CHALMERS

An Analysis of the Effects of Aid in Terms of Farming as a Business in Zambia

Bachelor Thesis in Industrial Engineering and Management

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Foreword

The Republic of Zambia is a developing country that possesses huge land areas with fertile soil and high potential for agriculture. Despite this, a majority of the population is living below the poverty line. This potential is obviously not realised and commercialisation of smallholder agriculture is therefore an important element of the country's strategy to reduce poverty and increase economic growth in rural areas as well as on a national level. We found it interesting to investigate how the situation can be improved by implementing a business minded thinking in the farming. The Swedish International Development Cooperation Agency (Sida) has had several initiatives within the Zambian agricultural sector. One such initiative is the Agriculture Support Programme (ASP) that ran between 2003 and 2008. The programme targeted 44 000 small-scale farming households with the goals to improve the food security and increase the income by educating farmers in entrepreneurship and improving their business skills. Since business and entrepreneurship are pillars in ASP the study team found it proper to analyse further, in line with our academic background within industrial engineering and management. The thesis is written in order to identify the effects of this type of aid and how they have been achieved. Another aspect we investigate is to what extent it can contribute to a sustainable development.

Without external help and support this thesis would not have been possible. Therefore we would like to thank the following people for their kind help and interest: our supervisor *Kristina Henricson*, for the time spent supporting us through the process; The Swedish Embassy in Lusaka, Sida and especially *Eva Ohlsson,* for introducing us to Zambia and ASP and helping us to set up valuable contacts; The Ministry of Agriculture and Cooperatives, *Dr. Richard Kamona* and all the staff within the ministry, for giving valuable input about ASP and introducing us to farmers in the field; *Olle Otteby*, for priceless information concerning ASP and the business conditions in Zambia and other African countries; *Björn von Hofsten with family,* for making our stay in Zambia unforgettable.

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Abstract

The Swedish International Development Cooperation Agency (Sida) has had several initiatives within the Zambian agricultural sector. One such initiative is the Agriculture Support Programme (ASP) that ran between 2003 and 2008. The programme had its roots in business and entrepreneurship with the short-term goal to improve food security and increase income among participating farmers. In the long-term perspective, the goal was to contribute to poverty reduction on a national level.

The purpose of the thesis is to analyse how aid programmes similar to ASP and the concept farming as a business can contribute to poverty reduction and generate economic growth in Zambia. The effects of farming as a business and the causes behind them were charted through a field study in Zambia which involved extensive interviews with the main stakeholders of the programme. The research was conducted as a qualitative methodology where interviews were supplemented by studies of consultancy reports as well as theories from various literatures. The thesis will be conducted through a qualitative methodology, since it is difficult to obtain this understanding through measurable data and statistics.

The thesis discusses the impact of ASP and different aspects of the farming as a business concept. This includes the effects for the individual farmer adopting the concept as well as prerequisites for effects on a national level. Implementation and management strategies of these kinds of aid programmes are also two important issues that are discussed. Furthermore, the sustainability is analysed in terms of long-lasting effects.

The result identifies that improved agricultural skills in combination with increased business skills generates synergies that facilitated farmers to break out from the poverty trap and instead enter a positive development spiral. The household approach and the facilitation cycle are two important factors behind this. ASP also tends to be an aid programme of a sustainable character since farmers have continued to develop their farming even after the programme ended. However, if there was to be a new programme similar to ASP, the market linkages need to be improved in order to facilitate the farmers' sales.

Sammandrag (Abstract in Swedish)

Sida har haft flera olika projekt inom den Zambiska jordbrukssektorn. Ett sådant är Agriculture Support Programme (ASP) som pågick mellan 2003 och 2008. Det kortsiktiga målet var att öka matsäkerheten och inkomsten bland de deltagande bönderna. På lång sikt var målet att bidra till en fattigdomsreduktion på nationell nivå.

Syftet med denna rapport är att analysera hur biståndsprojekt liknande ASP och konceptet ”farming as a business” kan bidra till fattigdomsreduktion samt generera ekonomisk tillväxt i Zambia. Effekterna av ”farming as a business” och orsakerna bakom dem kartlades under en exkursion till Zambia som involverade omfattande intervjuer med huvudintressenter till projektet. Studien genomfördes med en kvalitativ metod där intervjuer kompletterades med studier av konsultrapporter och teorier från diverse litteratur.

Rapporten diskuterar ASPs inverkan och olika aspekter av konceptet ”farming as a business”. Detta inkluderar effekterna för den individuelle bonden som anammar konceptet såväl som förutsättningar för att generera effekter på en nationell nivå. Implementerings- och managementstrategier för dessa typer av biståndsprogram är också två viktiga ämnen som diskuteras. Dessutom analyseras hållbarheten genom att undersöka om effekterna varit bestående.

Resultatet identifierar att förbättrad kunskap och förmåga inom jordbruket i kombination med förbättrade businesskunskaper skapar synergier som hjälper bönder att bryta sig loss från sin fattigdomsfälla och istället komma in i en positiv utvecklingsspiral. Koncepten ”household approach” och ”facilitation cycle” är två viktiga faktorer bakom detta. ASP kan sägas vara ett hållbart biståndsprogram eftersom bönder har fortsatt att utveckla sitt jordbruk även efter programmets slut. Vid ett nytt liknande program krävs dock en bättre koppling till marknaden för att förbättra böndernas försäljningsmöjligheter.

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List of Acronyms

ASP	Agriculture Support Programme
CEO	Camp Extension Officer
CFU	Conservation Farming Unit
DAC	District Agricultural Committee
DACO	District Agriculture Coordinator
EEOA	Economic Extension in Outlying Areas
GA	Gibcoll Associates
GDP	Gross Domestic Product
HJPI	HJP International Ltd
IMF	International Monetary Fund
LM&CF	Land Management and Conservation Farming
MACO	Ministry of Agriculture and Cooperatives
MDSP	Multiplication and Distribution of Improved Seed and Planting Materials
PACO	Provincial District Coordinator
REES	Rural Economic Expansion Services Ltd
RNA	RuralNet Associates Ltd
RNAB	Ramböll Natura AB
SADEV	Swedish Agency for Development Evaluation
SHAPES	Small Holders Access to Processing, Extension and Seeds
Sida	Swedish International Development Cooperation Agency
SROI	Social Return On Investment
TALC	Technological Adoption Life Cycle

1 Introduction

This chapter introduces the background of the thesis. It provides the reader with a brief overview of the Zambian history to put the current situation into context. The chapter will also explain the importance of agriculture and how its potential can be realised through commercialisation of small-scale farmers. The Swedish funded Agriculture Support Programme in Zambia is one such initiative and the chapter contains a description of how it was organised and implemented.

1.1 Background

The majority of the world's poorest countries are located in Africa. The developed countries in the West, Sweden included, support these countries through different kinds of development aid. One of the African countries receiving aid is the Republic of Zambia. Even though Zambia has experienced strong economic growth during the 21st century, more than 50 percent of its 12.2 million people are still living below the poverty line.

Sweden has close and friendly ties with Zambia and the cooperation is concentrated on three thematic priorities: human rights and democracy, environment and climate and also gender equality. From these themes the cooperation focuses on three sectors: energy, health and agriculture. The Swedish International Development Cooperation Agency (Sida) has had several initiatives within the Zambian agricultural sector. One such initiative is the Agriculture Support Programme (ASP), which ran between 2003 and 2008 (<www.regeringen.se> [10-04-09]).

1.2 Research Environment

Zambia is a young democracy with a complicated history that has taken new and unpredictable paths several times. The first non-Africans to arrive to the territory of present Zambia, being landlocked and surrounded by eight sub-Saharan African countries, were Portuguese explorers in 1798. Half a century later the famous British explorer and missionary Dr. David Livingstone travelled down the Zambezi River. By 1887 British mission stations were established in Zambia and southern Malawi (<www.ne.se> [10-05-03]).

1.2.1 Zambia's Colonial Days

In 1924 Zambia or Northern Rhodesia as it was called, was brought under direct British control through the Colonial Office and became a British colony. During the 1920s and 1930s the mining industry in Northern Rhodesia largely expanded. Huge deposits of copper were found in the area of upper Kafue, which is now known as the Copperbelt. World War II demanded increased production of base metals and by 1945 Northern Rhodesia was producing twelve percent of the world's copper, Soviet Union excluded. The mining industry required large labour forces. The skilled and more educated were mostly of European origin whilst the less skilled workers came from all over Northern Rhodesia. The working conditions for the unskilled labour force were extremely poor with low wages and high death rates. The fact that large amounts of men left their farms and villages to work in the mines had a negative impact on the agricultural sector. When the men left their families and farms, poverty and malnutrition became part of the daily life in various rural areas. In addition, the development of agriculture and rural areas went extremely slow for several years causing long-lasting negative effects (McIntyre 2008, p. 28-31).

1.2.2 Post-Colonial Zambia

In 1964 Northern Rhodesia finally became independent from Britain and changed name to Zambia. The republic's first president, Kenneth Kaunda, took over a country in a bad state. The country's income mainly depended on the world copper market and the population was largely uneducated. The president also inherited a national debt of 50 million kwacha, or 35 million dollars in 1964, from the colonial era that was going to affect the economy and investments in education and health negatively for a long time ahead, even still today. Declining copper prices in the 1980s and 1990s, struggles with the national debt, at times very high inflation and a prolonged drought had severe impact on the economy.

Elections in 1991 brought an end to President Kaunda's 27 years of one-party rule. The new president, Frederick Chiluba, faced enormous economic problems. With backing from the International Monetary Fund (IMF) and the World Bank he succeeded in liberalising and privatising much of the economy to make it easier for foreign investors to invest in the country. He also managed to gain confidence of western donors but since many of his reforms and their success depended on international donors, corruption unfortunately grew during his time in office. Despite the increased corruption, Zambia became a more open and welcoming country and tourism began to be recognised as a source of foreign currency and jobs during President Chiluba's time (McIntyre 2008, p. 28-31).

After having misused his presidency and experiencing tremendous pressure from the Zambian people and within his own party Chiluba was forced to step down and elections were held in 2001. The new president, Levy Patrick Mwanawasa launched an anti-corruption campaign in 2002 that resulted in the prosecution of among others Chiluba and many of his supporters (<www.cia.gov> I [10-04-06]).

1.2.3 Zambia Today and the Importance of Agriculture

Zambia enjoys a free press and an active civil society. However, the country is struggling with a major national debt, a weak currency, low educational levels and the devastating impact of HIV/AIDS. Despite an annual growth of about five percent in the last couple of years, it is one of the world's poorest countries with an annual Gross Domestic Product (GDP) per capita of only 1500 USD in 2009. This can be compared with the GDP per capita of Sweden which was 36 800 USD in the same year (<www.cia.gov>, I & II, [10-04-12]). In addition, the income distribution is skew with 59 percent of the population living below the poverty line, meaning they have an income of less than 1.25 USD a day, and 37 percent are considered to live in extreme poverty.

The Zambian economy heavily depends on the mining industry and especially on copper. This makes the country very vulnerable to fluctuations in copper prices. Experience has also shown that the copper mining does not generate the jobs and income levels needed to achieve the country's long-term goals in terms of GDP. To create a more stable growth Zambia has to increase the diversification of its economy. There is great potential for development in terms of resources not being used within the tourism, energy and particularly within the agricultural sector (<www.worldbank.org> [10-04-06]).

Although 58 percent of the land in Zambia is classified as medium to high potential for agriculture, only about 14 percent of the land is cultivated. Representing more than 40 percent of GDP and contributing to about twelve percent of national export earnings, agriculture and agro processing are important parts of the Zambian economy. In addition, agriculture employs 67 percent of the Zambian labour force and supplies raw materials to agricultural industries, which in turn account for 84 percent of value-adding manufacturing in the country. There are 1,145,829 smallholder households growing crops in Zambia and about 1,500 large-scale commercial farmers. Of the smallholder households, 96 percent are classified as small-scale farmers with holdings of five hectares or less. The rest are medium-scale farmers with holdings of 5-20 hectares (World Bank, 2009, p. 1-5).

The vast majority of the small-scale farmers carry out their farming at a semi-subsistence level. Basically, this means that they are only growing to cover their own needs and cannot manage to sell any produce. Without investments in new farming technologies etcetera, there will be no development and the agriculture will continue to be inefficient and not contribute to economic growth. There are only a few emergent farmers who invest their resources in a farming business. The reasons are numerous. Some of the challenges to commercialisation of small-scale farmers in Zambia are:

- Few market opportunities in rural areas as a result of poor infrastructure and poor political climate for private investment.
- Low economic returns as a result of extremely low productivity levels.
- The lack of education among farmers.
- The impact of HIV/AIDS.

This creates a climate where the motivation for commercialisation of farming is low. However, Zambia is a country with a vast number of small-scale farmers and huge land areas with fertile soil and high potential for agriculture. As a consequence, the commercialisation of smallholder agriculture is an important element of the country's strategy to increase economic growth in rural areas as well as on a national level (Chipeta et al, 2008, p. 5-6). However, the lack of management and organisation skills at different levels in society makes this potential in agriculture difficult to utilise. Management is a key and to a large extent this is what ASP was all about. ASP applied a business and management approach on Zambian farmers to realise the potential for production and commercialisation of the small-scale farming sector[1].

1.3 Agriculture Support Programme (ASP)

ASP was an aid programme running between 2003 and 2008 targeting 44 000 small-scale farming households in Zambia by implementing business knowledge in their farming.

1.3.1 The Initiation of ASP and its Goals

Sida has been involved in aid in Zambia almost since the country gained independence in the 1960s (<www.regeringen.se> [10-05-03]). Until around 2002 Sida had five different programmes running in Zambia: Economic Expansion in Outlying Areas (EEOA), Land Management and Conservation Farming (LM&CF), Multiplication and Distribution of Improved Seed and Planting Materials (MDSP),

[1] Olle Otteby, team leader, interview 4th of March 2010

Conservation Farming Unit (CFU) and Small Holders Access to Processing, Extension and Seeds (SHAPES) (Chipeta et al, 2008, p. 5). Each of these programmes had its target group within the Zambian farmer sector and all of them had similar goals. Instead of having five different small programmes striving for almost the same result, Sida wanted to combine them into one programme as shown in the timeline in *Figure 1.1*[1].

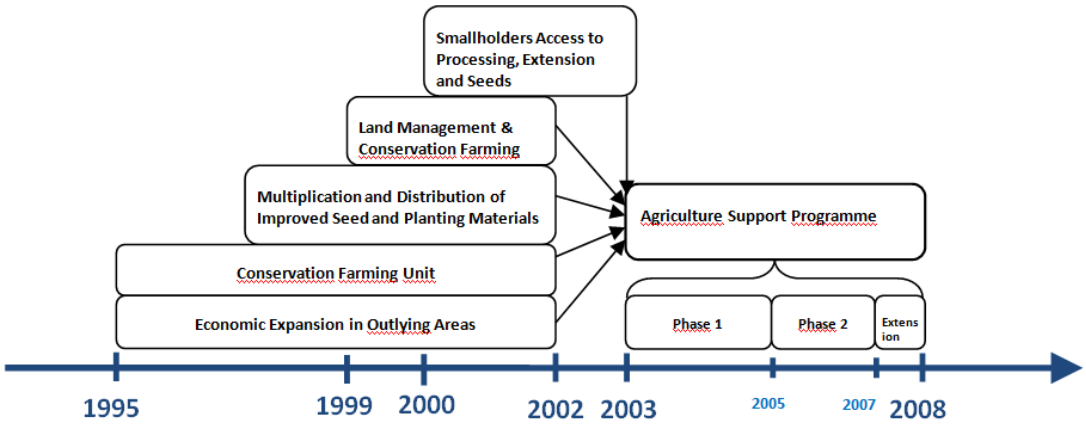

Figure 1.1: The rise of ASP.

When these five former programmes were phased out Sida hired a consultancy company, Ramböll Natura AB (RNAB), to identify the strengths of the five former programmes and out of them draft a specification of a new programme, ASP[2]. From EEOA, RNAB identified the clear focus on business as a key component, which aimed to make the farmers more aware of how to make money out of their farming. LM&CF had a group-based approach in order to target many farmers while EEOA instead focused on follow-ups with a limited number of individual households, the so called household approach, to obtain a more personal and focused contact (Scandiaconsult Natura AB, 2002, p. 5, 27, 35). RNAB combined these two strategies which allowed a wider coverage and a more cost effective approach, while assuring the quality of facilitation and active involvement of all family members, including women, men and youths[1]. From both EEOA and LM&CF, RNAB extracted what is called the facilitation cycle which aimed to support the farmers with all the necessary extension in all stages of the farming (Scandiaconsult Natura AB, 2002, p. 5). All of the important approaches and components of ASP will be explained later on in *1.3.4 Important Components of the Extension.*

The final objective of ASP was in the long-term to contribute to reducing poverty in Zambia from the 1998 level of 73 percent to 50 percent by 2015 in line with the overall development goal of the government of Zambia. The short-term objectives were to improve livelihoods of small-scale farmers through improved food and nutritional security and also increase income through sales of mainly agricultural related products and services (Chipeta et al, 2008, p. 31; Ramböll I, 2008, p. 1). Many of the farmers introduced to ASP first thought that the programme was going to provide handouts for the participants, which however was not the case[3]. Instead ASP

[1] Olle Otteby, team leader, interview 4th of March 2010
[2] Eva Ohlsson, Sida, interview 3rd of March 2010
[3] Justine Ngosa, chief officer, DACO, Monze, interview 9th of March 2010

focused on commercialisation of small-scale farmers, building entrepreneurship skills and linkages with the private sector for the small-scale entrepreneurs to function on a competitive market. To commercialise the small-scale farmers is in fact an enormous opportunity for poverty reduction in Zambia (Chipeta et al, 2008, p. 5-6).

1.3.2 The Organisation of ASP

ASP consisted of four major stakeholder groups. The farmers as the target group, Sida as the main financer, the Ministry of Agriculture and Cooperatives (MACO) as a provider of staff and knowledge in agriculture and finally a consultancy consortium with RNAB as the lead consultancy firm. The consortium worked as a compliment to MACO and constituted the structure of ASP providing the management of the programme[1]. Except RNAB the consortium consisted of Rural Economic Expansion Services Ltd. (REES), Gibcoll Associates Ltd. (GA), HJP International Ltd. (HJPI) and RuralNet Associates Ltd. (RNA) (Ramböll I, 2008, p. 1).

1.3.2.1 The Roles of the Four Major Stakeholders

As can be seen in *Figure 1.2* MACO and Sida had the overall responsibility for the programme. However, the implementation and management of ASP was the responsibility of the consultancy consortium. These tasks were mainly handled by the management unit, the facilitation teams and the district coordinators but were supported by the programme steering committee and the District Agricultural Committee (DAC). These entities constituted ASP and were involved in all stages from national level to farmer level. As a compliment MACO contributed with staff and manpower on all levels. For example the Provincial Agriculture Coordinators (PACOs), District Agriculture Coordinators (DACOs), block officers and Camp Extension Officers (CEOs) are subunits to MACO. This can be seen in the pink coloured boxes in *Figure 1.2*.

[1] Olle Otteby, team leader, interview 4th of March 2010

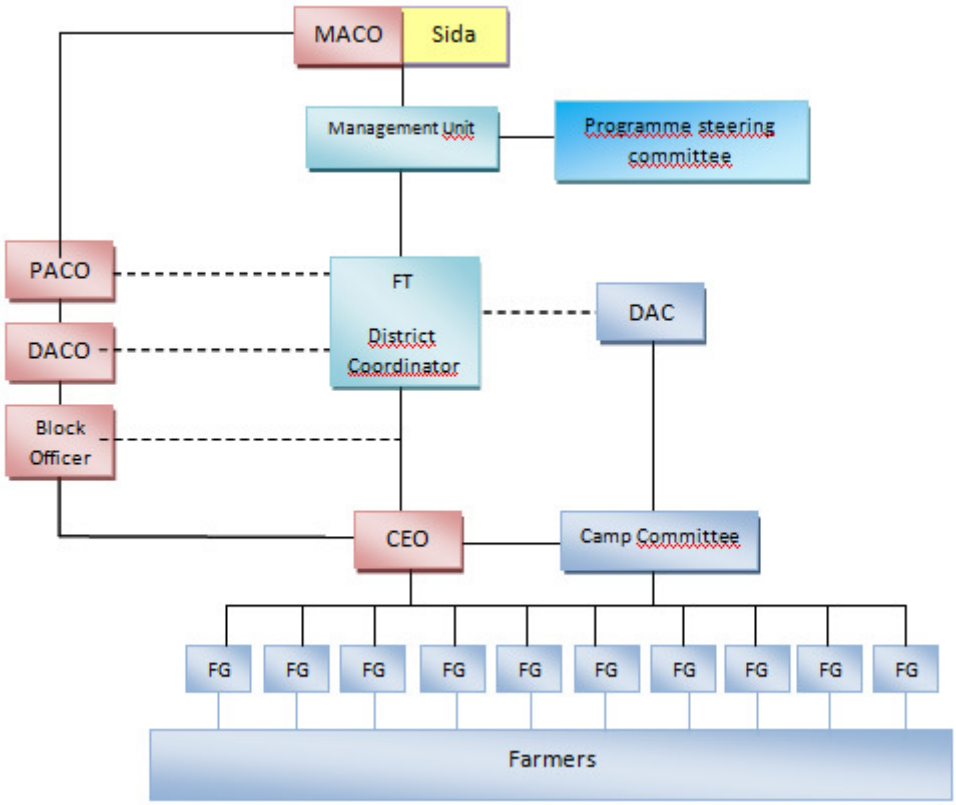

Figure 1.2: The organisation of ASP (Scandiaconsult Natura AB, 2002, p. 48).

The CEOs were the link between ASP, MACO and the farmers and had monthly meetings with farmer groups as seen as FG in *Figure 1.2*. The farmer groups consisted of one farmer from each household in every camp[1]. In these meetings the CEOs could receive information regarding what knowledge the farmers experienced a lack of and what kind of training they needed. This information could then be used at district level when the CEOs had their monthly meetings with the district coordinators (Chipeta et al, 2008, p. 29). By this way of working the programme was driven by the demand of the target group, the farmers, enabling them to pull the information down the ASP-system rather than having it pushed on them. This meant that the farmers could receive the right information and training at the right time[2].

The CEOs also had meetings with camp committees on a regular basis. The camp committees consisted of one or two farmers from each of the different farmer groups. These farmers were called lead farmers and were the most driven individuals in the farmer groups[3]. The lead farmers also functioned as an extended arm of the CEOs and a helping link between them and the rest of the farmers. They could provide information and training to the others when the CEO was not available[4]. This concept increased the farmers' possibility to receive support in their farming. The camp committees were organised similar to the farmer groups with the difference that their meetings concerned questions of a more strategic character (Ramböll I, 2008, p. 44).

[1] Naison Siamasuku, CEO, Gwembe, interview 10th of March 2010
[2] Sara Sikota, farm management officer, Monze, interview 9th of March 2010
[3] Harrison Michelo, lead farmer, Sedumbwe, Choma, interview 11th of March 2010
[4] Agnes Mukamaambo, CEO, Sedumbwe, Choma, interview 11th of March 2010

1.3.2.2 The Backstopping System in ASP

A backstopping system was integrated in ASP, which ensured that information and training always were available when needed. This made it possible to ensure that the quality of the extension was high throughout the programme. The most important parts in the backstopping were the meetings between the different entities in the organisation see *Figure 1.3*. The meetings between farmers and CEOs, CEOs and district coordinators, management unit and the facilitation teams, are examples of the backstopping system. At the meetings between farmers and CEOs, questions could arise which the CEOs were unable to answer. By collecting these questions and bringing them to meetings at district level, the problems could be solved and the knowledge could be spread among other CEOs. This was to ensure that the farmers' progress continued (Chipeta et al, 2008, p. 23).

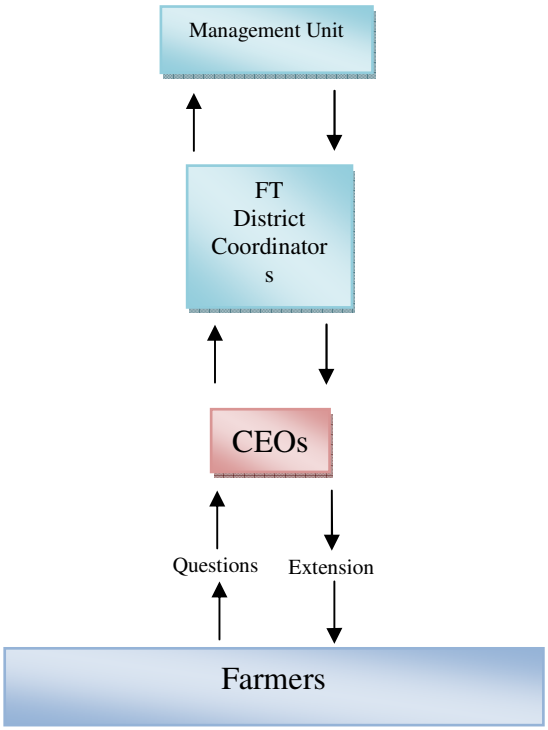

Figure 1.3: The idea of the backstopping system.

1.3.3 The Extent of ASP

According to the original plan, ASP was planned to run during 2003-2007 and include 40 000 farming households in 200 camps. The programme was divided into two phases, the first phase during 2003-2005 and the second during 2006-2007, each to contain 20 000 households (Scandiaconsult Natura AB, 2002, p. 95). However in 2005 it was decided to expand the second phase to include 4 000 additional households in 40 new camps (Ramböll I, 2008, p. 3). In 2007 there were still money left in the budget which made it possible to extend the programme another year to also include the harvest season of 2008[1]. During this last year all the administration of ASP was documented in reports by consultants to be handed over to MACO when

[1] Richard Kamona, deputy director of agriculture MACO, interview 4th of March 2010

ASP finally was phased out (Ramböll I, 2008, p. 3). The different phases of ASP and the extension of the programme are illustrated in *Figure 1.1*.

Zambia is divided into nine provinces which in turn are divided into 72 districts. ASP operated in four of these provinces and had activities in totally 22 districts shown as the coloured fields in *Figure 1.4* (Chipeta et al, 2008, p. 5). In every district there were several camps each consisting of up to about 1 000 households[1]. In each district only camps that fulfilled certain criteria were chosen to be involved in ASP. A camp had to show potential for economic growth. This means that it needed to have the potential to connect farmers to the market in terms of buyers, infrastructure and market places. In addition, sufficient land areas should be available for expansion. Its citizens had to show receptivity of forming communities and it also had to have a good population distribution between the genders and not overrepresentation of one of them. It was also important that the camp was accessible through all seasons, including the rain periods when roads often are destroyed. Finally it required presence of other actors such as donor activities and CEOs in order to be chosen (ASP, 2008, p. 17). In each district 30-32 camps finally participated in ASP (Ramböll I, 2008, p. 71). The provinces chosen for ASP were the Central, Northern, Eastern and Southern with five to six districts in each province. The districts were divided into three types, the ones with high agricultural potential, districts with a threatened resource base and districts with a high number of female headed households (Ramböll I, 2008, p. 74).

The operational costs of ASP were mainly financed by Sida, but towards the end of the programme the Norwegian Embassy contributed with a significant amount of 49.5 million SEK. The final budget of ASP amounted to 346.5 million SEK but only 330.3 million SEK was actually spent (Ramböll I, 2008, p. 35-37). However, MACO was the main funder for the operations in terms of staff (Chipeta et al, 2008, p. 25).

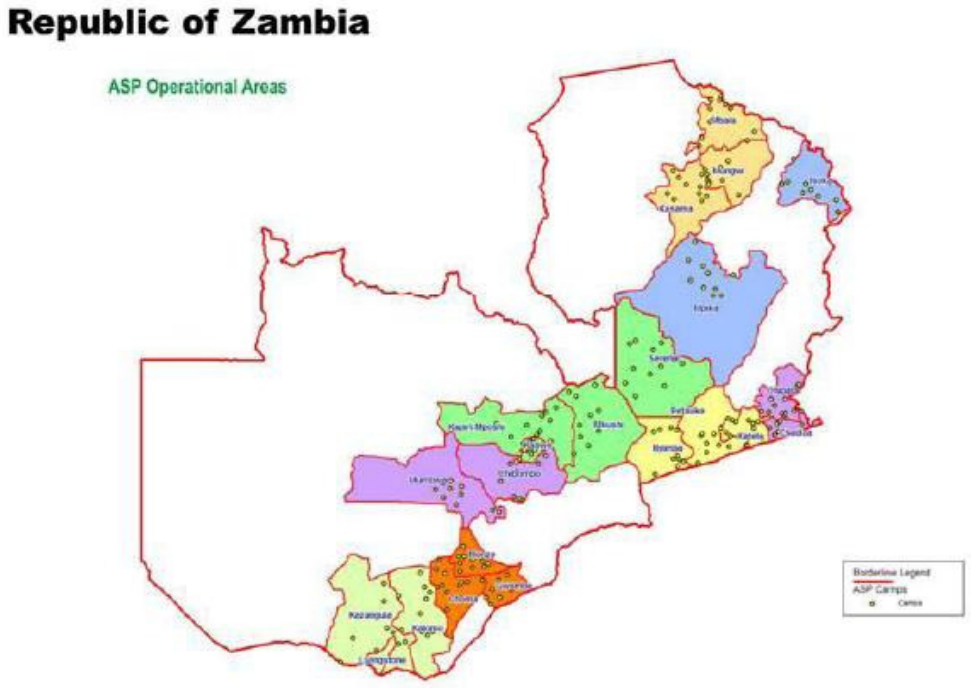

Figure 1.4: ASP operational areas (Ramböll I, 2008, p. 4)

[1] Sara Sikota, farm management officer, Monze, interview 9th of March 2010

The financial allocations were channelled through RNAB and ASP management unit[1]. The funds were not earmarked and should be spent where needed based on local priorities which was made possible by the decentralised budget process of ASP (Chipeta et al, 2008, p. 25).

1.3.4 Important Components of the Extension

ASP was an extensive aid programme with several important components. The business approach permeated the whole programme and constituted the foundation for all activities. The two underlying components for the implementation of the business knowledge into the farmers' daily activities were the facilitation cycle and the household approach. In addition, there were also a lot of minor components nevertheless important to be familiar with to be able to fully understand the idea of ASP (Chipeta et al, 2008, p. 13-15).

1.3.4.1 The Business Approach

With a business approach, ASP aimed to enable farmers to improve their standards of living in terms of housing, food security and basic household needs. It also sought to contribute to the transition from subsistence to a cash economy to boost economic growth on a national level in a long-term perspective (ASP, 2008).

The business approach was an overall principle that the farmers were supposed to consider in all their activities (Chipeta et al, 2008, p. 15). In the beginning of each phase of the programme the farmers received basic education in how to manage businesses[2]. They learnt how to analyse their economic situation and the markets. They were also trained in planning and resource mobilisation and how to use the skills from the perspective of an entrepreneur (Chipeta et al, 2008, p. 15).

All the components of the business approach was summarised into the concept farming as a business. The whole idea behind farming as a business was to change the mind-sets of the farmers and to catalyse a transformation from subsistence farmers to entrepreneurs. ASP simply sought to make the farmers go from net buyers to net sellers, by producing a surplus. With the profit they gain from sales they should be able to do investments in their farming and to generate economic growth in a long-term perspective[3].

1.3.4.2 The Facilitation Cycle

The facilitation cycle was vital for the progress of the programme. It was a process containing eight steps and it was carried out at the community-level by the CEOs and ASP's own facilitators (Chipeta et al, 2008, p. 12-13). An illustration of the facilitation cycle and its eight steps can been seen in *Appendix 2*.

1. **Selection of target areas**
   The first task within the facilitation cycle process was to select which camps within the districts to work in. To ensure to gain effects of the facilitation ASP only chose camps with a potential of change[4].

2. **Awareness creation and community mobilisation**

[1] Olle Otteby, team leader, interview 4th of March 2010
[2] Sara Sikota, farm management officer, Monze, interview 9th of March 2010
[3] Goliath Chooye, senior agriculture officer, Choma, interview 11th of March 2010
[4] Justine Ngosa, chief officer, DACO, Monze, interview 9th of March 2010

When a camp was chosen ASP was introduced to the farmers. It was explained how ASP would operate, that the programme would not give any handouts but instead be an opportunity for the farmers to learn how to develop from their own resources. The farmers were faced with the fact that 30 percent of the participants must be women for the training to start (Chipeta et al, 2008, p. 13). ASP was presented to the farmers as an offer, the farmers decided whether they wanted to participate or not[1]. Only farmers who were open to new routines and wanted to change their current situation and to adopt the concepts were targeted. The farmers had to be able to learn how to keep records and be able to train others. ASP did not target farmers that were too poor, meaning that farmers had to have land and basic equipment to work with[2].

Farmers were replaced if they did not attend meetings and if they did not make the changes expected of them[3]. The programme could replace both single farmers and even a whole camp if they did not proceed as they were expected to. This was called the walk away policy and its purpose was to prevent money being spent on farmers with no will to change and adopt what ASP taught them so that the programme could benefit long lasting effects[4].

At the end of this period interest groups were formed. An interest group was a group of farmers who all expressed the same interest in how they wanted to develop their farming. Group members shared their knowledge, experiences, problems and solutions (Chipeta et al, 2008, p. 13). The interest groups gathered households and individuals with similar needs and interests. For example they were within livestock, cereals, crops, legumes, horticulture, fish keeping, bee keeping and goat rearing. Besides the specific subject the discussions in the groups also included cost analyses, marketing surveys, environmental considerations etcetera (Ramböll II, 2008, p. 11).

3. Opportunity identification

This was a step where the farmers analysed their present businesses and also other opportunities that could be exploited. The analysis involved elements such as costing and marketing surveys as well as environmental considerations. After the analyses the farmers who expected handouts dropped out of the interest groups. The final number of participants in the groups used to end up at 15-20 people and they were composed of both men and women (Chipeta et al, 2008, p. 13).

4. Needs assessment

In the interest groups the farmers assessed their needs and identified the constraints to their businesses. There could be needs in terms of farming techniques, management, information, financial support and commercial and infrastructural networks (Chipeta et al, 2008, p. 13).

5. Action Planning

When the needs had been assessed the next important step of the facilitation cycle was the action planning. The action planning was a strategic process in

[1] Sara Sikota, farm management officer, Monze, interview 9th of March 2010
[2] Leanard Kalima, farm management officer, Choma, interview 10th of March 2010
[3] Sebastian Lubiwda, crop husbandry officer, Gwembe, interview 10 March 2010
[4] Justine Ngosa, chief officer, DACO, Monze, interview 9th of March 2010

which the farmer should identify visions, targets, objectives and activities for the farm within a given time frame. The action planning was then followed up by reflections and, if necessary, adjustments (Chipeta et al, 2008, p. 14).

6. **Resources mobilisation**
   The sixth step of the facilitation cycle was to identify available resources to invest in the business. The most challenging resource to mobilise for the farmers was money for making investments possible (Chipeta et al, 2008, p. 14).

7. **Implementation (including participatory monitoring)**
   After the action planning and resource mobilisation the farmers were supposed to act according to their plans. During this step the enterprise performance of the farm was closely monitored with frequent follow ups (Chipeta et al, 2008, p. 14).

8. **Evaluation**
   The last step of the facilitation cycle was the evaluation where the farmers were supposed to do an assessment of their action plan on the successes and failures and the reasons behind them. Action – reflection – action was a process inherent in the facilitation cycle and through this, monitoring and evaluation took place at every stage in the cycle. The results were used in the opportunity identification stage from where the facilitation cycle was repeated with a new plan or a new enterprise (Chipeta et al, 2008, p. 14).

Compared to previous programmes, ASP put less focus on training. Instead much time and effort was put in preparations and follow ups as being illustrated in *Figure 1.5*.

Figure 1.5: Learning Processes bringing knowledge and skills into practice (Chipeta et al, 2008, p. 24).

Planning and reflecting were the pillar stones in ASP designed to be the developing base for the farmers, 80 percent of the focus was on preparation and follow up. The farmers tried, reflected and saw what went wrong. As a result the farmers developed from their own mistakes and former successes[1].

1.3.4.3 The Household Approach

In ASP the household approach was meant to give a more personal contact between the CEOs and the farmers than the group approach had done in former programmes. In the group approach the households sent one representative from each family to meet with the CEO and together with other families acquire information and knowledge[2]. With the household approach the CEO had meetings with one household at a time. They met once a week to every second week for follow up visits to discuss

[1] Olle Otteby, team leader, interview 4th of March 2010
[2] Farmer group I, Gwembe, interview 10th of March 2010

the household's own needs, questions and problems. Through the household approach ASP provided the farmers with the necessary environment enabling them to solve their own problems (Chipeta et al, 2008, p. 14).

2 Focus of the Thesis

This chapter describes the purpose of the thesis and divides it into two sub questions. These research questions will be described more in detail separately. Finally, the scope of the thesis will be presented.

2.1 Purpose

The purpose of the thesis is to analyse how aid programmes similar to ASP and the concept farming as a business can contribute to poverty reduction and generate economic growth in Zambia. The thesis will chart the effects of adopting the concept farming as a business and the causes behind them.

2.2 Problematisation

To easier reach a conclusion concerning the purpose it has been broken down into two research questions:

- **What are the effects for ASP farmers adopting the concept farming as a business and what are the causes behind these effects?**

  The participating farmers' current situation will be compared to their situation before the programme. The farming as a business concept in ASP had a wide coverage and included many different elements. This question will deal with how the individual farmer adopted the elements and how the farmer was affected by them. Successful concepts, theories and implementation methods will be identified as well as the underlying causes.

- **How can aid programmes similar to ASP be designed and implemented among Zambian farmers in order to contribute to poverty reduction?**

  When the first research question has been analysed it is possible to investigate how aid programmes like ASP can gain sustainable effects on a national level. The analysis of effects and causes will be taken to a higher level, concerning how a programme like ASP and its implementation should be designed.

2.3 Scope

ASP was an extensive aid programme and contained several different aspects. It is not feasible to investigate the entire programme more than just briefly within the given timeframe. The focus of the thesis is therefore to process the parts that concern entrepreneurship, business and the socially and economically sustainable development that the programme wished to generate. The household approach affected both the business and gender perspectives. However, the gender perspective will only be reviewed briefly since focus of the thesis is on business and entrepreneurship. The HIV/AIDS awareness part of ASP does not align with the purpose of the thesis and will therefore not be investigated.

The supervisor of the thesis and her research subject, as well as the group's own interest and previous knowledge, was taken into consideration when selecting parts to investigate. The thesis also had to be within the area of the study team's academic background within industrial engineering and management.

The 44 000 households involved in ASP were spread over several different areas in Zambia as seen in *Figure 1.4*. Due to the prevailing time interval and the financial limits of the study team it is impossible to include all the participating households in the study. Investigations and interviews among the households were therefore only performed in one specific selected province. The Southern province was chosen as the geographical object of the study, including three different districts whereof two were high potential areas and one was an area of low agriculture potential but with identified high female household involvement.

On account of the fact that all provinces in Zambia have different conditions, the result cannot be said to be truly applicable in general for all provinces in the country. The field study will give a more profound insight locally and therefore contribute with a comprehensive view of the situation while most of the thesis' result will be based on experiences from Sida, RNAB and MACO. Conclusions about the national effects of aid with long-term goals will only be based on ASP and reservations are made that the results would not necessarily concern similar projects. The belief of the study team is however, that investigating the impacts of aid in terms of farming as a business in three different districts in Zambia will provide a good notion of how it can generate agricultural and economic development in other areas as well.

3 Research Method

In this chapter the methodology used will be presented along with the strategy and the design of the research. The performed interviews will be presented in a table and the arrangement will be explained in detail. The chapter also includes a short discussion of the reliability and the validity of the thesis.

3.1 Methodology

The ambition of the study team is to obtain a thorough understanding of ASP and how involved individuals perceived the programme. This will be achieved by investigating in depth what happened during the programme and how it affected the stakeholders. It is difficult to obtain this understanding through measurable data and statistics. Therefore the thesis will be conducted through a qualitative methodology. Qualitative studies are preferable for vague subjects that can have several different meanings, which can be interpreted freely (Wallén, 1996, p. 73). The purpose of qualitative studies is to give deeper understanding in one particular problem area together with an overview of the problem environment (Bell 1993, p. 15). Qualitative studies can be of different types, this thesis will be based on qualitative methodology. Such a method can include deep interviews, field studies, intervention studies and participant observations (Wallén, 1996, p. 73). Due to the character and the extent of ASP the most appropriate way to perform the thesis is through a field study with extensive interviews and observations. The research will therefore be based on a three-week field study in Zambia including interaction with farmers and main stakeholders together with studies of existing consultancy reports.

The thesis could have been performed as a quantitative research with statistics of the farmers' development in terms of produce and income. However, this type of result is not in line with the purpose since it does not provide a deeper understanding. It is moreover not feasible for the study team to perform such a research within the given time frame since the result of ASP in numbers and percentages is not available. Additionally, questions regarding feelings and opinions cannot be measured in a quantitative research. For example happiness and prosperity can have different meanings to different people. In such cases the whole situation needs to be taken into consideration, something that is possible when performing more thorough interviews.

Regarding qualitative research, there are both advantages and disadvantages. Interviews with a limited number of individuals will enable the study team to receive a deep and thorough insight in the situation. However, by only being in contact with a limited number of interviewees the results of the interviews might not reflect the results of the whole target group of ASP. Therefore there is a risk that the people interviewed can give misleading impressions and information. In consequence, the study team will have to be accurate when designing the interview templates, performing the interviews and analysing the results.

The two research questions differ regarding the depth of the analysis and therefore different approaches are needed. The analysis of the individual effects and their causes will mainly be based on the impressions and findings about ASP. When analysing the effects and how it can contribute to poverty reduction and economic growth the need to use existing theories is stronger since factors necessary for generating sustainable national effects must be supported by theories of how to reach larger populations with limited resources.

3.2 Research Strategy

The study was divided into three separate stages. The first stage contained the process of preparing the field study in Zambia, the second stage was to carry out the field study and the third stage consisted of analysing the collected data. During the first stage it was important to perform a comprehensive study of ASP. To understand the meaning of the ASP concepts and to enable an extensive analysis of the results, literature studies were made within entrepreneurship and management including organisational behaviour and implementation models. It was also important to attain a broad picture of the agricultural conditions in Zambia to understand the farmers' situation. To achieve useful outcome from the thesis the already existing reports were considered to ensure that the purpose of the thesis had not already been explored. The second stage included the data collection, during this stage the research questions were constantly kept in mind in order to obtain relevant data. The analysis in the third stage aimed to combine findings from the field study with existing theories and previous performed studies to be able to answer the research questions. The three stages of the study are illustrated in a Gantt-schedule, which can be seen in *Appendix 5.*

3.3 Research Design

Before initiating the study the feasibility for the study team to perform a field study in Zambia had to be ensured. Through valuable information and encouragement from SweZam, the Swedish-Zambian Association, Sida and the supervisor of the thesis, the project could be determined as feasible. To obtain a broad view of ASP, it was necessary to interview representatives from all of the main stakeholders. All the stakeholders had different roles in ASP and had different opinions about the programme's results and effects. A chart of interviewed stakeholders and their organisational levels in ASP can be seen in *Table 3.1* below.

Table 3.1: A brief chart of organisations necessary to meet and their levels in ASP respectively.

Level	Organisation
Top level	MACO, Sida
Management unit	Ramböll Natura AB
District level	DACO, CEO
Household level	Farmers

The design process started off with dialogues which involved Sida-employees at Sida in Stockholm and at the Swedish Embassy in Lusaka. Sida-employees in Lusaka introduced the study team to Dr. Richard Kamona, Deputy Director of Agricultural Extension at MACO in Lusaka. The part of the field study including the district visits was designed in dialogue with Dr. Kamona. Starting from the priorities of the study team and based on the ASP-potentials of the provinces described in section *1.3.3 The Extent of ASP,* as well as the provinces' accessibility and the limited timeframe, a decision regarding what districts to visit was made. Three districts was planned to be visited in order to collect input from DACOs, CEOs, farmers and other people with connection to ASP through interviews. The districts were Monze, Gwembe and Choma. The study team wanted to collect input from both well performing and poor performing ASP farmers as well as farmers that did not participate in ASP. The camps

visited and farmers met were chosen in consent with the local DACO staff and consideration of the mentioned farmer criteria. The final schedule of the field study can be seen in *Appendix 1*.

3.4 Interviews

The objective of the interviews with Sida and MACO at top level was mainly to receive a deeper understanding of the programme and how it was carried out beyond what could be learnt from the consultancy reports. Secondly the expectation was to collect the interviewees' opinions regarding ASP in general and the critical factors affecting its result. Their views on the effects of the programme on individual farmer level and national level as well as their opinions about how a possible new programme should be carried out were of great interest.

The interview with a representative from the management unit of ASP focused on the implementation of the programme and the communication functionality between the top level stakeholders, the management unit and DACOs. At district level the main goal was to learn about the implementation process of ASP, how the training of district staff and farmers was carried out. At household level, however, focus was set on the effects of the programme in terms of what concepts the farmers had adopted and how it affected them. The study team wanted to find the effects regarding income generation, standard of living, agricultural expansion and whether any dispersion effects could be identified.

All the interviews were based on predefined interview templates with various contents depending on the interviewee. When designing the interview templates the different attitudes of the stakeholders related to their roles in the programme had to be taken into consideration. The templates are attached in *Appendix 4*. Initially five different question templates adjusted for Sida, MACO, RNAB, DACO/CEO and the farmers were designed. A complete list of people interviewed and met can be seen in *Appendix 3.*

3.5 Complications during the Work Process

During the work process in Sweden the group experienced some complications regarding the build-up of the necessary contact network in Zambia. Since the staff of ASP were recruited through specific project employments most of them were no longer active in the same type of engagements. It was therefore difficult to get in contact with well-grounded and updated staff willing and able to assist during the field study. To establish contacts with MACO while still in Sweden also turned out to be a complicated and long-lasting process. There were great uncertainties about the possibilities to meet with MACO and to receive support from them regarding the farmer contacts until shortly before departure to Zambia.

It was sometimes difficult to make the interviewees realise that the study was done entirely independent from Sida, MACO or other ASP related organisations. Due to this fact it is possible that some of the answers were coloured in a way the interviewees thought would be most appropriate. As an example one of the interviewed DACOs expressed a wish to compare the results of his district competitively with the ones from the other districts, which might have affected him when suggesting farmers the study team could interview.

3.6 Reliability and Validity

The goal of the study team was to present a result as accurate and reliable as possible. During the data collection the study team put great focus on the importance of keeping an objective mind and to not interpret or colour statements from the interviewees with personal values. To ensure a good reliability the study team were flexible during the field study and continuously updated the interview templates. From the outcome of each interview the question templates were updated with follow up questions and new questions that came up during the process. This assured that the collected data stayed in line with the main purpose and contributed to answering the research questions and securing validity. The farmers might have felt that they had less to gain but more to lose if they spoke negatively about the aid programme they participated in. To avoid dishonest answers it was important to ask open questions and to avoid leading questions as well as to clarify the background and the purpose of the study before starting an interview.

4 Theoretical Framework

This chapter presents theories and methods that are useful when analysing and interpreting the research findings. The theoretical framework includes theories concerning economic growth, implementation, dispersion effects, business strategy and sustainable development.

4.1 Economic Growth

Economic growth is important not only for rich industrialised countries in the West, but for all countries and without growth it is hard to improve people's living standards. Culture, education and corruption discouragement are some factors considered to be essential for economic success (Baumol et al. 2008, p. 122).

4.1.1 Attitudes and Culture

A culture with incentives for entrepreneurial spirit is vital since entrepreneurship is a prerequisite for growth. David Landes, one of the world's leading economic historians reached the conclusion: *"If we learn anything from the history of economic development, it is that culture makes all the difference."* Some countries grow more rapidly and improve their living standards quicker than others since their cultures simply are more conductive to growth. However, there are examples of countries turning their economies around in a time period certainly shorter than the cultural view would imply. Although culture is important, institutional environment clearly matters as well. Several examples have shown that institutions together with policies can have a strong impact on culture in a period much shorter than a full generation (Baumol et al. 2008, p. 122).

4.1.2 Education

Various multilateral organisations such as the United Nations and the World Bank, have all pointed to the important role of education in reducing poverty and contributing towards stable and more tolerant societies. Educated people are more informed citizens thus improving the functionality of democracy. A more educated society also produces more innovations which enhance growth. As citizens gain more skills the economy grow more rapidly. For example, a highly trained worker may be the equivalent of two untrained labourers. In addition, education yields benefits to society beyond those that can be captured by individuals themselves. Education is a necessary but not sufficient condition for economic advance since there are more factors that have to be considered (Baumol et al. 2008, p. 125).

4.1.3 Corruption

A public official who is acting for personal gain by violating the norms of public office and harming the interest of the public to benefit a third party is corrupted. The public official is awarded for giving access to goods and services the third party would not otherwise obtain (Sampford et al. 2006, p. 45). Corruption is a major problem and is blamed to be a significant reason to the economic misery in many African and other poor countries. Corruption stunts growth in a number of ways. It diverts entrepreneurial energy away from productive activities like the development and adoption of innovations toward socially wasteful endeavours. The cost of losing the productive services of these potential innovators is perhaps the greatest cost of corruption. In addition, by increasing the cost of doing business corruption discourages investment both at home and from abroad. The IMF has estimated that corruption can impose as much as 50 percent tax rate on foreign investment, which

discourages foreign influx of capital (Baumol et al. 2008, p. 76). In short, corruption can be said to undermine the fairness, stability and efficiency of the whole society and its ability to deliver stable and sustainable development to its citizens through democratic institutions (Sampford et al. 2006, p. 1).

4.1.4 Aid

There are good theoretical reasons why foreign aid may be able to raise growth rates, especially among the poorest nations of the world. However, the evidence for this preposition is mixed. If aid for public goods such as health systems, sanitation, roads and infrastructure can be delivered in a way that support these entities, then it has a constructive role to play. However, aid must be viewed as a short-term development strategy and the developing countries have to find their own way of reaching economic growth (Baumol et al. 2008, p. 135).

By improving human health, education and by facilitating the construction of public infrastructure, aid can markedly improve the situation of hundreds of millions of people around the world currently trapped in poverty. However, there are other empirical studies which have reached a different conclusion concerning this issue. Among others a study at New York University shows that there are no linkage between aid and growth (Baumol et al. 2008, p. 175). In the same way Swedish Agency for Development Evaluation (SADEV) states that no positive correlation between aid and economic growth in developing countries can be seen (SADEV, 2007, p. 1).

There are several reasons why aid may not succeed in enhancing growth. One of the most important is the fact that foreign aid almost uniformly is or must be distributed through governments of poor countries. The leaders of the recipient governments may misuse the aid by spending it on non-growth generating activities. To reduce the leakages in the aid pipeline associated with corruption, inefficiency or substitution the aid must be delivered directly to the intended beneficiaries. Even if the problems with the government distribution could be solved the beneficial impact of aid can be offset in other ways. The influx of money can push up a country's exchange rate and thereby make its exports less competitive on the world markets. One study has documented a clear statistical linkage showing that in countries that receive more aid, labour-intensive and export-oriented industries grow more slowly than in other countries (Baumol et al. 2008, p. 178).

4.1.5 The Poverty Trap

The poverty trap is a phenomenon which creates a negative economical spiral. No or low income result in low savings and low investments which in turn result in low productivity. In other words, there will more or less be no development at all, which is the situation in many African countries. This negative development spiral is illustrated in *Figure 4.1* (ASP, 2008, p. 83; Baumol et al. 2008, p. 177).

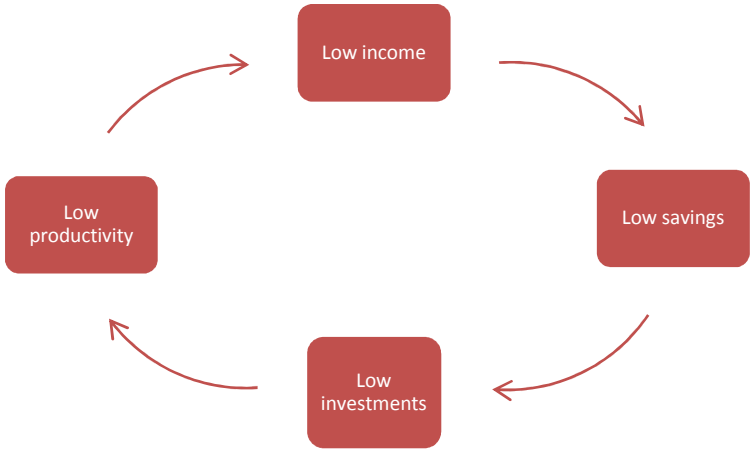

Figure 4.1: The poverty trap.

4.2 Implementation

When introducing new concepts and methods in regular work of change it is fundamental to have an accurately elaborated implementation plan. Two essential implementation models in the information system industry can be described as opposites in their extreme nature. The first one, called Big Bang implementation, aims to make a complete implementation targeting all the business units at once and implementing all the software modules simultaneously. The other important implementation model is the phased implementation which aims to implement module by module or business unit by business unit in batches. The advantage of the phased implementation is the increased flexibility and the reduced consequences of mistakes in the implementation. It is more manageable to implement one module at a time and it also facilitates the opportunity to adapt quickly from the experience gained from the early implementation and to use the more efficient methods hereafter. The Big Bang implementation can be very difficult to manage due to its big proportions (Magnusson & Olsson, 2008, p. 96).

4.2.1 Business Strategy and Management

An organisation that does not united follow its strategies is most certainly one that does not function properly. If an organisation does not have a uniform view on the objectives and goals, all attempts to make a change will be rather complex. The result is that the organisation will be pulled towards different directions and the efforts become straggling. Therefore the presence of a well communicated and established business strategy is of great importance for the outcome of the work of change (Magnusson & Olsson, 2008, p. 103).

4.2.2 Self-Ruling Production Teams

It is identified that by being in control of what you do, basic psychological needs can be satisfied. Self-ruling production teams are examples of this. When working together in teams and with a high level of self control the output can increase. The phenomenon can be explained by a situation where a group is involved in the planning and decision making process, this lead to the group feeling more responsible for its own activities and therefore work harder towards the common goal. This kind of group also satisfies the needs of social contact and sense of status and control in its own actions (Rubenowitz, 2008, p. 87-91).

However, in order to work in a good and efficient way there are some prerequisites that need to be met. At first, the group needs to have a well-defined workplace and be able to be identified as one single unit. The team also needs to have well-defined goals and visions. This facilitates teamwork since the members of the group have equivalent goals to work towards and they know what they want to achieve. In addition, the team needs to have a certain amount of independency in their work, it contributes to the team feeling responsible for their actions since they by themselves have to decide in what way they want to progress. Independent teamwork also makes the group members feel important for the organisations they are a part of and it is increasing their well-being (Rubenowitz, 2008, p. 87-91).

4.3 Performance Reviews

A supervisor can help its adept to develop by clarifying what is expected from the adept. The supervisor can continuously give information about the perceived progress and one method to give the adept a clear goal concerning his effort is through performance reviews. These reviews can be characterised as prepared dialogues between supervisor and adept and the purpose is to contribute to their respective development. During the reviews the supervisor and adept should set up a work plan for a certain time period. At the end of each period the outcome should be assessed and discussed between them. However, it must be clear that the system of performance reviews is an extra burden for the supervisors, particularly regarding the consumed amount of time. It is very important that the supervisors listen during the dialogues and not take a dominating role. The supervisors should also give the adept a chance to freely speak about their work and progress (Rubenowitz, 2008, p. 11-12, 14).

4.4 The Chasm Theory and Dispersion Effects

The Technological Adoption Life Cycle (TALC) is a model for understanding the acceptance of new products among customers developed by Moore (1999) as a part of his chasm theory. It describes how targeting the right group of buyers can result in great dispersion effects through very small efforts of directly reaching the intended group of people.

The desired group of adopters can further be divided into groups depending on their response to a discontinuous innovation based on a new technology, which can be seen in *Figure 4.2.* The innovators are said to pursue new technology products aggressively simply for the pleasure of exploring the new properties of the device. They constitute a test group for other adopters and their level of satisfaction with the product might strongly affect the progress of the TALC. The early adopters are almost as quickly responding to the introduction of new technology as the innovators. The difference is the reason to their adoption. They adopt new technologies for the benefits they believe to gain from them and not to explore the properties of the device as in the case of the innovators. The similarities however are due to the fact that their buying decision is based on their intuition rather than well-established references of the technology.

The early majority share some of the early adopters' reasons to adoption but put more focus on the practicality of the new technology. They tend to wait and see the results of the innovators and early adopters before adopting it themselves. The group of people connected to the early majority can be estimated to equal one third of the entire adoption population and is therefore an important group to reach. Without them it is hard to receive any substantial profits or growth. The major difference between the

early and late majority comes down to the fact that the late majority will not adopt the technology even though they can see the benefits of it. They will wait until the new technology has become an established standard and might even then still hesitate before adopting. The late majority is often a group just as big as the early majority and therefore as highly profitable and important to reach. The last group of adopters is called the laggards. Those consist of a population not willing to accept new technologies at all and therefore represent a group not worth targeting at all (Moore, 1999, p. 8-19).

The gaps between two adjacent adopting populations in the TALC are what Moore refers to as "*cracks in the bell curve*" represented by the *Figure 4.2*. The most significant transition in the TALC is the one between the early adopters and the early majority. When adopting and implementing new technologies the early adopters are looking for a competition advantage by lowering their product costs or time-to-market. The early majority on the other hand is looking to adopt a productivity improvement for their already existing operations. The early majority therefore demand an error-free functional product while the early adopters seek an innovative product still in some kind of developing stage. The gap, or chasm as it is called, is consequently due to the fact that the early adopters do not constitute a good reference for the early majority. Their different expectations make them two slightly incomparable adoption groups and the problem of the chasm is the lack of a useful reference that is needed for the early majority to adopt. If the chasm is not taken into consideration the dispersion from the early adopters to the early majority will be inhibited (Moore, 1999, p. 8-19).

Figure 4.2: The technological adoption life cycle (<www.iec.org> [10-05-03]).

4.5 Sustainable Development

Sustainable development is a subject that becomes more important every year and takes more focus in ventures' and businesses' activities. A frequently appearing definition of the concept was stated by the Brundtland Commission. It says that "*Sustainable development is a development of a society that is able to supply the daily needs without adventuring the needs of future generations*" (<www.lu.se> [10-02-15]).

Sustainable development is usually said to be composed of three different dimensions, environmental, economic and social development. Therefore, sustainability is required

in each of these three subsystems and the systems must be coordinated. The question concerning what dimension to prioritise in favour of another is an ongoing debate. If a company or organisation put focus on the dimension of economic sustainability they prioritise cheap products and materials that can affect the environmental dimension in a negative way. The environmental dimension is the one that must be prioritised. Without a sustainable environmental system it does not matter what happens regarding economic or social aspects in the long run (Ammenberg, 2004, p. 41).

4.5.1 Social Entrepreneurship

The concept social entrepreneurship can mean different things to different people, but one thing is common for all, that social entrepreneurs are different from regular entrepreneurs. Social entrepreneurs do not primarily strive for economic wealth, for them the social mission is explicit and central. A social entrepreneur seeks to create systematic changes and sustainable improvements and looks for a long-term social return on investment (SROI). Even if they act locally, their actions have the potential to stimulate global improvements in their chosen areas. It can be educational, economical, environmental improvements or in any other social field. With limited and scarce resources they are skilled at using them efficiently and they leverage their limited resources by cooperating with others (Dees, 2001, p. 2-5).

A downside, however, is the fact that it is hard to value social improvements and public goods. This makes the market for a social entrepreneur quite complex and as a result it is much harder to determine whether or not a social entrepreneur is creating value and if it is being done in an efficient way (Dees, 2001, p. 3).

4.5.2 Social Return on Investment

SROI works as a complement to the ordinary return on investment (ROI). SROI measures the non-financial outcome of a project and helps organisations to understand and quantify the social, environmental and economic value they created (<www.proveandimprove.org> [10-05-03]).

The SROI is a much broader concept of value than just financial. It shows how change has been created by measuring the different value aspects and presenting them in monetary values. These values are relevant to people or organisations that have experienced or contributed to the project and an SROI analysis can satisfy many different purposes and help with a variety of activities. It provides useful information to investors, funders and the public sector services. For a funder or investor the SROI can be used to measure the overall returns on investments and it is also a method of estimating whether the investment performed against the funder's objectives. The public sector can use SROI to see values beyond just the financial return of a contract and see the outcome in a broader perspective (<www.sroiproject.org.uk> [10-05-03]).

5 Research Findings

This chapter presents the outcome of the interviews and deals with all the important facts, opinions and impressions the study team has experienced during the pre-studies and the field study. The chapter also includes relevant findings from the pre-studies of existing consultancy reports.

5.1 Working Environment and Attitudes in Zambia

The agricultural sector of Zambia represents the biggest part of the labour force in the country. However, the farming knowledge and interest are of various rates among the farming population. MACO seek to improve the farmers' situation but their methods and prioritisations are sometimes inadequate[1].

5.1.1 Farming in Zambia

Because of the limited prerequisites many Zambians become farmers only in order to make a living. The education opportunities are limited especially regarding higher education. The University of Zambia is the only academic institution in the country covering no more than 11 500 students (<www.unza.zm> [10-05-03]). Those who, despite the limitations receive an education of a higher level or a complete professional training are still not guaranteed to be integrated into the labour force of Zambia[2]. The weak private sector cannot occupy everyone, neither educated nor uneducated people. Joining the farming population becomes a natural alternative for these individuals. Their interest in farming might therefore be inadequate since farming is not their primary choice of occupation. This might also affect the output of their farming and limit their development since they often become subsistence farmers with no profits[3].

In order to make the business approach work properly, the attitude among farmers must change and this will require patience and time. ASP was important because it tried to make the farmers see their enterprises in a bigger perspective, that they are a part of the nation's economy. However, it is not enough that the farmers change their attitude, also the whole society's view on farmers must change[4].

Generally farmers in Zambia have not had a culture of planning and preparing of upcoming harvest seasons. After the harvest season many farmers have been satisfied with their hard work instead of planning for next season[1]. As a result of this culture the farmers miss their opportunity to adjust their coming seeding according to market demand, future needs and beneficial seed timing[5].

In Zambia there is usually a clear difference between the gender roles within the farming. If the husband is not around, the farming activities can sometimes not proceed. Normally the husband decides everything, crops and income are registered in his name even for the produce that his woman sells at the marketplace. Theoretically the husband could use his income to finance a marriage with a new wife[6]. Farmers in

[1] Olle Otteby, team leader, interview 4th of March 2010
[2] Richard Kamona, deputy director of agriculture, MACO, interview 4th of March 2010
[3] Eva Ohlsson, Sida, interview 3rd of March 2010
[4] Alfred Sianjase, district coordinator, Kalomo, interview 10th of March 2010
[5] Constantine Jolehya, lead farmer, Manungu B, Monze, interview 9th of March 2010; Richard Kamona, deputy director of agriculture, MACO, interview 4th of March 2010
[6] Justine Ngosa, chief officer, DACO, Monze, interview 9th of March 2010

Zambia usually do not see their farming as a common activity. Instead they divide it into the man's chicken, the woman's chicken and the child's chicken for example[1].

The interaction between the farmers and the market is very important. When an aid organisation contributes to an increased productivity at household level it is vital to also put some effort on the market side in order to benefit from the increased produce. To accomplish these improved connections between the farmers and the private sector, ASP established new marketplaces in several districts (Scandiaconsult Natura AB, 2002, p. 61). Another example of how the linkages could be improved was the contracting of a Zambian crisp factory. The routine of the factory was to buy all their potatoes from a South African supplier. The Zambian government insisted that the factory should buy all their potatoes from ASP farmers instead, which since then is the case[2]. An additional aspect of the farmers' contact with the market is that the farmers generally have troubles to finance investments. In Zambia there is a very high interest rate of approximately 30 percent, which makes it hard to make loans profitable. It is also difficult for the farmers to have loans granted[3]. Therefore the farmers have to generate their own capital when they want to make an investment.

5.1.2 Moral Issues in Zambia and Difficulties Working With MACO

The fact that there were several different stakeholders involved in ASP resulted in both benefits but also some complications. Sida experienced difficulties in their cooperation with MACO since they had very different opinions in certain issues. One of these issues concerned the management of ASP where Sida thought that MACO needed to be complemented with a consultancy consortium[4]. MACO on the other hand considered that it would be better if it handled the entire programme itself. In the end it was mainly involved in the staffing of ASP while the final decision-making was made by the consultancy consortium. The experience from former Sida-programmes is that part of the invested money would be spent on things of no use to the programme, such as new vehicles and conference trips for the employees. Several of the interviewees were of the same opinion and believed that the ministry were having troubles with corruption. Based on previous experiences it is likely that if MACO would handle the entire programme itself, money from Sida will disappear on its way through the ministry and not reach the actual target group[5].

The fact that MACO lacks a structure for rewarding or punishing employees leads to an unfavourable distribution of the resources[6]. There are no incentives for the MACO employees to strive for improving the farmer situation instead of trying to enhance the employment situation of their own. This might result in some of the employees maximising their own profits rather than making sure the resources reach their intended purpose. Another factor behind this is the allowance system in MACO. Parts of MACO's day to day activities depend on allowances and the employees therefore tend to prioritise issues maximising their income instead of what is most contributing

[1] Justine Ngosa, chief officer, DACO, Monze, interview 9th of March 2010
[2] Alfred Sianjase, district coordinator, Kalomo, interview 10th of March 2010
[3] Eva Ohlsson, Sida, interview 3rd of March 2010
[4] Eva Ohlsson, Sida, interview 3rd of March 2010; Olle Otteby, Team Leader, interview 4th of March 2010
[5] Alfred Sianjase, district coordinator, Kalomo, interview 10th of March 2010; Eva Ohlsson, Sida, Interview 3rd of March 2010; Olle Otteby, team leader, interview 4th of March 2010
[6] Olle Otteby, team leader, interview 4th of March 2010

to the development of the farmers. However, it is not the person itself that deliberately generates this behaviour but rather the culture in which it has grown up[1]. The Swedish Minister for Development Assistance, Gunilla Carlsson, stated that there have been problems with corruption in Zambia: "*We experience an estimated loss of Swedish taxpayers' money of five to eight million SEK annually*." (<www.svtplay.se> [10-05-03]). Team Leader Mr. Olle Otteby and Sida employee Mrs. Eva Ohlsson also experienced a culture of corruption in parts of their involvement with the ministry.

During the introduction of ASP back in 2002 team leader Olle Otteby presented the programme as not being "*a support programme, it is a business development programme, it just happens to be within the agricultural sector*". For this statement he later on had to go to the direction of MACO to make an excuse. He thinks the reason that MACO disliked his statement was that business is seen as immoral in Zambia. Especially concerning middlemen since they make money from others work, though the market system would not work without them[2].

Before the start of ASP there were different opinions regarding the extent of the programme. MACO wanted to help all of the farmers at the same time and did therefore, initially, not like the basic idea that ASP only targeted a limited number of farmers[2].

5.2 The Development of the Farmers

Throughout the programme farmers have experienced a total change in their way of working and running their farms. By applying new concepts and tools they have learnt how to run their farms as businesses. A big difference can be seen between the participating and non-participating farmers.

5.2.1 The Training in ASP

The training of the farmers during ASP was organised and led by the CEOs. They held lectures and demonstrations for both individual farmers and groups. The goal with the demonstrations was to teach the farmers the best way of working according to ASP. The CEOs also brought the farmers to different lead farmers so that they could gather inspiration to their own farming. Most of the CEOs used to train farmers before as well, but during ASP they could meet more often as a result of increased transport resources.

The CEOs received their knowledge from a two week long education programme led by staff from the ASP management unit. They were taught about the business approach, the facilitation cycle and the household approach. During the programme the CEOs had continuous contact with staff from ASP and DACO officers so they could ask them for help if they did not have enough knowledge themselves to help farmers with their problems[3].

During ASP the training were carried out with a bottom-up perspective. The farmers had to identify their own needs and then join interest groups that worked with their kind of interests. When the farmers themselves indentified their needs and possibilities they worked harder to reach their goals. Since the farmers were organised

[1] Eva Ohlsson, Sida, interview 3rd of March 2010; Olle Otteby, Team Leader, interview 4th of March 2010
[2] Olle Otteby, team leader, interview 4th of March 2010
[3] Agnes Mukamaambo, CEO, Sedumbwe, Choma, interview 11th of March 2010

in interest groups the training could be adapted to the farmers needs and still be effective in terms of time. In addition, despite the fact that there was only one CEO on every 100 farmer during ASP, the achieved results were better compared to former programmes in which there was one CEO on every 30 farmer[1]. The training of the farmers was during ASP more focused on business, preparation and follow-ups than it was before. After the programme has ended many of the CEOs still use the concepts and the way of working they learnt during ASP, but now they do not have the same amount of transport resources[2].

5.2.2 Farmers Achievements and What They Have Learnt

Famers have during ASP learnt to see their farming as a business and how to make it profitable. Before the programme they could for example sell their livestock for the same price as they paid for it. Now they sell for higher prices because they know that they need to gain profit from their work. They know how to make money from their farming and which crops that are the best to seed to maximise their profits[2].

In order to measure the farmers' achievements concerning improved entrepreneurship and business skills, a development matrix was created by the ASP management unit. The matrix includes eight different indicators, each with five levels. Level one represents traditional non-enterprising households, level two aware-non-enterprising households, level three self-confident-enterprising households, level four emerging-enterprising households and level five successful-enterprising households. The eight indicators are:

- Establishment of new businesses
- Improved businesses
- Increased turnover
- Establishment of linkages to service providers
- Savings schemes
- Investments
- Access to financial services
- Insurance

The farmers' improved agricultural skills were measured the same way but with other indicators. These indicators are:

- Diversifying crop production
- Increasing livestock production and productivity
- Supplementary feeding of livestock
- Growing high value crops
- Exploitation of non-traditional farm enterprises
- Utilisation of improved irrigation technologies
- Timely access to foundation seed
- Ability to market seed
- Maintenance and conserving of landraces
- Use and practice of land management practices
- Adoption of labour saving technologies

[1] Naison Siamasuku, CEO, Gwembe, interview 10th of March 2010; Olle Otteby, team leader, interview 4th of March 2010

[2] Agnes Mukamaambo, CEO, Sedumbwe, Choma, interview 11th of March 2010

As can be seen in *Appendix 6* a lot of farmers advanced from lower levels into higher during their participation in the programme, both considering entrepreneurship and business development and agriculture development. Many farmers from phase one have also continued their development even after the programme ended (Ramböll I, 2008, p. 26-31).

Participating farmers have learnt to document their farming in abstract expressions in a better way than before. As a result, they can evaluate their work and learn from their mistakes. From their own experiences, they can learn which crops are best to seed and when it is optimal to seed and harvest them[1] (Ramböll I, 2008, p. 26).

Before ASP many farmers did not plan their work at all and if they did, most of the planning was done by the husband. Due to the lack of planning many of these farmers had a hard time before the harvest since they had not saved enough food or money from last year's harvest. Now the whole family plan the entire season together. They decide what they want to grow, how much and when. They have plans for different time perspectives so they always know how big part of the income they can use and how much they need to save for future investments[1].

Famers have learnt to set up goals, visions and ways to reach them. They had different kind of goals when they entered the programme. Some wanted to buy more assets while others wanted to send their children to school, improve their farming skills and increase food security. Most of them achieved their goals. Today, after every harvest, famers compare their produce with their goals and analyse the possible differences. They learn from their mistakes and change the way they carry out their work until next season (Ramböll I, 2008, p. 26).

Farmers were taught how to use market information in order to maximise their profits. Now they try to seed the most profitable crops, sell at the right time and to the purchasers that offers the highest prices. Before participating in ASP some farmers grew crops without knowledge about the demand. For example, some farmers the study team met in Gwembe, did not know what they were going to do with the surplus and sometimes they even had to give it away[2].

The Zambian government provides a text message service to the famers so they can gain access to market information in terms of prices of maize. In this way they know the minimum prices for which they should sell their produce. Some farmers regularly use this service while others rely on their own market researches they perform with the knowledge they acquired during ASP. Their selling is also much more organised after the programme than it was before. Small-scale farmers usually have a small amount of produce to sell. During ASP the households learnt to cooperate. They now consolidate their produce to reach new purchasers who only buy large quantities of crops. Farmers also consolidating transports to the market places and thus save money[3].

Before ASP many of the farmers spent their money quite directly after they sold their produce. Nowadays they instead save more money for investments in order to expand their farming in long-term perspective. Some farmers have invested in tools and

[1] Olle Otteby, team leader, interview 4th of March 2010
[2] Farmer group I, Gwembe central, Gwembe, interview 10th of March 2010
[3] Constantine Jolehya, lead farmer, Manungu B, Monze, interview 9th of March 2010

machines to make their farming more effective. For example, one farmer has sold a piece of his land in order to afford to drill a well and buy a water pump[1].

Most of the farmers who participated in ASP, both in phase one and phase two have increased their income. Among the households who participated in phase one, 93 percent of them have increased their income with more than 50 percent. The corresponding proportion for phase two is 66 respectively. Many of the farmers who did not participate in the programme have also increased their income but not to the same extent. The increase of income for farmers in phase one has continued even after the direct facilitation from ASP stopped in 2005. This can be seen in *Figure 5.1* (Ramböll I, 2008, p. 14).

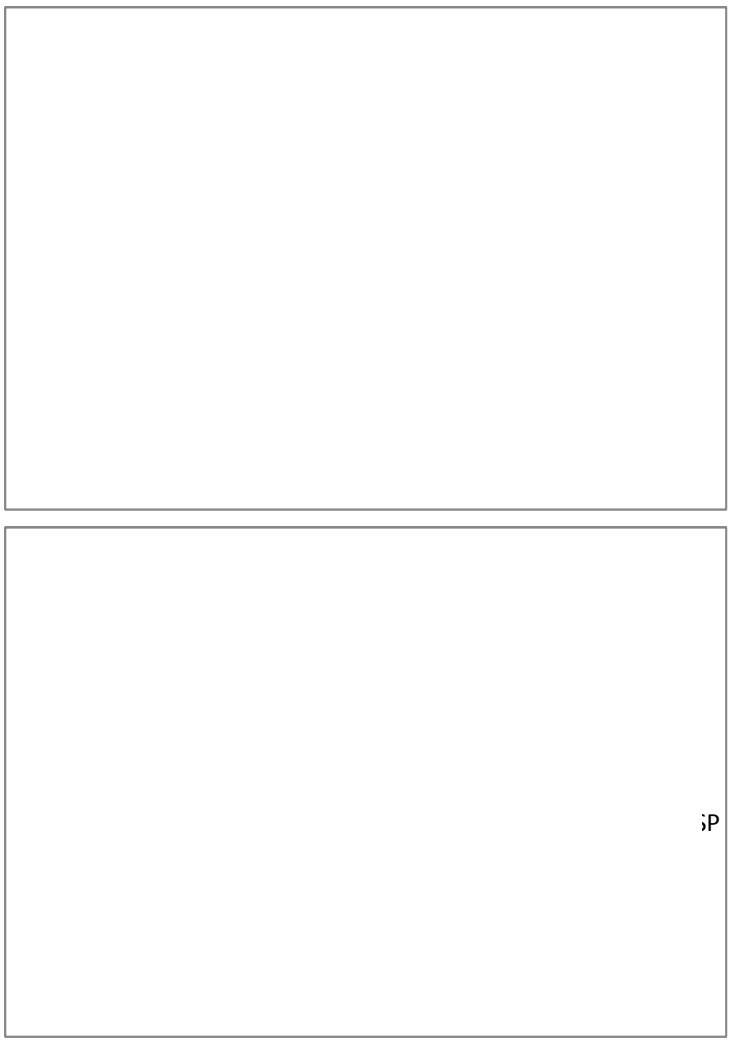

Figure 5.1: Trends in average household income (Ramböll I, 2008, p. 13-14).

However, some of the farmers the study team met have only increased their income marginally after ASP ended. The reason is that these particular farmers joined ASP in a late stage and did not undergo facilitation during a sufficiently long period[2].

[1] Mutinta Kalyalya, farmer, Malende, Monze, interview 9th of March 2010

[2] Farmer group I, Gwembe central, Gwembe, interview 10th of March 2010

When the income among the farmers has increased, many of them have been able to buy more assets. During 2006, 58 percent of the households who participated in phase one and 43 percent of farmers from phase two reported an increase of their assets. The corresponding proportion for farmers who did not participate in the programme is 26 percent. Statistics show that the increase has continued and during the 2007/2008 agricultural season 79 percent of the farmers from phase one has reported an increase in the amount of assets. The statistics considered assets such as ploughs, rippers, radios, televisions, sewing-machines and vehicles. However, the statistics do not say anything about the prices of the assets (Ramböll I, 2008, p. 16).

One of the main goals with ASP was to improve the food security among the farmers, and the proportion of food secure households has continuously increased during the programme. For farmers who participated in phase one the increase has continued even after ASP stopped the direct facilitation in 2005. This can be seen *Table 5.1* (Ramböll I, 2008, p. 21).

Table 5.1: Proportion of food secure households during ASP (Ramböll I, 2008, p. 21).

	Proportion of Food Secure Households (%)	
Year/Household Category	Phase I	Phase II
2003	45	
2004	-	
2005	-	38
2006	60	45
2007	76	66
2008	89	77

As an example of the impact of the increased food security, a CEO the study team met in the district of Choma told that before ASP the camp lagged behind and people were even starving. After the programme the farmers have increased their food security and self-assurance. The atmosphere in the camp is completely different from before. People are smiling and they are hopeful about the future[1].

Many of the famers who participated in ASP have been able to hire labour. During the 2007/2008 agricultural season 64 percent of ASP farmers from phase one and 57 percent from phase two hired labour to their farms. Among the non-ASP households, the proportion of those that hired labour is 41 percent (Ramböll I, 2008, p. 22).

When the farmers have increased their produce and income they have been able to expand the land area they cultivate. Many farmers have more than doubled their growing area and one farmer the study team met has even expanded his area from one to eleven hectares. Farmers have also diversified their farming so that they now grow

[1] Agnes Mukamaambo, CEO, Sedumbwe, Choma, interview 11th of March 2010

and breed more different types of crops and livestock respectively. For example, one farmer the study team met in Choma discovered a demand for sunflower. He carried out a market research and made a decision to start to grow it. His business has run increasingly better since then. Before ASP the main purpose with his farming was basically to generate enough food for the day but now he sells most of his produce. He now sees himself as a businessman and not just as a farmer as he did before[1].

The farmers have started with non-farming activities as well. Some farmers, for example the women the study team met in Gwembe, have learnt to weave baskets. They sell them at the marketplace and in this way their households received another source of income. During ASP farmers also learnt that, in order to be able to price as high as possible, the produce shall be sold at times when demand is high and supply is low. As a result, many farmers chose to invest in storages. In this way they can store the produce at times when the market demand and hence the prices are low. At times with high market demand they can sell the produce to higher prices and increase their income. In addition, as a result of the increased income and better standards of living many farmers experience a decrease in the criminal behaviour such as thefts in the camps[2].

ASP has not just affected the farmers economically but also strengthened gender equality among the households. Before ASP the women were only involved in the farming to a limited extent. Some of them could not even feed the livestock. Now the whole household plan and work together and the households are more equal. Many of the women met feel more independent and happier when they can contribute to the household's income (Ramböll I, 2008, p. 38-39)[3].

5.2.3 A Successful Farmer

To obtain a clear picture of how ASP really affected the participating farmers it is important to see how a specific farmer experienced the programme and how that farmer adopted the concepts. To visualise what the farmers learnt, how they use the new knowledge and to put this into perspective, Mr. Constantine Jolehya and his farming business will be used as a model.

Mr. Jolehya is a farmer in the district of Monze in the Southern Province and his household consists of ten persons in total. Together they decided to join the first phase of ASP in 2002 after having attended an information meeting. Many other farmers chose to not participate in the programme when they found out that there were no handouts involved. Though, Mr. Jolehya chose to participate since he had a big interest in processing and business but was in need of more knowledge concerning these issues. This was his incentive to stay in the programme, which was in line with ASP's ambition to only back motivated people.

At the time Mr. Jolehya and his household joined ASP he was a farmer growing only for subsistence. He only grew maize and had no livestock. Even though he planned to a limited extent, farming was not considered to be a business by him. He had no vision with the farming except from basically surviving and getting food for the day. He received training from the CEO indeed, but usually this took place in large groups

[1] Harrison Michelo, lead farmer, Sedumbwe, Choma, interview 11th of March 2010

[2] Farmer group II, Lukonde, Gwembe, interview 10th of March 2010; Harrison Michelo, Sedumbwe, Choma, interview 11th of March 2010

[3] Farmer group II, Lukonde, Gwembe, interview 10th of March 2010

and it was hard to pick up everything that was said. In addition, the possibility to ask questions about things that were unclear was very limited. Even worse, if asking a question to which other farmers found the answer to be obvious he risked being laughed at.

When he joined ASP he wanted to change his current situation. He had two goals: improve his farming skills and learn more about business. The household approach during ASP was something new to him. He met his CEO about once a week. During these meetings the whole household was gathered and everybody should be active. Together with the CEO they planned and did follow-ups, but most importantly, they set up a vision for their farming. The fact that the whole household attended the meetings made it easier to work in line with the vision and aim at goals that they all agreed upon. To have a vision is simply a key and a foundation for successful farming. He received a lot of advice from the CEO and step-by-step he learnt how to keep to the vision and achieve the goals by learning about planning, budgeting, market analysis etcetera. He was also provided with market information so that he could sell his produce on the market. This was something new to him. Parallel to this he also participated in interest groups to learn from other farmers and their experiences. He joined three different groups that suited his interests and need of knowledge. They met twice a month to share experiences about crops and livestock.

By using the knowledge he acquired from the meetings with the CEO and the interest groups he could see how his farming gradually changed to the better. His improved farming skills made it possible to increase the harvests. The training in planning, budgeting and how to perform market analyses made him realise that he could sell the produce that exceeded the household's need. In this way he generated an income that he could save and use for future investments in the farming. He could now see that his farm actually was a business and that he was a businessman. He used the savings for investments to expand and diversify the farming. Instead of just growing maize as he used to do before ASP, he started to grow crops by demand. This was possible by performing his own market analyses and sometimes using the market information he received from the CEO.

As his farming progressed he experienced that farmers who chose to not participate in the programme changed their minds. They could see how the participating farmers continuously improved their farming, whilst nothing or very little happened to their own. Many of these farmers joined ASP in phase two, despite the no-handouts policy. However, Mr. Jolehya continued to expand and increase the turnover. He finally invested in a motorised sunflower oil press to produce cooking oil. The processing of crops made it possible to hit a new market and he even bought a shop where the household now sell its products.

"*Agriculture as a business is the best thing I have learnt, it has brought me to where I am now*". These are the words of Mr. Jolehya. Today he is an entrepreneur running a farming business that covers 20 hectares. Of these eight hectares is cultivated and he can see the possibilities for expansion. Besides the sunflower oil production and the shop he has also invested in livestock consisting of chickens goats and donkeys. Other farmers can rent the donkeys if they are in need of transportation. Thanks to the income from his business he can also send his children to school. Despite the fact that it has gone two years since ASP ended he has continued to work with the concepts he learnt during the programme. He is even training other farmers that did not participate

in ASP in business and new farming techniques. He is hopeful about the future and together with the rest of the family they are currently working to achieve their next goal: to buy a vehicle so they can manage to bring their produce to new market places further away where the prices are better[1].

5.2.4 A Non-Participating Farmer

There is no doubt that ASP changed many farmers' lives, as in the example with Mr. Jolehya above. To put this into context it is important to also obtain a picture of how a farmer that did not participate in ASP is carrying out its farming. The study team met a non-participating farmer in the district of Choma in the Southern Province.

He grows maize and beans and breeds chickens and goats. However, he does not have a plan for how the livestock will contribute to increased income, but just owns them. The farmer does not know how much land he owns but he claims that he only uses parts of his land for agriculture. He does not have any vision for his farming but in the future he hopes to be able to buy a little hand mill.

He considers himself to be a subsistence farmer and thinks it is hard to earn money from his farming. In order to make some money he performs different kinds of extra work besides his farming. Mostly he works for other farmers but he sometimes also works with road construction. During the last years he has only improved his farming to a small extent.

The farmer has heard about ASP since many participating farmers live in the area but, he does not know any details about it. From the participating farmers he has heard that it was a good programme and he has also seen their progress. Even though he has seen that the ASP farmers have developed a lot he has never asked them for help or advice. The planning of the farm is done by him and the rest of the family is not involved. He has heard of the concept farming as a business from participating farmers but thinks it will require too much effort from him to start learning it. He does not consider his farming is a business[2].

5.3 The Present Situation for MACO and the Farmers

After ASP ended in 2008 many farmers have continued their development and improved their standards of living. Many of the interest groups are still active thanks to the engagement of the farmers'. However, the interest groups are not as organised as during ASP and they are managed by the farmers themselves[3].

The way MACO works after ASP has ended is still the same as during the programme, but not as extensive as then. Nowadays the work is more focused on maintenance rather than more development since the training is reduced due to transport limitations. Assets remain in the areas where ASP operated and are available for the CEOs and other district staff, but a lack of fuel has been expressed as the major problem in all visited districts[4].

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[1] Constantine Jolehya, lead farmer, Manungu B, Monze, interview 9th of March 2010
[2] Name unknown, non ASP farmer, Sedumbwe, Choma, interview 11th of March 2010
[3] Agnes Mukamaambo, CEO, Sedumbwe, Choma, interview 11th of March 2010
[4] Richard Kamona, deputy director of agriculture, MACO, interview 4th of March 2010

When ASP ended the farmers that did not participate were hoping for an extension or a new programme. Even some participating farmers shared their hopes because they thought that they had more to learn[1].

5.4 The Dispersion of the Knowledge among Farmers

Even though a limited number of farmer households participated in ASP, the knowledge has been spread to farmers who did not participate in the programme as well. One reason to this is that the interest groups were open to all farmers who wanted to join, and therefore many farmers could attend the trainings even if they were not a part of programme. The participating farmers, especially the lead farmers also taught their friends and other farmers what they have learnt during the programme. Because many of the interest groups are still active and the farmers still are free to join, the knowledge the ASP farmers learnt can continue to spread wider[2]. ASP created support entities for the farmers, for example improved infrastructure, facilitation of middlemen and better selling channels. These support entities can be used by all farmers and therefore also help non participating farmers to develop[2].

5.5 Problems during ASP and Prospects of a Future Programme

People that have been involved in ASP have experienced different problems. These experiences have raised thoughts about how to design and implement a future similar programme.

5.5.1 Problems during the Programme

The different stakeholders of ASP had clearly different views on the major complications of the programme. However, all the organisations seemed to have strong opinions about the programme structure. Throughout the compilation of the programme, during the programme itself and especially after the end, there have been serious discussions and disagreements about how the ASP organisation should have been composed. The ministry strongly felt that the organisation of ASP should have been completely integrated into MACO and that the ASP activities should be a part of their regular work[3]. Sida and the RNAB representatives on the other hand felt that there was a strong need for a separate organisation at least at management level to control the progress of the programme[4].

In MACO's opinion the actual structure of ASP looked like in *Figure 5.2* instead of presented in *Figure 1.2*. Since Sida hired an external consultancy consortium, two parallel flows of information through the hierarchy of the programme were created, converging at the CEO level. MACO claimed that this caused a bad synchronisation between ASP's and MACO's activities which confused the CEOs[2].

[1] Farmer group II, Lukonde, Gwembe, interview 10th of March 2010
[2] Olle Otteby, team leader, interview 4th of March 2010
[3] Richard Kamona, deputy director of agriculture, MACO, interview 4th of March 2010
[4] Eva Ohlsson, Sida, interview 3rd of March 2010; Olle Otteby, team leader, interview 4th of March 2010.

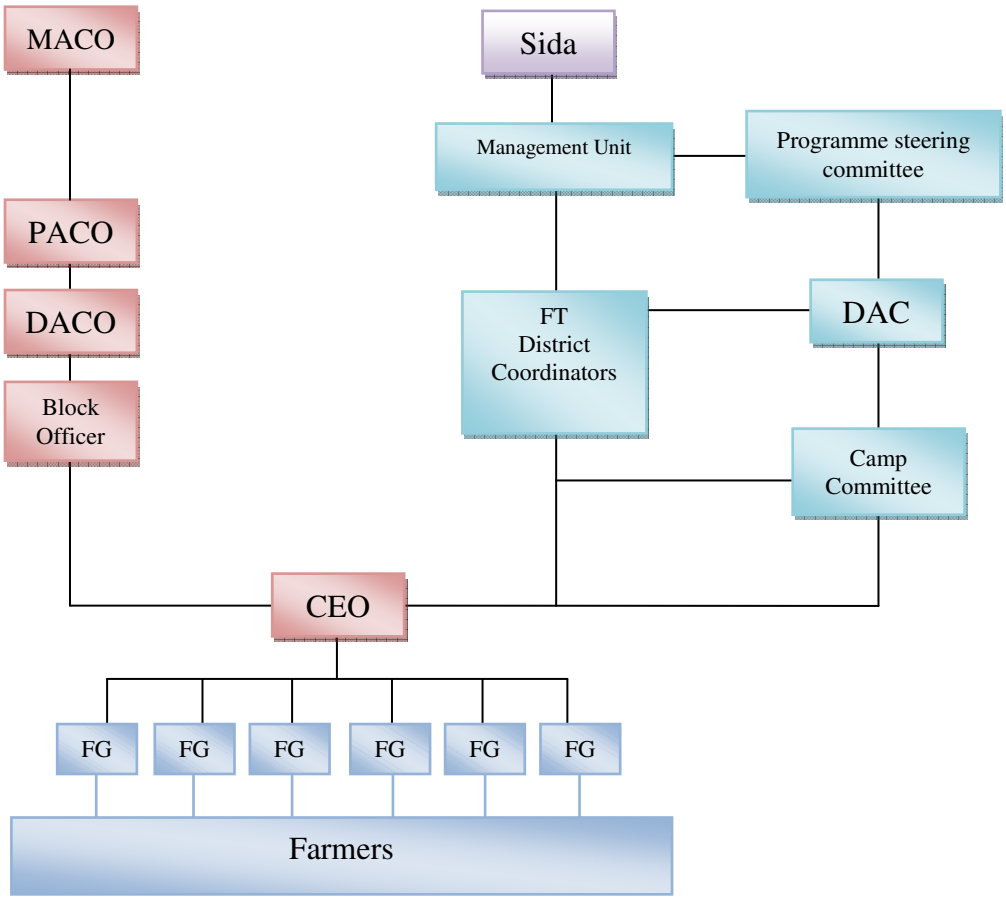

Figure 5.2: MACOs view of the ASP structure.

Other persons the study team met did not experience the same problem. Instead, they stated that the ministry controlled the process completely and had deep insight in the work of ASP at all levels. The reason why MACO experienced bad synchronisation was due to a lack of interest. The cooperation with the provincial and district levels of the ministry worked out a lot better than on the management level, and were considered by both parties as a great success[1].

Even though one of the DACO's opinions aligned with MACO's, none of the other interviewed district officers recognised the described problem. None of the CEOs expressed difficulties about dealing with instructions from two separate organisations. In fact some of them did not see the ministry and ASP as two different organisations[2]. Naison Siamasuku, CEO in Gwembe expressed that *"ASP was not an independent organisation. It was entirely collaborative with MACO and the other partners, and both the daily communication and the implementation worked out successfully"*. This contributed to the belief that MACO's complaints about the structure were rather an issue of empowerment. They wanted to be the highest deciding unit and to have complete control of the incoming and outgoing resources[1].

[1] Olle Otteby, team leader, interview 4th of March 2010; Alfred Sianjase, district coordinator, Kalomo, interview 10th of March 2010

[2] Beatrice Tatila, CEO, Monze, interview 9th of March 2010; Niason Siamasuku, CEO, Gwembe, interview 10th of March 2010, Agnes Mukamaambo, CEO, Choma, interview 11th of March 2010

The involved ASP staff and the district staff of the ministry expressed the increased workload as one of the major complications from a programme point of view. The CEOs experienced an increased pressure to deliver results as a consequence of the improved prerequisites. This together with the fact that they had to combine ASP activities with MACO related activities the workload was hard to manage sometimes. They encouraged the idea of having more staff employed directly under ASP so that these people could focus entirely on implementing ASP's concepts[1].

According to Sida, the major complications concerned the structural issues but in another way than what MACO officials described. They felt that their input had to pass too many levels through the organisation of the ministry before reaching the districts. They requested a structure with fewer levels within MACO or an improved way to manage the resources directly to the district levels. Even though ASP was better than previous aid programmes in which Sida has been involved, too many resources still disappeared on its way to the target group[2].

All the stakeholders of ASP believe that there was a lack of market linkages during the programme. Even if farmers increased their produce it was hard to sell it because they had problems to find purchasers. The reasons to this was both because there is only a few number of them in the surrounding areas and also because most of the ASP farmers produce too small quantities for purchasers to consider it profitable to pick up crops at different farms. The farmers themselves also had limited possibilities to transport their produce to the purchasers. In a new programme more emphasis should therefore be put in market linkages to improve the sales possibilities[3].

5.5.2 Visions of a Future Programme

When ASP ended MACO and some external consultants sketched on a new programme which they presented to Sida in the end of 2008. MACO wanted to run the new programme itself. Sida gave their opinions and feedback on the draft and primarily they thought it was inadequate focus on the household approach. MACO was supposed to modify the programme description together with new consultants, but Sida has in mid 2010 still not received a modified proposal.

ASP has not yet been evaluated officially by Sida. Their evaluation of the programme will be performed during autumn 2010 in cooperation with a Norwegian organisation. The Norwegians will primarily focus on the dispersion effects while Sida will focus on the sustainability of the effects[2]. However, various evaluations have been done by the consultancy consortium and MACO. These states that ASP was a very cost efficient programme because the economic growth among the participating farmers by large has exceeded the total cost of ASP (Harrison, 2008, p. 9; Ramböll I, 2008, p. 37).

[1] Agnes Mukamaambo, CEO, Sedumbwe, Choma, interview 11th of March 2010; Beatrice Tatila, CEO, Monze, interview 9th of March 2010

[2] Eva Ohlsson, Sida, interview 3rd of March 2010

[3] Alfred Sianjase, district coordinator, Kalomo, interview 10th of March 2010;
Eva Ohlsson, Sida, interview 3rd of March 2010; Farmer group I, Gwembe, interview 10th of March 2010; Farmer group II, Lukonde, Gwembe, interview 10th of March 2010; Harrison Michelo, Sedumbwe, Choma, interview 11th of March 2010; Constantine Jolehya, lead farmer, Manungu B, Monze, interview 9th of March 2010; Justine Ngosa, chief officer, DACO, Monze, interview 9th of March 2010; Olle Otteby, team leader, interview 4th of March 2010; Richard Kamona, deputy director of agriculture, MACO, interview 4th of March 2010

A well-developed network takes long time to establish. During ASP's six years of operation a well functioning network was build up. When ASP ended, many employees quit and valuable parts of the network disappeared[1]. Parts of the knowledge disappeared without first being passed on to new employees[2]. This means that if a new programme is about to be set up, it is necessary to build up a new network, almost from scratch.

5.6 Sustainable Development

By trying to contribute to the poverty reduction in Zambia, ASP also contributed to the creation of a sustainable development for the farmers and for the society. The overall ASP strategy was to concentrate on areas where people wanted to be involved, which would lead to the greatest sustainable impact within the given timeframe. To reach sustainable development and to reach the goals of ASP the driving force was entrepreneurship and business development (Ramböll I, 2008, p. 1).

The household approach in ASP aimed to involve all family members and it is shown that the progress with agricultural development and entrepreneurship proved to be greater in gender-empowered household than in household with traditional norms and relations. These families show improved farming skills which can be seen in food security, incomes and standard of living. The training and involvement of all members in the family will most likely contribute to these benefits being more sustainable in a long-term perspective (Ramböll I, 2008, p. VI).

[1] Olle Otteby, team leader, interview 4th of March 2010
[2] Alfred Sianjase, district coordinator, Kalomo, interview 10th of March 2010

6 Analysis and Discussion

In this chapter the research findings are analysed and discussed in accordance with the theoretical framework. It is based on the farmers' achievements, the underlying reasons to their achievements and how this type of aid can progress and contribute to poverty reduction and sustainability on a national level.

6.1 Effects for Individual Farmers Adopting the Concept Farming as a Business

Several different impacts have been observed at individual farmer level. These impacts and the causes behind them will be analysed.

6.1.1 Impact on Food Security and Income

The food security and income among participating farmers have increased significantly compared to the situation before. The two main reasons to this increase are according to the study team that the farmers improved their planning skills and learnt how to diversify their farming. The planning element is important because the famers could calculate their growing in order to cover their needs and how much seed they had to save until next season. As a result of the diversification in ASP the farmers gained a continuous output. By spreading the risk the farmers also became less sensitive for the impact of extreme weather conditions and different kinds of vermin epidemics. Another reason behind the improved food security is that the farmers have been able to increase their produce as a result of the improved agricultural skills that they acquired from the ASP training. However, an increased produce is not necessarily enough regarding food security because one must know how to properly allocate the produce over the year. Consequently, even in this aspect the planning is essential.

Except improved food security the farmers have also achieved an increased income. As in the case of improved food security one reason to the increased income is the increased produce. The farmers have to produce more than they consume to be able to sell. However, a surplus does not necessarily lead to increased incomes. First you need to know how to sell it, something the farmers learnt during ASP. An example of this is the farmer group in Gwembe who had a surplus but did not know how to generate an income from it. Making the farmers realise that farming actually is a business in combination with improved agricultural skills and business skills created synergies for the ASP farmers that had a huge impact on their development. By only improving agricultural skills income does not necessarily increase. Similarly, only improving business and entrepreneurship skills does not result in increased production. However, combining these factors together with a change in attitudes can enhance the attainment of the desired outcomes, making the synergies obvious.

To be able to sell the produce it is important that the farmers understand how the market works in accordance with supply and demand. The farmers' produce must be met by a demand on the market and what is equally important is that they must price properly to gain profit. Before ASP, farmers could breed livestock and then sell it for the same price as they paid for it. When not taking the costs of the breeding in consideration they made a loss without even being aware of it. Realising that they could make a profit increased their motivation for their farming. In order to maximise the income the farmers learnt how to analyse the market in order to find the most profitable sales opportunities and the buyers willing to pay the most. When the

farmers consolidate their produce they will be able to reach new buyers and new markets that are interested in larger batches. By consolidation the farmers will also enjoy of economies of scale.

Baumol (2008) describes a phenomenon called the poverty trap. During the research the study team identified that many farmers in Zambia are trapped in this negative spiral. However, many farmers participating in ASP managed to break out of this and instead enter a positive development spiral. With the income from their selling they can make investments to improve their standard of living. Perhaps even more important for the farmers' development in a long-term perspective is the fact that they also can invest in new farming tools improving the farming efficiency. In this way they can increase productivity and gradually also the income from increased sales. This was the case for the farmer Mr. Jolehya, as described in *5.2.3 A Successful Farmer*. He sold his surplus and received an income. By this he was able to invest in his farming and in the long-term increase his income even more and improve his standard of living. The positive development spiral is illustrated in *Figure 5.1*.

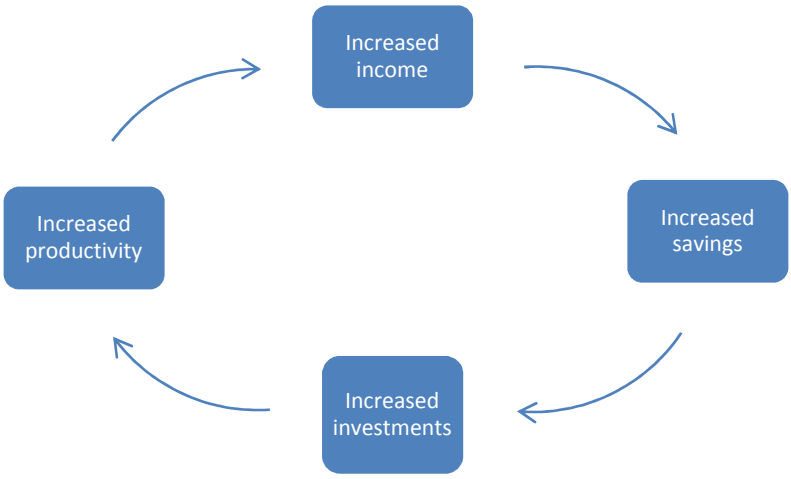

Figure 6.1: Positive development spiral.

Though, there are differences between farmers and their results regarding food security and increased income. Some have been more successful than others concerning these two issues. First of all, farming is a profession, and just like any job, being a farmer is not suitable for everyone. To be successful in your profession you need a genuine interest and take pride in what you do. Running your own farm certainly requires high level of knowledge within several areas and particularly good management skills to be successful. ASP targeted farmers that had the will to change their current situation. Although they had the commitment, this does not necessarily imply that they have what it takes in terms of management. This could be a reason to the differences between participating farmers when it comes to the level of achieved success. The success in terms of increased food security and income is linked to the level of entrepreneurship and business development that the farmers reached, as described in *5.2.2 Farmers Achievements and What They Have Learnt*. To make more farmers, or even all participating farmers, reach the higher levels of four or five, there should have been a more active selection of farmers. By choosing farmers that not only have the commitment, but also the potential to develop management skills and expand their farming, ASP could to a larger extent have fulfilled its intention to transform subsistence farmers into entrepreneurs.

The way farmers were allowed to join ASP resulted in that many farmers needed basic agricultural skills to transform from food insecure to food secure subsistence farmers, rather than business skills in order to transform from subsistence farmers into entrepreneurs. Improved food security might be perceived as a decent result since farmers actually improved their livelihoods. However, according to Baumol (2008), entrepreneurs generally generate benefits to society beyond those that can be captured by the individuals themselves. This can be applied on farmers as well. An entrepreneurial farmer generates more benefits to society than a subsistence farmer. As a result, it is preferable for the society if the participating farmers to larger extent become entrepreneurs.

6.1.2 Effects of Improved Household Involvement

The average ASP household has become more gender equal. The study team consider this to be a result of the household approach since both old consultancy reports and experiences from the field study indicates this. By involving the entire household in the farming and setting up common goals that all individuals strive towards, the efforts can be focused in one direction. According to Magnusson (2008) this is of great importance for the outcome of the work since it prevents individual household members from sub-optimising their own output, something the traditional view on farming often allows. In addition, when the entire household is involved in the farming, the work can continue even if the head of the household is not available. This was not always the case before ASP. For example, if the head of the household suffered from a disease for a longer time many of the daily farming activities stopped. This could cause severe consequences for the whole household. The fact that the rest of the household contributed more to the farming would logically make the head of the household want their involvement to continue. Therefore, the increased involvement is likely to sustain even after ASP.

6.1.3 The Effects of the Bottom-Up Perspective

The study team has experienced that farmers participating in ASP have continuously developed during the programme. The most important factor behind this was that ASP had intensive individual follow-ups with every household. The CEOs and to some extent also the lead farmers were vital in this aspect since much of their work consisted of meetings with the farmers on a regular basis. These meetings are considered to be important since the farmers made reflections regarding their work, plans and progress in line with the action-reflection-action concept. As a result of the backstopping system the CEOs could always provide answers to the farmers' questions, which facilitated the farmers to develop even more. The meetings aim to contribute to an effective development of the CEOs and the farmers and have clear similarities to Rubenowitz's (2008) performance reviews. An open relation and discussions between them make the farmers progress towards their goals and visions of the time period. Without a well-functioning backstopping system the progress would stop every time they came across a problem that the CEO could not solve. The reviews of the farmers' performance made it possible for the farmers to communicate their problems to the CEOs on a regular basis.

Due to the performance reviews and the fact that the training started from every household's individual needs, the farmers received the right type of training at the right time. As a result the farmers made continuous improvements within their businesses. The study team has also found that starting from the needs of the target group made them more motivated, which in turn increased their development even

more. The facilitation cycle concept together with the interest groups made it possible to start from the farmers' individual needs. Thanks to the bottom-up perspective the farmers felt that they could affect what they wanted to learn and felt a strong involvement in the implementation of the programme. Participation in a project setup is of great importance for the motivation and performance of the workers according to Rubenowitz (2008). The farming households in ASP can be compared to a self-ruling team. The fact that the entire household was involved in the planning and decision-making and that it was some kind of status to be an ASP farmer increased their motivation even more.

6.1.4 Impact of the Three Year Training Period

During the farmers' three years of participation, most of them developed from subsistence farmers to business minded entrepreneurs. One important reason to this transition is that each phase of the programme ran during three harvest seasons. This time span made it possible for the farmers to adopt the concepts to such extent that they could use them on their own after the programme. Some farmers the study team met had made very small progress during the programme compared to other participating farmers. However, the team experienced that this was due to the fact that they joined late and only participated during one season. Many ASP farmers that participated during a whole phase have also continued improving to a larger extent than the farmers that joined late even after the programme ended. This states the importance of the three-season duration to achieve a sustainable result. The reason why the three-year duration is so important is that the farmers need a training period with full support to achieve a sufficient understanding and pass the learning curve before they can manage the ASP concepts on their own.

6.2 How Aid Programmes Like ASP Can Be Designed To Generate National Effects

The implementation of an aid programme by an external aid agency often intends to fulfil parts of a greater primary vision of the host country, rather than just help the target group itself. In the case of ASP it was to contribute to the national effort of poverty reduction in Zambia. In the previous section it has been clarified that aid programmes with a business approach can generate individual effects, but still it remains to identify how such programmes can be designed and implemented to contribute to poverty reduction on a national level. This can be slightly more complicated since there are many different elements to consider when choosing implementation and management strategy.

6.2.1 The Importance of Using a Proper Management Strategy

Zambia possesses good agricultural prerequisites in terms of fertile soil, minerals and water resources. Despite this fact, the country experience major problems exploiting its resources in order to generate growth. When a country possesses the resources itself but cannot use them, education might be the missing piece. However the education needs to be financed. When aid providers enter such countries to finance the education it is important to use the right strategy. Baumol (2008) states that it is of great importance that aid are distributed directly to the beneficiaries. If the aid is distributed through the local government there is a risk of misuse of the money and that leakages occur due to corruption. Since such risks are perceived concerning MACO, the need for an external organisation is elucidated.

The impression of the study team is that MACO lacks a well-functioning management structure. The different departments of the organisation seem to act on their own and there is no coordination between them. However, the departments' activities are strongly connected and require a continuous exchange of information to work as a united entity. Without this exchange they are likely to pull the organisation in different directions and the efforts become straggling. According to Magnusson and Olsson (2008), an organisation without a clear business strategy will not be able to complete a beneficial work of change. The different MACO departments are therefore likely to not being able to see effects of their aggregative work even though the different divisions might see positive effects separately. They risk experiencing a duplication of their work and a weaker attraction to their united goals. This separation that can be seen within MACO results in difficulties to allocate resources between departments and downwards through the hierarchy since every department is trying to maximise its own benefits. The unfavourable management structure of MACO results in the need for an external management unit responsible for the distribution of resources.

However, there are advantages with an integrated structure in an aid programme. First of all there are benefits in being able to use the existing network of staff within MACO. MACO employees possess valuable knowledge about the agricultural and cultural issues in the country. If MACO would have been responsible for the programme it might have increased the involvement and commitment of the employees and the issue of how to take over an external programme would have been eliminated. Knowledge gained during the programme would also have remained within MACO even after the programme ended. The issue of an entire external organisation leaving the country with all the implementation knowledge would otherwise require education of new implementers for the work to continue. When having a completely external organisation responsible for the implementation much emphasis must be put on the handover process. But this would not even necessarily mean that the host organisation would adopt the new methods and concepts on a permanent basis. If the handover were unsuccessful the sustainability of the programme would be affected negatively. The implementation would come to an end and the dispersion effects would decrease.

If aid providers never go through local organisations such as MACO, the local organisation will never have the incentives to improve and manage to build a fully functional own organisation. Hence, in the long run the country will continue to be dependent on aid providers and external organisations. In accordance with Baumol (2008), Sida utilised an external organisation during ASP to allocate the resources directly to the beneficiaries without passing the MACO hierarchy. The study team agrees that in the case of ASP, it was best to let the resources go outside of MACO when implementing the programme.

In the case of ASP, the external organisation focused on the management issues whilst MACO carried out the implementation. Thereby the external organisation could benefit from the existing network for the implementation whereas MACO was given the opportunity to improve. The structure used during ASP can therefore be considered as a combination of the two structures. The opinion of the study team is that this combination is preferable, considering the management problems within MACO. However, if a local organisation, in contrast to MACO, is coordinated in a

proper way and with no indications of corruption it might be better to have a completely integrated programme.

6.2.2 The Importance of Using a Proper Implementation Strategy

When implementing an extensive project it is of great importance to use a proper implementation strategy in order to obtain a smooth implementation. Depending on the type of the project there are different strategies.

The way MACO wants to implement aid programmes has similarities to Magnusson and Olsson's (2008) Big Bang implementation. MACO, as a governmental organisation, is obligated to target all active farmers in the country with their efforts to develop the agricultural sector. They experience difficulties to motivate support addressed to small specific groups of farmers. To address all farmers at once results in a fair allocation of the resources and efforts. All farmers receive the same opportunity to develop their farming independent of their current situation and their geographical location. However, to introduce all concepts and implementation models of ASP to a group of people as big as the entire agricultural population of Zambia takes enormous resources. With limited resources the concepts cannot root among the farmers to the same extent and the effects can therefore not become as significant as when implementing the concepts in more limited target groups. The effects are not likely to sustain when the programme comes to an end in accordance with the case of the farmer group in Gwembe, which gained insufficient support since it did not complete an entire phase. In the same way the farmers will not receive enough understanding about the programme concepts to be able to progress, using them on their own, when the support ceases.

The alternative, which was the situation of ASP, is Magnusson and Olsson's (2008) phased implementation where the focus is set on one or a few parts of the network or the target group at a time. The benefits of the phased implementation can be deduced to the decreased effects of the upcoming problems and difficulties and the greater flexibility to adapt the training to farmer needs. To focus the implementation on a smaller target group is more resource intensive and creates better prerequisites for the concepts to root and they will be able to sustain when the support ends. The phased implementation of ASP partially contradicted the obligations of MACO and aligned with the approach of RNAB to affect the farmers incrementally. Magnusson and Olsson's (2008) implementation models and the reasoning about them concern implementation of information systems in various organisations. However the study team identifies a clear parallel between the implementation of information systems and aid programmes, due to the similar complexity and extents of the projects. The model can therefore be applied on implementation of aid programmes in Zambia like ASP. Consequently, the opinion of the study team is that the phased implementation is preferable when implementing aid programmes on large target groups as exemplified by ASP.

6.2.3 The Importance of Using a Proper Selection Strategy

The detected dispersion effects as a result of the programme structure with lead farmers and open interest groups aimed to decrease the need of targeting the entire farmer community. The farmer selection of ASP strongly affected the possibility for dispersion effects and thereby the contribution to national effects. ASP had a passive selection of farmers where the farmers only could expect education, which meant that they would not develop unless they made own efforts. This attracted the most driven

and interested farmers which can be categorised as the early adopters and innovators described in Moore's (1999) TALC. The CEOs offered the most active and committed farmers to become lead farmers who can be referred to as the innovators of the programme. The lead farmers were open to new concepts and methods and functioned as a test group on whose level of satisfaction other farmers could rely. The farmers joining in the first stage of phase one have similarities with the early adopters who wanted a competitive advantage from adopting new concepts and farming techniques. To obtain the wanted dispersion effects the innovators and early adopters were definitely the right groups to target. Convincing them about the benefits of the programme led to the joining of the early majority and to some extent also the late majority. This exemplifies the strategy of ASP. Through training of small target groups, ASP reached out to a lot more than that. However, a group of people that ASP had no intention to reach was the laggards. Their lack of interest makes them hard to reach and they are not likely to make any own efforts to achieve improvements. As in the case of ASP there is therefore no point of wasting resources on laggards.

The TALC is a model introduced by Moore (1999) to describe the adoption process for innovative technologies and has in its natural extent nothing to do with implementing business approached concepts among farmers. However, the nature of the experienced dispersion of knowledge among the farmers is very similar to the ones described by Moore (1999), and for this reason the model can be considered as applicable. The major distinction between the model and aid implementation is concerning the chasm of the TALC. The same strive for competitive advantage of the early adopters is not as valid for the Zambian farmers as for technological adoption of innovations. The early adopting farmers have proved to be willing to share their knowledge with other farmers and have encouraged them to implement concepts introduced during ASP. This means that the early majority of the farmers are assumed to find their references among the early adopters and the issue of the chasm can therefore be ascertained to be solved.

The opinion of the study team is that in order to gain effects on a national level a dispersion of the knowledge to non-participators is necessary. To educate all farmers through participation in an aid programme is not economically feasible and facilitation of dispersion effects is therefore a good alternative. The dispersion of knowledge during and after ASP is due to the targeting of the right farmers. However this dispersion is most likely limited within the ASP camps. In order to spread the effects outside these camps it is therefore necessary to target new camps in possible future programmes.

6.2.4 The Importance of Well-Functioning Market Linkages

Market linkages are one of the most important factors for making business and in fact they are vital for business to even take place. Despite the increased productivity and income there has evidently been a problem concerning market linkages for the ASP farmers and this is an issue where improvements can be done. This is the opinion of all people the study team met during the field study and it is also stated in several of the studied consultancy reports. For this reason it is essential for an aid programme with business approach to include the market element in the programme strategy in order to facilitate trade. The elements of market linkages are to some extent hard to control for an aid provider since it depends on external factors such as non-participating actors, limitations in infrastructure and the number of market places.

To facilitate market linkages the aid provider could try to contract purchasers as cooperation partners and bind them to buy products from participating farmers throughout the programme. For example, this was the case for the crisp factory that started to buy potatoes from local farmers after pressure from the government. The link between the farmers and the contracted buyers would work out well during the programme, with support from the aid agency. After the programme ends and the contract ceases a well-functioned cooperation has hopefully been established and the buyers' incentives to continue purchasing from the local farmers should be strong. In this way an aid programme could support the creation and improvements of market linkages to match the increased production of the farmers.

6.2.5 The Possible Impact on a National Level in the Long-Term

By improving farmers agricultural and business skills through education and training, ASP was part of something bigger. Some farmers used their increased incomes to send their children to school to provide them with a basic education. According to Baumol (2008) education is one of the best ways out of poverty and towards long-term economic growth. In addition, education yields benefits to society beyond those that can be captured by individuals themselves. This means that ASP might contribute to economic growth in Zambia in the future thanks to the increased number of farmers being able to send their children to school. Education empowers people to help themselves, just like ASP gave farmers the tools to facilitate themselves and break out from the poverty trap. What is equally important is that education contributes towards stable and more tolerant societies by improving governance and reducing corruption.

The positive development spiral, as described in *6.1.1 Impact on Food Security and Income* implies that farmers who manage to enter this spiral continuously develop in terms of increased income, savings, investments and productivity. These farmers will eventually come to a point in their development when they will need external labour force in order to continue the development. By employing other farmers who lack the prerequisites and the right management skills to be able to enter this spiral by themselves, the farmers can continue to expand and increase productivity. When a large number of small-scale farmers start to hire workforce it will contribute to an increased employment, which in turn will stimulate the economy of the nation. As a result it will contribute to the welfare of the country. In addition, larger farms will be able to enjoy the advantages of economies of scale.

The increased income among the farmers will increase their spending power. As farmers buy more assets, new markets might rise as a respond to the increased demand. Since the efficiency of the farms in terms of output increase, fewer people can produce more, and as a result, the required labour force within agriculture will decrease. The people who do not have to work within the agricultural sector can instead work in the new markets. The increased consumption will increase the government's revenues from taxes. With increased revenues the government can invest in education and necessary infrastructure for further development of the society. Although this potential development is in the long-term perspective, Zambia possesses the necessary prerequisites to make such development happen. However, the country today lacks what it needs in terms of education and good management, which are the keys.

It can be questioned whether aid can generate economic growth in a long-term perspective or not. According to Baumol (2008) one study, with focus on the

connection between aid and growth in developing countries, states that such connections do not exist. Similarly, SADEV (2007) states that there are no evidence of correlation between aid and sustainable economic growth in developing countries. On the other hand, the research findings implied that development aid like ASP indicates many possible factors that might contribute to economic growth on a national level due to their sustainable character.

6.2.6 Sustainability of the Impact

ASP certainly was an aid programme with sustainable results since it provided MACO with extension tools that it could use to improve the farmers' situation. The extension tools and the farmers' involvement helped maximising the dispersion effects to other farmers, as well as to following generations. However, according to Baumol (2008), aid must be viewed as a short-term development and the country must find its own way to achieve growth. Although, after having visited farmers in Zambia the study team attained the perception of a continuous development among the farmers even after ASP ended. The reason why the farmers have been able to continue their development is that they still use the concepts and techniques they learnt during ASP. Many of the interest groups are also still active and it allows the farmers to learn from each other and exchange experiences. The only thing confining a wider spread of the ASP methodology among farmers in Zambia is the lack of transportation among the CEOs.

The goals of ASP were in line with the Zambian government's long-term goals, to reduce poverty. Ammenberg (2004) describes three different parts of sustainability, necessary to obtain sustainable development: environmental, economical and social. These were all involved in ASP but to different extents. Although ASP was an aid programme of a sustainable character it did not have a lot focus on the environmental development. Although, this environmental aspect should be included in a programme like ASP, to ensure that all parts in Ammenbergs (2004) theory of a sustainable development are covered.

Social entrepreneurs are according to Dees (2001) persons who do not primarily strive for economic wealth, but instead have a social concern. Indeed ASP contributed to economic growth, but a social change among the farmers was also a part of the programme's result. Thus, ASP could to some extent be called a social entrepreneurship project according to the study team. Just like a social entrepreneur ASP used its limited resources and only targeted a limited group in order to contribute to effects nationally.

Dees (2001) states that social entrepreneurs strive for long-term SROI. ASP affected people in other terms than just economical. To see the result in a wider perspective it is interesting to do an analysis of the SROI. The SROI helps organisations to understand and quantify the social, environmental and economic value they create. With this method the investors' contribution to social benefits become more clearly. Because it puts the results of a project in a broader perspective, SROI is a good tool to attract investors, which also is in favour for the stakeholders. Therefore, when performing the official evaluation of ASP, Sida should carry out an SROI analysis. This would be an opportunity to raise MACO's interest and to make them see to what extent ASP really affected people despite the fact that it only targeted a limited part of the Zambian farming population.

7 Conclusions

This chapter presents the conclusions of the thesis based on the analysis and discussion. Critical factors for a successful implementation and design as well as the effects and causes will be presented to answer the research questions.

The Effects for ASP Farmers Adopting the Concept Farming as a Business and the Causes behind these Effects

The vast majority of the ASP farmers reached the short-term goals and ***increased their food security and income***. In fact, all the participating farmers the study team interviewed had reached food security and had continued to increase both production and income since 2008 when the programme ended.

The farmers gained improved ***agricultural skills*** so that they could increase their produce. They improved their farming techniques and learnt the importance of planning and keeping records. The farmers also learnt to set up a vision for their farming, having a common vision in the household increased the family involvement making the entire family strive towards the same goal. This fact together with increased gender equality was an effect of the household approach and improved the aggregated agricultural capacity of the household. However, it is not enough to just increase the produce, one must also know what to do with it in order to generate an income.

Running a farm is more or less the same thing as being a businessman running your own company. Running a successful company requires commitment, good management and ***business skills***. The same thing applies to farming. During ASP farmers became aware of the fact that farming actually is a business and in order to run a successful business they needed to acquire the right skills. The farmers learnt how to do budgeting and market analyses. Being profitable was a key to be able to make further investments in the farming.

The backstopping-system ensured that the development of the agricultural and business skills continued throughout the programme and that the knowledge of the CEOs did not become a limiting factor.

As seen in *Figure 7.1* the identified underlying factors for the farmers' development are the ***business approach***, the ***facilitation cycle*** and the ***household approach***. These three fundamental concepts have enabled the farmers to improve their agricultural and business skills through training in the previous mentioned areas. Combining these new skills creates synergies that eventually lead to an improved food security and an increased income for the participating farmers.

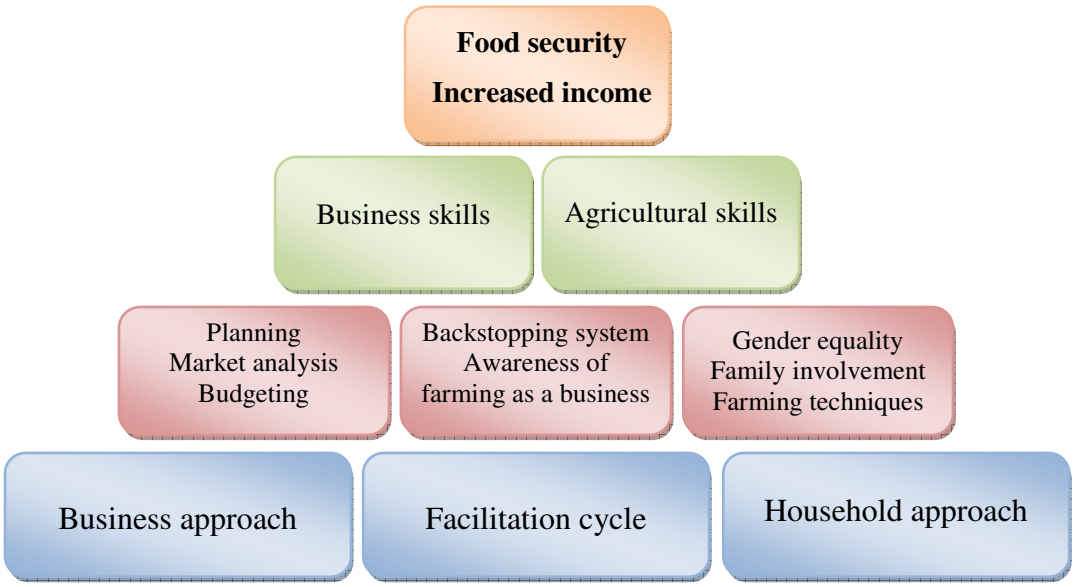

Figure 7.1: The effects for ASP farmers adopting the concept farming as a business and the causes behind them

How Aid Programmes Similar to ASP can be Designed and Implemented among Zambian Farmers in Order to Contribute to Poverty Reduction on a National Level

All stakeholders of ASP conclude that it was a successful programme in terms of achieved goals and the farmers' development. However, to gain sustainable effects on a national level from an aid programme like ASP a clear strategy of how to reach out to a significant number of farmers and which ones to target must be established.

The stakeholders of ASP had different opinions concerning the organisation of the programme. The opinion of the study team is that the way ASP was organised, with an external private agent outside of MACO, was an important reason to the success of the programme. To bring in management expertise from outside and combine this with local expertise from MACO is controversial, but has obviously contributed to the positive outcome of the programme. In addition, this organisation contributed to a reduce of the leakages in the aid pipeline associated with corruption, inefficiency or substitution since the aid more or less could be delivered directly to the intended beneficiaries. This is important since corruption scandals in Zambian ministries unfortunately are not uncommon. If there would be a new programme similar to ASP in the future, the study team believe that it should be organised in the same way unless proper management and no corruption at the ministry can be ensured.

When experiencing limited resources it is not economically feasible to educate all farmers. Therefore it is essential to target only a limited number of farmers who in turn can spread the knowledge further. To achieve this dispersion effect it is important to actively select the right group of farmers to target. The wanted farmers are those who not only have the commitment but also the potential to expand their farming and develop management skills.

Although ASP was a successful programme all stakeholders perceived that the market linkages were insufficient. When the production of the farmers increased they experienced problems selling their surplus. One way to strengthen the market linkages is to contract private companies and create a beneficial collaboration between the farmers and the companies.

When the farmers increase their income many of them prioritise sending their children to school. This might in the long term generate sustainable effects since education is a good way out of the poverty trap. In addition, the spending power of the farmers has increased which might result in that new markets might rise as a response to the increased demand. This creates new job opportunities and increased tax revenues resulting in improved welfare if the government handles the revenues properly.

To summarise; with the right implementation strategy, a business approach and improved market linkages an aid programme like ASP can contribute to sustainable effects and poverty reduction on a national level.

8 Further Research

The thesis implies that ASP and the farming as a business concept fell out well in Zambia. However, the market linkages were recognised as a weak part of the programme that should be strengthened. Hence, this could be subject for further research investigating how the market linkages can be improved, not only during aid programmes like ASP, but generally in order to facilitate farmers' sales. It would also be interesting to investigate if similar programmes to ASP could be carried out in other developing countries with different prerequisites compared to Zambia.

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Appendix

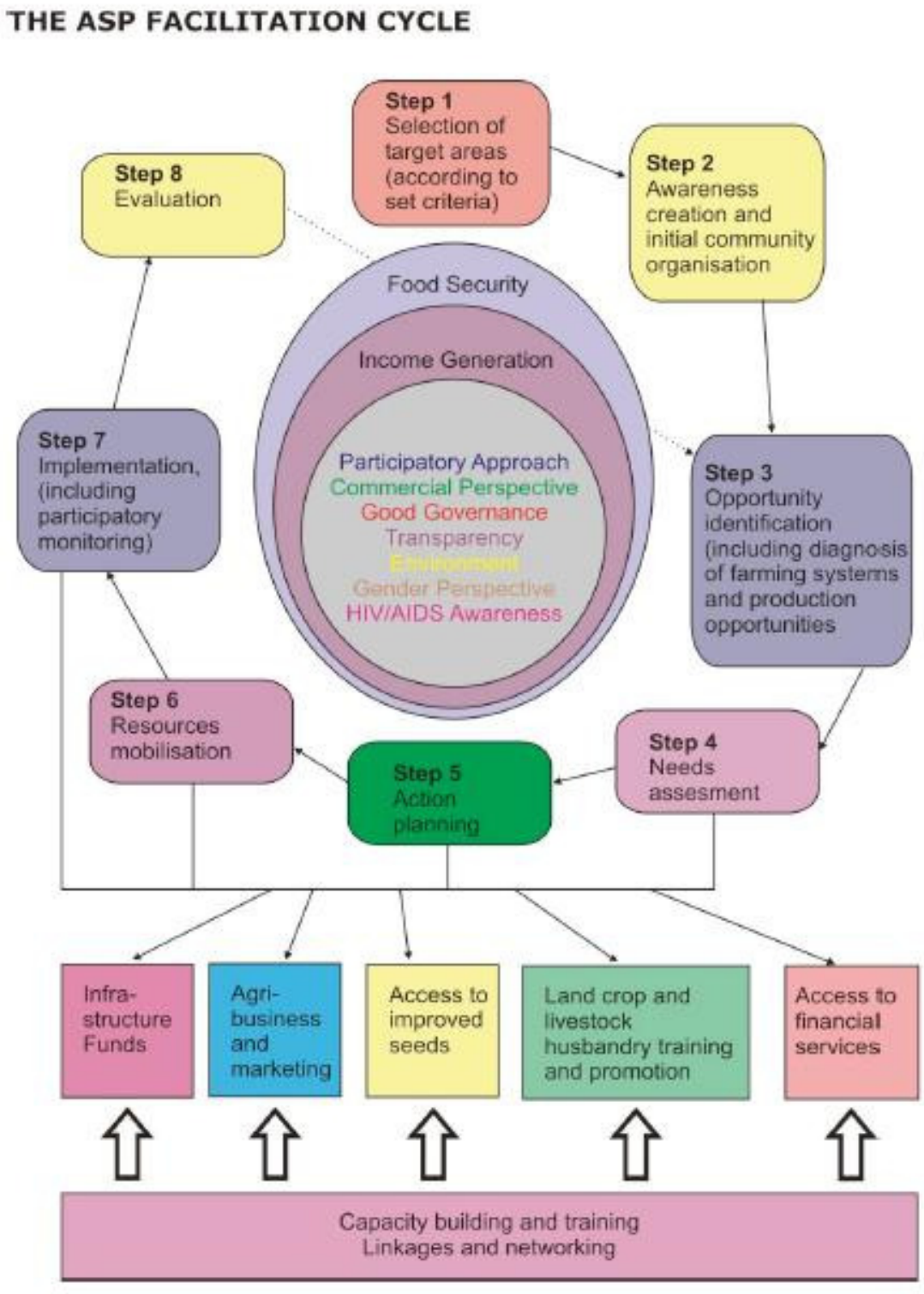
Appendix 1: Programme for the Field Study

The field study was carried out in Zambia between March 1st and March 21th

01-03-10	Afternoon	Travel to Zambia	Gothenburg-Lusaka
03-03-10	Morning	Interview Eva Olsson, Sida	Lusaka
04-03-10	Morning Afternoon	Interview MACO Interview Team Leader	Lusaka
08-03-10	Afternoon Evening	Travel to Monze Preparation	
09-03-10	Morning Afternoon	Interview DACO, CEO, Farm mgmt officer, own facilitator Interview Farmer 1 Jolehya Interview Farmer 2 Kalyalya	Monze
10-03-10	Morning Afternoon Evening	Travel to Gwembe Interview DACO Interview crop husbandry officer Interview CEO Interview Farmer group I (less successfull) Interview Farmer group II (Successful) Travel to Choma	Gwembe
11-03-10	Morning Afternoon Evening	Interview DACO Interview CEO Interview with two succssfull lead farmers (John and Harisson Michelo) Interview with non-participating farmer (Mkulima) Wrap up for field study	Choma
19-03-10	Morning	Presentation and discussion at the Swedish Embassy	Lusaka
21-03-10	Afternoon	Travel home	Lusaka-Gothenburg

Appendix 2: The Facilitation Cycle

The ASP facilitation cycle is described in *1.3.4.2 The Facilitation Cycle*.



The Facilitation Cycle (Ramböll I, 2008, p. 11).

Appendix 3: List of Interviewees

In this appendix all the persons interviewed during the study are listed.

Sida

Top Level

- Eva Ohlsson, First Secretary, Programme Officer of Agriculture and Rural Development
- Agnes Kasaro Ngolwe, Programme Officer of Agriculture and Food Security
- Eva-Marie Kjellström, Research Fellow, SADEV, Karlstad Sweden
- Malila Chisanga, Programme Officer of Energy and Urban Development

Ministry of Agriculture and Cooperatives

Top Level

- Dr. Richard Kamona, Deputy Director of Agricultural Extension, Lusaka
- Lackson Kaluba, Principal Extension Methodologist, Lusaka
- Martin Muyunda, Principal Extension Methodoligist/RESCAP Programme Officer, Lusaka

District Level

- Goliath Chooye, Senior Agriculture Officer, Choma
- Justine Ngosa, District Agricultural Coordinator, Monze
- Sebastian Lubiwda, Crop Husbandry Officer, Gwembe
- Leanard Kalima, Farm Management Officer, Choma
- Sara Sikota, Farm Management Officer, Monze

- Beatrice Tatila, Camp Extension Officer, Monze
- Cecilia Hakayobe, Camp Extension Officer, Monze
- Naison Siamasuku, Camp Extension Officer, Gwembe
- Agnes Mukamaambo, Camp Extension Officer, Sedumbwe, Choma

Ramböll Natura AB

Management Unit

- Olle Otteby, Team Leader, RNAB, Lusaka

District Level

- Alfred Sianjase, District Coordinator, Kalomo

Farmers

Household Level

- Constantine Jolehya, Lead Farmer, Phase One, Manungu B, Monze
- Mutinta Kalyalya, Lead Farmer, Phase One, Malende, Monze
- Harrison Michelo, Lead Farmer, Phase One, Sedumbwe, Choma
- John Michelo, Lead Farmer, Phase One, Sedumbwe, Choma
- Name unknown, Non ASP Farmer, Sedumbwe, Choma

- Farmer group I, Kasonde Community Building, Gwembe Central, Gwembe (18 members from phase two attended)
- Farmer group II, Makambo School, Lukonde, Gwembe (8 members from phase two attended)

Appendix 4: Interview templates

This part of the appendix displays the compiled interview templates used during the interviews in Zambia. Specific templates for each main group of stakeholders was used and follows by turn Sida, MACO, Ramböll, farmers and district staff.

Swedish International Development Cooperation Agency, Sida

The purpose with the interview is to collect information about how and by whom the ASP was initialised, the aim of the programme and how it was accepted by the farmers. We also want to know the stakeholders' approach to the concept during and after the programme.

Initiation, planning and goals of ASP

How and by whom was the ASP initiated?

What was Sida's role in the ASP?

What was your attitude to the ASP? How did you experience the attitude of other involved organisations and participating farmers? For example MACO's and RNAB's involvement.

Did your attitude change during the programme? Did you experience any change in attitude of other involved people?

Which organisations were involved in the planning of the ASP? How much were the farmers involved? When did the planning start and for how long did it go on?

What were Sida's goals with the programme? Do you think they were fulfilled?

How were the goals of the ASP established? Were all organizations/stakeholders involved?

Did the other involved organisations have different goals? Do you think that their goals were achieved?

Do you experience any differences between the initial goals and the outcome of the programme?

Did the goals of the ASP change during the programme? Why and in which way?

What is your opinion of the concept "farming as a business"?

Were there any problems with the quality of the crops before the programme? For example stones mixed with crops. If so, has there been any improvement after the programme?

What were the major problems during the ASP? If you were to be involved in a similar programme is there anything you would have done differently?

The handover process and the results of ASP

What was the initial plan of the programme after its finish? Who was supposed to take over and when?

How was the handover carried out?

How was the handover prepared? Did you experience any difficulties with the handover?

What were the effects of the handover? Do you think that the programme was affected due to the handover? How? Negative/positive?

Were there any reactions from the farmers after the handover?

Has Sida any involvement today? In what way?

Sida still makes evaluations, what is the main purpose of these evaluations?

Have you noticed if any farmers not participating in the ASP have adopted the concept "farming as a business" or parts of it?

Did you have plans on expanding the programme for example with more households? Why/why not?

What critical situations have occurred during and after the programme? Have you had any specific setbacks or successes?

Ministry of Agriculture and Cooperatives, MACO

The purpose with the interview is to collect information about how and by whom the ASP was initialised, the aim of the programme and how it was accepted by the farmers. We also want to know the stakeholders' approach to the concept during and after the programme.

Initiation, planning and goals of ASP

How and by whom was the ASP initiated?

What was MACO's role in the ASP?

What was your attitude to the ASP? How did you experience the attitude of other involved organisations and participating farmers? For example Sida's and RNAB's involvement.

Did your attitude change during the programme? Did you experience any change in attitude of other involved?

Which organisations were involved in the planning of the ASP? How much were the farmers involved? When did the planning start and for how long did it go on?

What were MACO's goals with the programme? Do you think they were fulfilled?

How were the goals of the ASP established? Were all organisations/stakeholders involved?

Did the other involved organisations/stakeholders have different goals? Do you think that their goals were achieved?

Do you experience any differences between the initial goals and the outcome of the programme?

Did the goals of the ASP change during the programme? Why and in which way?

What is your opinion of the concept “farming as a business”?

Were there any problems with the quality of the crops before the programme? For example stones mixed with crops. If so, has there been any improvement after the programme?

What were the major problems during the ASP? If you were to be involved in a similar programme is there anything you would have done differently?

The handover and the results of ASP
What was the initial plan of the programme after its finish? Were MACO supposed to take over? If so, was the time specified for the handover?

How was the handover carried out and what effects have it resulted in?

How was the handover prepared? Have you experienced any difficulties with the handover?

What were the effects of the handover? Do you think that the programme was affected due to the handover? How? Negative/positive?

Were there any reactions from the farmers after the handover?

Has Sida any involvement today?

Have you noticed that any farmers outside of the ASP have adopted the concept “farming as a business” or parts of it?

Did you have plans on expanding the programme for example with more households? Why/why not?

What critical situations have occurred during and after the programme? Have you had any specific setbacks or successes?

Ramböll Natura AB, RNAB.

The purpose with the interview is to collect information about how and by whom the ASP was initialised, the aim of the programme and how it was accepted by the farmers. We also want to know the stakeholders’ approach to the concept during and after the programme.

Initiation, planning and goals of ASP
How and by whom was the ASP initiated?

What was RNAB’s role in the ASP?

What was your attitude to the ASP? How did you experience the attitude of other involved organisations and participating farmers? For example MACO’s and Sida’s involvement.

Did your attitude change during the programme? Did you experience any change in attitude of other involved people?

Which organisations were involved in the planning of the ASP? How much were the farmers involved? When did the planning start and for how long did it go on?

What were RNAB's goals with the programme? Do you think they were fulfilled?

How were the goals of the ASP established? Were all organisations/stakeholders involved?

Did the other involved organisations have different goals? Do you think that their goals were achieved?

Do you experience any differences between the initial goals and the outcome of the programme?

Did the goals of the ASP change during the programme? Why and in which way?

To what extent were RNAB controlled by Sida and to what extent were they able to handle on their own?

What is your opinion of the concept "farming as a business"?

Were there any problems with the quality of the crops before the programme? For example stones mixed with crops. If so, has there been any improvement after the programme?

What were the major problems during the ASP? If you were to be involved in a similar programme is there anything you would have done differently?

The handover and the results of ASP

What was the initial plan of the programme after its finish? Who was supposed to take over and when?

How was the handover carried out?

How was the handover prepared? Did you experience any difficulties with the handover?

What were the effects of the handover? Do you think that the programme was affected due to the handover? How? Negative/positive?

Were there any reactions from the farmers after the handover?

Has RNAB any involvement today?

Have you noticed that any farmers outside of the ASP have adopted the concept "farming as a business" or parts of it?

Did you have plans on expanding the programme for example with more households? Why/why not?

What critical situations have occurred during and after the programme? Have you had any specific setbacks or successes?

The Farmers

The purpose with the interview is to collect information about how and by whom the ASP was presented and how it was accepted by the farmers. We also want to know the farmers' approach to the concept during and after the programme. How the farmers were affected by the handover is also interesting.

Initiation, planning and goals of ASP

How and by whom was the ASP presented to you?

What was your attitude to the ASP? How did you experience the attitude of other participating farmers?

Did your attitude change during the programme?

Were there any farmers involved in the initiation of the ASP?

What were your goals with the programme? Do you think they were fulfilled?

Did the other participating farmers have different goals? Do you think that their goals were achieved?

Did your goals of the ASP change during the programme? Why?

What is your opinion of the concept "farming as a business"?

What were the major problems during the ASP? If you were to be participating in a similar programme is there anything you would have done differently?

The handover and the results of ASP

In 2008 the ASP was ended and handed over to MACO. What did the handover mean for you and other farmers?

Have you experienced any difficulties after the handover?

Have you noticed that any farmers outside of the ASP have adopted the concept "farming as a business" or parts of it? Have you talked to and taught other farmers what you have learnt from the ASP?

Do you think that everyone should participate in a similar programme?

What has the ASP given you until today?

What do you think the ASP will give you in the future?

Have there been any upcoming difficulties since the programme ended? Have you received any help? What are your opportunities for receiving help after the programme ended?

What has worked best with the ASP and what didn´t work so well?

The District Staff

The purpose with these interviews is mainly to learn about the implementation process of the ASP. How the CEOs and the DACOs were introduced to the programme and how there were trained in the by ASP introduced methods and concepts. It was also of great importance to learn about how they educated the farmers and to gather their input about the successfulness of the programme.

What is your main task in your current employment?

What was your role before, during and after the ASP?

Who introduced you to the programme and what was your initial opinion about the concepts?

How were you trained in the different elements of the programme?

From whom did the instructions come?

How was the communication between you and MACO, and you and the ASP steering Committee?

Did you see any problem with getting instructions from two different authorities?

How did you instruct the farmers? Through interest groups? Through lectures? Through personal meetings?

How often did you meet the farmers?

How were the interest groups organised?

What were the major difficulties with educating the farmers?

Are you working in a different way now than before ASP?

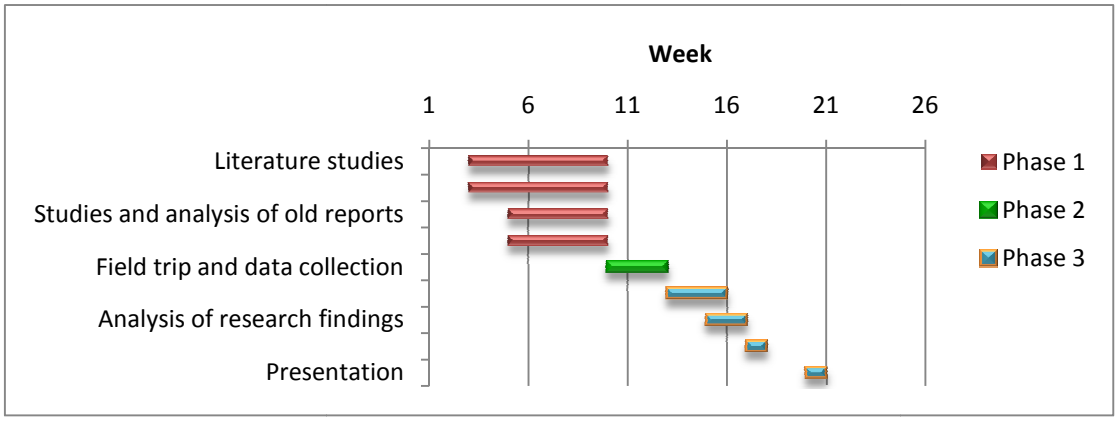
How did you organise the farmers to match their production against market needs and sales possibilities?

What do you think about the attitude of the farmers towards the project?

Is there anything you would like to change if there were to be a new similar programme?

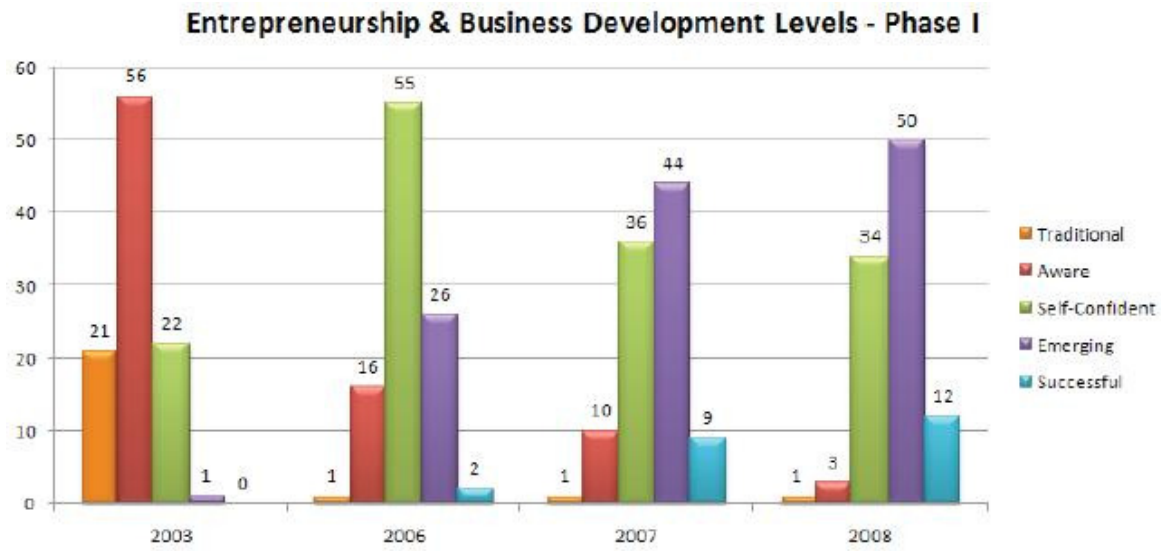
Appendix 5: Gantt-Schedule

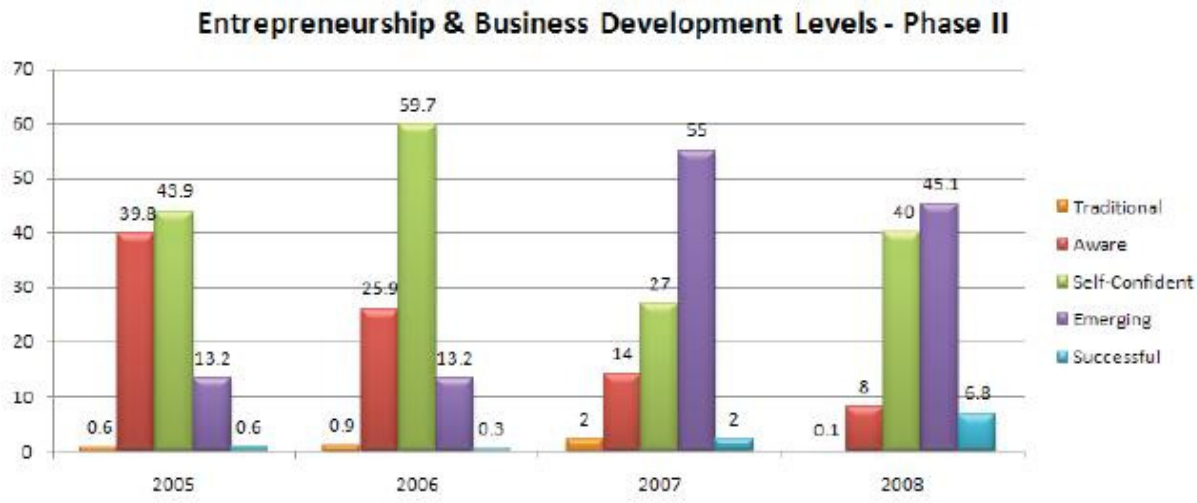
The Gantt-schedule describes the working process of the study and shows the three different phases which is presented in *3.2 Research Strategy*.



Appendix 6: Levels of Entrepreneurship & Business- and Agriculture Development

The following figures show the development of entrepreneurship and business skills among the farmers participating in phase one respectively phase two. The bars represent the different levels and the Y-axis represents percentage of farmers.





Appendix 7: Development of Agricultural Skills

The following figures show the development of agricultural skills among the farmers participating in phase one respectively phase two. The bars represent the different levels and the Y-axis represents percentage of farmers.