIMATE CHANGE THREATS.....	7
2.2 IMPACT ON FOREST AND AGRICULTURAL RESOURCES .....	8
2.3 IMPACT ON BUSINESS AND FINANCE.....	8
2.4 IMPACT ON VULNERABLE GROUPS.....	8
<b>3. THE BUSINESS AND FINANCIAL MODEL RESPONSE TO IMPROVE CLIMATE RESILIENCE</b> ....	<b>8</b>
3.1 AGRO-ECOLOGICAL DIVERSIFICATION .....	9
3.2 ECONOMIC DIVERSIFICATION .....	9
3.3 SOCIAL DIVERSIFICATION .....	9
3.4 OTHER RESILIENCE MEASURES .....	10
3.4.1 PARTNERSHIPS .....	10
3.4.2 CLIENTS .....	10
3.4.3 COMMERCIAL STRATEGY.....	10
<b>4. CONCLUSIONS</b> .....	<b>11</b>
4.1 MAIN CONCLUSIONS .....	11
4.2 INVESTMENT CHALLENGES .....	11
4.3 BENEFITS AND THEIR DISTRIBUTION .....	11
REFERENCES .....	11

## EXECUTIVE SUMMARY

Tubeleke Women Club is a producer organization made up of 26 members located in the south of Choma District in South West of Southern Province of Zambia. It is a women's and youth-based project aimed at generating income through producing and selling of baskets, made from bamboo fibre, and animal farming. A group of women founded the organisation in the year 2002 – mainly for the purpose of obtaining fertilizer from a Government support programme.

The group survived with declining membership but was revived in 2016 through an FAO-hosted project called the Forest and Farm Facility (FFF) which trained one of the members in Market Analysis and Development (MA&D). Since then the group reoriented towards business development, starting with woven baskets. It has also developed a savings and loans fund to provide small loans or investment funds to its members. It has grown and improved its production in recent years. The goal of the group is to empower the members of Tubeleke Club through exploiting natural forest products such as locally grown bamboo and other sustainable farm products.

In recent years climate change has become an issue of increasing significance for the members of Tubeleke Club. Rains have become increasingly erratic, and the growing season has shortened to even less than 80 days. Prolonged droughts have had major impacts on subsistence crop production. The droughts have resulted in severe hunger and a radical drop in income.

The Tubeleke Club has been thinking about how to become more climate resilient in the face of this growing threat. Subsistence farming has been diversified by its basket weaving business and it is anticipated that the group will grow and alleviate poverty through Bamboo baskets and other farm products.

To diversify still further, the group has saved profits from the basket sales in its savings and loan fund. Rather than redistributing all profits to members at the end of the year, it was agreed to reinvest some of the capital into further diversification - pig and sheep rearing. Neither of those two activities depend on seasonal water. Once the livestock were in place, the group also started a bio-gas plant from animal droppings – which not only provided cooking fuel (reducing the need for fuelwood), but also provides a regular supply of slurry to fertilise crops. Additionally, the group has attempted to establish a bamboo plantation to ensure the future sustainability of our bamboo basket production.

The increasing confidence of the group in business activities, and their strong collective action has cemented new partnerships with the FAO and Forestry Department and with the newly established Zambia National Forest Commodities Association – who it is hoped will help market their products. The strong social bonds that have been built are an additional source of climate resilience as they have been able to attract external support – including for the installation of a bore hole to improve water supply. They will soon be able to grow their own animal feed (reducing external expenditure) and can contemplate new cropping options such as the production of vegetables in more resilient agroforestry systems.

# 1. INTRODUCTION

## 1.1 NAME AND VISION

The name of the forest and farm producer organization in this case study is 'Tubeleke Women Club'. 'Tubeleke' is a Tonga word meaning 'Let us Work'. This is a name picked consciously by the women to show their determination and willingness to work to improve their lives. The group's vision is to be the best women club producing traditional quality baskets, bushels and grass brooms that will meet and surpass customer expectation. The group hopes to break into the international tourist market soon.

Tubeleke Women Clubs is a group of women who are involved in making traditional baskets in the Siachitema area of Kalomo district in the southern Choma province of Zambia. The group was formed in 2002 mainly for the purpose of obtaining fertiliser from the government Fertiliser Support Programme (FISP) programme. Over the years membership of the group declined as the group only became active when it was maize growing time and members needed fertilizer.

In 2016, however, the group was reorganised and given different objectives. The focus of the group changed to a business-oriented outlook. When one of the members (chairperson), Juliet Machona, attended a Market Analysis and Development (MA&D) training of trainers workshop facilitated by the Forestry Department, MA&D trainer and supported by FAO under the Forest and Farm Facility (FFF) program it motivated her to help the group. The MA&D approach developed by FAO and adopted by the FFF program to help people improve their livelihoods through businesses developed under sustainable natural resource management.

After the training, Juliet then trained the other members and after carrying out a product identification process using the MA&D approach, the group settled on two products, baskets, and brooms. From then on, the group has remained committed to the development of traditional bamboo baskets and brooms and marketing of their wares locally and the nearby towns of Kalomo and Choma even after diversifying into other income generating activities. It has a membership of 26 people comprising 20 females (4 youth) and 6 males.

There is a long history of the presence of the bamboo clumps in Siachitema that were planted some time ago and grass used to make brooms grows naturally and is available as raw materials throughout the year. A few individuals exploit these bamboos for storage barns and mat making. Tubeleke Women Club is the only entity that is currently producing baskets for commercial purpose in the local area and surrounding communities of Siachitema in Choma.

It is the group's mission to attract investment in basket making for sustainable socio-economic development to transform the living standards of the local people in Siachitema area of Kalomo district. This is already happening as the group has been given a borehole to enable them carry out other activities like gardening and planting new stock of bamboo. The government, through the Forestry Department, has also taken note of the group's efforts and how basketry has helped uplift the living standards of its members. To this effect for the first time ever government has included basketry in the Southern province budget for capacity building of members of the two basketry groups in the district.

## 1.2 LOCATION

Tubeleke Women Club is located 36 km from Siachitema in the south of Choma district in Southern province. The area is predominately a farming area with major crops grown being maize, groundnuts, cowpeas, and some garden vegetables. In the past decade, maize growing has been adversely hit by unfavourable weather that has resulted in drastic yield drops and loss in food security at household level for most people. The gardens have also reduced in number as rivers dry as early as three months after the rainy season ends. This is because the streams and rivers are heavily silted as all riparian vegetation has been removed along the stream riverbanks.

The idea of producing baskets was born out of the two objectives, which are:

- To find an extra income source from a forest product that was not affected by the climate variation that had caused other crops to fail from drought

- To take advantage and maximize profits from locally produced baskets as there appeared no other enterprise producing these baskets in the area and surrounding communities.

Figure 1. Locally grown clumps of bamboo from which the groups baskets are made



### 1.3 FOUNDATION AND MEMBERS

The group was formed in 2002 under Zambia National Farmers Union (ZNFU) by a group of women mainly for obtaining fertilizer from the government under Fertilizer Support Program (FISP) for maize growing which was the major income earner for the members. However, over the years membership of the group declined as the group only became active when it was maize growing time and members needed fertilizer. Additionally, maize growing became less lucrative as the soils in the fields became overused and produced less. This was compounded by frequent droughts caused in part by climate change.

The group was reorganized in 2016, where its focus shifted towards a more business-oriented structure. The Chairperson attended a Market Analysis and Development (MA&D) training organized by the FAO under the FFF program together with the Zambia National Forest Commodities Association (ZNFCA). This introduced the Chairperson and the group as a whole to five main areas of business (finance, markets and product technology, institutional and legal, natural resource base, and social cultural), all of which have to work if the business is to be viable over the long term.

The group also benefited immensely from the knowledge the Chairperson obtained after undertaking a training course supported by FAO on good practices in agribusiness in March 2018 at the Songhai Regional Centre of Porto Novo in Benin. This paved the way towards subsequent diversification into other agriculture business activities like rearing of animals such as pigs and sheep.

The current membership stands at 26, 20 female and 6 males. There is a committee in place comprising 6 executive members (Chairperson, Vice Chairperson, Secretary, Vice Secretary, Treasurer, Vice Treasurer) and 5 committee members.

## 1.4 BUSINESS PROPOSAL

The group's business has evolved over the past 3 years, from basket and broom making to an integrated model including animal rearing. From an initial capital of K180.00 (\$10.00) the group has raised funds up to K44, 480.00 (\$2,471.00).

Basket making has been a tradition to some families in Siachitema and some are members of the Tubeleke Women group. The weaving and selling of baskets were always done in an informal way until members underwent MA&D training. Basket business was arrived at as the most viable option after all proposed potential products were screened and filtered using the MA&D filter approach. Brooms were not picked as the major business for the group because of the very low profit margins. This can be attributed to the many actors making and selling brooms in the area. The group however has maintained it as one of the income stream activities.

Tubeleke Women make baskets and brooms that are sold locally in Siachitema, Choma and Kalomo the two nearest towns. The group makes 104 baskets per month which are valued at K25 (\$1.39) each. They also make brooms as another side business, which they sell at K3 (\$0.16) each. Not so much effort goes in the broom business because there are a lot of other people making brooms and selling. The group business philosophy is not to always get cash for their products but sometimes exchange it with other products of similar value like chicken, maize, or groundnuts, which they later sell.

After attending a training at Songai in Benin, Juliet brought to the group ideas of animal rearing and making biogas for cooking and lighting. At the time of writing this paper the group had 10 pigs after selling 19 piglets and 9 sheep. Between 2016 and 2019 the group raised about K31,200.00 (\$1730) from basket sales and K12, 200.00 (\$678) from pig sales. This enabled members to buy uniforms for their children, pay school fees and acquire farming inputs.

More recently, the group also acquired 3 sheep at K1,500 (\$84) and this number has increased to 12 with a market value of K12,000 (\$667). No sheep sales have been made yet.

A personal biogas stove was installed in the house of the club leader as a demonstration – and this uses the animal manure to generate gas, while also turning the remaining slurry into clean manure that can be used to improve crop yields.

## 1.5 MARKET CONTEXT

After the MA&D training the group carried out a survey to find out who the competitors and then determine what to produce and at what price. The survey on competitor analysis revealed that there were no other groups/individuals making Bamboo baskets in Choma and Kalomo. There was another group however in Choma also supported by FAO who were making baskets from palm leaves, which were costing the same price for a medium basket (which were mostly made) and these were sold locally. It also discovered that it would face tough competition in Livingstone which is the tourist capital of Zambia and located 200 km from Choma. The quality and diversity of baskets was high as the product had to meet international tourist standards. For now, the group does not take its product to Livingstone but considers it as a possible future market. A survey done revealed that smaller decorative baskets can sell 3 times the price of the regular medium baskets mostly made by the group.

During the survey it was further discovered that customers had different tastes and not everyone wanted the medium basket the group used to make. Some wanted small-decorated baskets, storage baskets, and yet others preferred bigger ones.

The group realised that if they had to sell more baskets they had to diversify in terms of sizes and outlook and start making what people wanted and so they introduced the smaller ones and intend to launch a larger basket and price them differently. Currently the small basket is K15 and the Medium is K25.

The group saw no need to price their product lower than the competitor did as they argued that their product was made from a different material and was more durable.

Figure 2. Baskets made by the Tubeleke group (same size)



The current business focus of the group is to produce baskets and selling them to local people who want them. They are also working to convince potential buyers to buy the product. The group has realized that there exists a potential overflow of demand outside the usual selling boundaries so long they make what is needed by markets like Livingstone and are therefore embarking on capacity building of its members. Having the present situation of business, the group has opted to supply on retail of baskets and would consider bulk supply as the enterprise expands.

## 2. THE NATURE OF THE THREAT OF CLIMATE CHANGE

Zambia is divided into three main agro-ecological zones based on soils, climatic factors, rainfall patterns and common agricultural activities. Zone I constitute about 12 percent of the country and covers Luangwa and Zambezi river valleys. It has low altitude and low erratic rainfall with a short growing season. Although it is hot and humid with poor soils in some places, it is suited for growing drought resistant crops. Goat rearing and fishing potential are high as is cattle rearing.

Choma districts falls in this zone, which has an average annual rainfall of 800 mm, growing season ranges from 80 to 120 days and temperature between 20 to 25 degrees centigrade.

In the past decade or two, however the rainfall has become erratic and does not reach 800 mm and the growing season has reduced to less than 80 days. This has affected negatively on crop yields leading to hunger and drastic drop in incomes.

### 2.1 PERCEIVED CLIMATE CHANGE THREATS

As the Club expand their business even the material intake is expected to increase and hence the plan to plant more bamboo. This however may turn out to be unsuccessful once more, if the drought situation experienced in the recent past is anything to go by, as there will not be sufficient water to grow the bamboos. This may hinder future expansion plans that the group has on paper.

The more animals the group has, the more water will be required. The less the water available the more the animals will become susceptible to diseases and the growth will be compromised. This will negatively impact on the group's income.



## 2.2 IMPACT ON FOREST AND AGRICULTURAL RESOURCES

In 2019, the group planted bamboo suckers in order to increase the raw material for baskets, but all the stock planted dried up due to drought, individual maize fields for members also dried up and affected household food security. The group will try again, but these setbacks are a typical occurrence in this semi-arid part of Zambia.

## 2.3 IMPACT ON BUSINESS AND FINANCE

Although the drought did not affect directly on the group's resource for baskets, it however had great impact on individual incomes and food security, which usually comes from their farm produce. This affected the group's saving, reinvestment capacity as a larger percentage of money generated from basket, and pig sales went to assisting members with funds for food, school fees and other household needs.

## 2.4 IMPACT ON VULNERABLE GROUPS

The group will soon expand the piggery project to individual members. This is not only meant to increase animal production but also ownership of the project. It is expected that by the end of 2020, 10 selected members will have piggery houses and the number will increase to over 50 animals (more than 200 piglets). Revenue is expected to increase to over K90, 000.00. The funds realized will help support members in drought periods when they are most vulnerable.

The group further plans to plant a hectare of bamboo (400 suckers) in readiness for the scaling up in basket production, anticipated to bring in more income. This will be accompanied by capacity building of all members in high quality basket making to be facilitated by the Forestry department.

## 3. THE BUSINESS AND FINANCIAL MODEL RESPONSE TO IMPROVE CLIMATE RESILIENCE

The group has embraced the concept of economic diversification and this has helped to broaden income options. From the selling of baskets and brooms the group now rears pigs and sheep, sell packaged crop seed and during fruit season they gather and sell wild fruits like *Uapaca kirkiana* (Masuku) and *Landolfia kirkii* as shown in the pictures below.

Figure 3. Visitors purchasing baskets and fruit.



### 3.1 AGRO-ECOLOGICAL DIVERSIFICATION

In the previous season the group had planted about half a hectare of bamboo, but all the suckers dried up due to lack of water. This year the group intends to increase the area to 1 ha (10,000m<sup>2</sup>) as water is now readily available. As the bamboo matures and the root system becomes more established, the bamboo become drought tolerant and will keep on increasing in size and number even without being watered.

The borehole was drilled after FAO noticed the effort the group was making trying to increase the feedstock for its basket business and to grow maize that could be used in the production of animal feed. The effort was rendered vain by the drought as all the plants dried up due to lack of water. With now a reliable source of water (borehole), the group intends to begin growing maize and start making their own animal feed to cut down on feed expenses, 48.5% of the budget (2019) was spent on animal feed.

The group has also embarked on vegetable production that will provide both food members and some income.

The group will again replant bamboo after the last stock they planted dried up due to lack of water. This is meant to increase on the available feedstock for the baskets.

A typical annual budget for the group looks like the one below which is managed from the sale of baskets and pigs. The funds are from the investment funds put aside for eventualities and reinvestment derived from the business profits.

No.	Item Description	Amount (ZMW)
1	20 bags of pig feed	6,700.00
2	Animal Vaccines	3,000.00
3	2 bags of palm leaves	200.00
4	5kg sunflower	140.00
5	5kg popcorn	165.00
6	5kg groundnuts	50.00
7	2 bags of fertilizer	700.00
8	Transport	1,500.00
9	Communication (Phone & Internet)	300.00
10	Funerals	500.00
11	1 bottle weed killer	350.00
12	Food (during weaving)	200.00
<b>Total</b>		<b>13,805.00</b>

### 3.2 ECONOMIC DIVERSIFICATION

Apart from animal rearing, pigs, and sheep, which is doing quite well, the women, also do village banking through a Village Savings and Loans Association (VSLA). This is an innovation where a member bank or save money locally through an elected safe keeper and different individuals keep keys to the safe locker. The members of the saving group are free to get small loans and pay back on very flexible terms at an interest rate of 10%. This has provided members with opportunities to do other businesses at individual level like buying and selling vegetables or tomatoes.

### 3.3 SOCIAL DIVERSIFICATION

The affiliation to the ZNFCA has provided an opportunity to meet and create links with other FFPOs with similar interests. With plans of expands in the horizon these networks will provide very valuable links to the expansion process. ZNFCA will be used as a platform to launch new products and market support from various individuals and organisations.

### 3.4 OTHER RESILIENCE MEASURES

The group attracted attention from FAO through their work and determination who came to their aid and sunk a borehole at a central location. This will enable members to engage in various income generating activities like gardening that will be done throughout the year.

The group also trained in risk management during the MA&D capacity-building workshop. This looked at unexpected events that could affect the smooth running of the enterprise, and the solutions that could be put in place to mitigate any negative impact. Some measures taken include diversification of the business as explained earlier.

#### 3.4.1 PARTNERSHIPS

The ZNFU was engaged in 2015 to November 2016 for implementing activities under Pillar 1 of the FFF programme. One of the key results in the ZNFU proposal was to strengthen the Forest Commodity Committee to be able to represent the smallholder forest producers for policy and business. The FFF was strengthening the Forest Commodity Committee as part of its support to the ZNFU which had requested for a viability assessment of the Forest Commodity Committee (FCC) to transform into a specialized Forest Commodity Association. A number of capacity trainings for FFPOs were organized and conducted under this arrangement until ZNFU experienced internal administration issues that affected the implementation of FFF activity that led FAO to cutting ties with ZNFU.

Then Zambia National Forest Commodities Association (ZNFCA) came into the picture. ZNFCA is a non-profit membership-based farm forestry and environment conservation organization established to promote ecological and sustainable management of forests and farm forestry commodities. The Association promotes networking of member Associations throughout the country and sharing of experiences. ZNFCA also promotes use of non-wood products and value addition as part of product diversification. Tubeleke Women Group is a paid-up member of the Zambia National Forest Commodities Association (ZNFCA). the Association offers training in governance and policy advocacy and market linkages of its members to potential buyers.

#### 3.4.2 CLIENTS

Apart from the usual customers in the local vicinity of Siachitema, the group has targeted events like the Agriculture and Commercial Shows held in the districts like Kalomo and Choma to market and sell their baskets and other produce. Livingstone is another potential market earmarked. The group's diversification and expansion program involve making of decorative small baskets that are on demand in the tourist capital.

#### 3.4.3 COMMERCIAL STRATEGY

Unlike the maize and other crop prices that are usually dictated by the buyer and the government floor price, the group taking the input costs into consideration and competitor prices arrives at the price of the baskets made and animals sold. The quality of the product too plays a major part in determining the price and the market.

The local demand is usually for medium baskets used to carry various items, the market in town is usually for decorative baskets that can be hang in homes and institutions. Therefore, the market will be segmented to deal with high-class clientele that will comprise lodges, restaurants, hotels, middle and high class. Then the low-class category to cater for the usual local clients.

The pigs and sheep are sought after by people with butcheries and those buying for rearing. Some orders have been received for pigs and sheep, though sheep is not being sold now. The last time most of the pigs were sold to people with butcheries from Livingstone. The pigs are weighed and sold per kilogram. Vegetables are sold by individual members at the nearby road Market near Siachitema Brethren in Christ Mission.

## 4. CONCLUSIONS

### 4.1 MAIN CONCLUSIONS

The main reason that can be attributed to the success of Tubeleke women businesses is the diversification of their business, when one component of their income stream is affected, there is always another to fall back on. The drought that has devastated southern province in the recent past impacted so much on the crop fields of the members and their individual incomes but the group still had their raw material for baskets and were also able to source sufficient water for their animal project which did very well. The market for their produce remained stable and brought in a good income.

In their publication on resilience, Linnenluecke and Griffiths (2010) suggest that in looking to generate resilient organizational strategies and responses, insights need to be drawn from episodes of organizational decline. He continues to say, we recognize that these episodes in all probability do not align to future conditions associated with climate change and corresponding increases in number and severity of extreme weather events. However, they provide some general insights into organizational resources, capabilities, and response mechanisms that may be useful for organizations attempting to generate long-term resilience to climate change and weather extremes. The group will learn to devise climate resiliency strategies from lessons learnt and lessons shared.

### 4.2 INVESTMENT CHALLENGES

The biggest challenge the group faces is saving enough money to reinvest in the business. Most profits end up being shared when group member's food security is affected by drought. To overcome this the group encourages members at individual level to engage in some form of family business that will cushion the impact of drought so that they do not run back to deplete the group business profit.

### 4.3 BENEFITS AND THEIR DISTRIBUTION

The diversification into animal production brought in an income of K12, 200.00 (US\$ 610) and individual income of about K600 for each member (US\$ 30). Take for instance the example of two members Agnes Mushonga and Memory Kainda. They got K1, 050.00 (US\$ 52) each last year, K 600 (US\$ 30) came from the sale of pigs and K450 (US\$ 22) from basket sales. This sort of income helps its members immensely, for example, helping Agnes buy foodstuff for her family and pay for farming inputs; helping Memory to pay for her children's school fees and food for the family.

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