“With the Strength of a Group”

A Minor Field Study of Small-Scale Farmers’ Socio-Economic Situation in Kagera, Tanzania

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2010-12-28
Abstract

This thesis is based on a minor field study conducted in Kagera, Tanzania, during approximately two months in 2009. In the Kagera region, agriculture is seen as the main dependent factor for the small-scale farmers’ livelihoods, which is an activity challenged by environmental constraints including soil degradation and deforestation. The non-governmental organisation Vi Agroforestry has been active in Kagera since 2005, focusing on the re-establishment of a healthy and sustainable environment, while simultaneously trying to reduce the levels of poverty and food insecurity through rural-based agroforestry techniques and enterprise development. Its work is implemented with a demand-driven group approach and the small-scale farmers’ self-reliance as a key element.

The purpose of the field study was to investigate the socio-economic situation for small-scale farmers in Kagera and how it possibly had changed over time as well as in what ways Vi Agroforestry so far might had affected the farmers’ situation. The possible diverse development between farmers that were members in groups collaborating with the organisation and non-members was also investigated. During the field study semi-structured interviews signified the main source of information and the material gathered was analysed according to the capital assets of the pentagon of the sustainable rural livelihood framework.

Overall, even though the small-scale farmers still seemed to face challenges in their daily lives when this study was conducted, the general impression was that their socio-economic situation had improved over time and that Vi Agroforestry had constituted a contributing engine for this development. The main contributions by the organisation in this regard seemed to have been the education and training in agriculture and agroforestry techniques, enterprise development and micro savings and loans. Due to an apparent small-scale development with a diverse focus among the farmers on improving different capitals, as well as insufficient data on how the farmer’s situation was before the organisation’s arrival, no prominent differences seemed evident between the farmers who were members of groups collaborating with Vi Agroforestry and non-members.

Key words: Kagera region, small-scale farmers, agroforestry, Vi Agroforestry, pentagon of sustainable rural livelihoods, socio-economic conditions, village groups, micro savings and loans.
Acknowledgement

First and foremost we would like to express how much we enjoyed our stay in Kagera, Tanzania during November and December 2009. It was an interesting and instructive experience that broadened our views both as students of Peace and Development studies, as well as first-time visitors of Tanzania. Moreover, before we explain our findings further we would like to give a big thanks to all the people that made this study possible and who have helped us along the way to be able to write our Bachelor thesis.

To start with, we would like to thank all the farmers that we interviewed for all the information and knowledge they have given us about their lives and experiences. We wish them and their families a healthy and joyful life and all the luck with their future undertakings.

Many thanks should also be given to all the people working at SCC-Vi Eastern Africa and at the Kagera office as well as the different Zone Coordinators and Field Officers in Bugabo and Bugene zones. We are very grateful for all the information and facilitation that you have provided us with and for the time you have spent answering all our questions and wonderings. Furthermore, we are also thankful towards Vi Agroforestry for the possibility of transport for the time spent in the field, which made our time in the field more effective and facilitated our visits to the different farmers interviewed.

Additionally, we would like to show our appreciation towards Fidelis Mutembei, our translator, who helped us both during our interviews as well as with broadening our views of the Tanzanian way of life. Thank you for all your help and for always having a big smile on your face!

- We thank you all and we hope to be able to meet you soon again!

Finally, we would also like to thank the Swedish International Development Cooperation Agency (Sida) and Linnaeus University for giving us the opportunity to conduct this study. A special thank you should also be given to our tutor and teacher Anders Nilsson who has been there along the way to support, encourage and advice us in our field study.

Helena Fransson and Madeleine Karlsson
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## Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AMREF</td>
<td>African Medical and Research Foundation</td>
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<tr>
<td>CHAT</td>
<td>Continuum of Care for Persons Living with HIV/AIDS in Tanzania</td>
</tr>
<tr>
<td>CHEMA</td>
<td>Community Habitat Environmental Management</td>
</tr>
<tr>
<td>DFID</td>
<td>British Department for International Development</td>
</tr>
<tr>
<td>ELCT</td>
<td>Evangelical Lutheran Church in Tanzania</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organisation (of the United Nations)</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>ICRAF</td>
<td>World Agroforestry Centre</td>
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<td>KAEMP</td>
<td>Kagera Agricultural and Environmental Management Project</td>
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<tr>
<td>KCU</td>
<td>Kagera Cooperative Union</td>
</tr>
<tr>
<td>KCT</td>
<td>Kolping Society of Tanzania</td>
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<tr>
<td>KDCU</td>
<td>Karagwe District Cooperative Union</td>
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<tr>
<td>LVDP</td>
<td>Lake Victoria Development Programme</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
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<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<tr>
<td>NPI</td>
<td>New Partner Initiative</td>
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<tr>
<td>NR</td>
<td>Natural Resource</td>
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<tr>
<td>PRA</td>
<td>Participatory Rural Appraisal</td>
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<tr>
<td>RESAPP</td>
<td>Lake Victoria Regional Environmental and Sustainable Agricultural Productivity Programme</td>
</tr>
<tr>
<td>SAWATA</td>
<td>SAidia WAzee TAnzania</td>
</tr>
<tr>
<td>SCC</td>
<td>Swedish Cooperative Centre</td>
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<tr>
<td>Sida</td>
<td>Swedish International Development Cooperation Agency</td>
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<tr>
<td>SL</td>
<td>Sustainable Livelihood</td>
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<tr>
<td>SRL</td>
<td>Sustainable Rural Livelihood</td>
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<tr>
<td>SSA</td>
<td>Sub-Saharan Africa</td>
</tr>
<tr>
<td>TZS</td>
<td>Tanzanian Shilling</td>
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<tr>
<td>UNICEF</td>
<td>the United Nations Children’s Fund</td>
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<tr>
<td>VS&amp;LA</td>
<td>Village Savings and Loans Association system</td>
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</table>
PART I - Background

The first part of the thesis provides the reader with a background understanding of the research area and the aim of the study, as well as explains the analytical framework and methodology that have been applied in order to investigate and answer the thesis’ research questions. These sections are followed by (i) an introduction of Vi Agroforestry and its overall work, and (ii) a presentation of the areas visited during the field study.

1. Introduction

1.1. Problem Area

For many of the world’s poorest countries the high levels of poverty, hunger and food insecurity have over the last decades been ongoing challenges that many of these countries’ inhabitants are faced with on a daily basis. Since the Millennium Development Goals (MDGs) were initiated significant progress has been made concerning the first goal of eradicating extreme poverty and hunger in poor countries throughout the world. However, in the case of Sub-Saharan Africa (SSA), this development has proven to be less apparent and instead the degree of poverty, hunger, and food insecurity is said to have increased rather than decreased in the recent years (Faurès and Santini, 2008: 17-30).

It is further estimated by the Food and Agriculture Organisation of the United Nations (FAO) that over 60 per cent of the population in SSA are living in rural areas and that rural poverty is expected to be as much as 90 percent of the total poverty rate in Eastern and Southern Africa. Moreover, for the majority of the poor rural population in these areas agriculture is seen as the main dependent factor for these peoples’ livelihoods and in Eastern Africa alone agricultural goods are said to be the core export sector constituting approximately half of the region’s total exports (Ibid.)

Moreover, whereas agriculture in other words could be seen to be of highest importance for the rural population in the SSA, it is also important in this context to highlight the region’s current agricultural development challenges. The area that is being used for agricultural

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1 In the report “Water and the Rural Poor - Interventions for improving livelihoods in Sub-Saharan Africa” by FAO, rural poverty is measured by the level of child malnutrition as this is seen to represent an indicator of rural poverty and food insecurity.
cultivation is estimated to have expanded remarkably during the last decades and whereas total yields have been rising, the per capita food production is said to be declining, leading to great constraints in the agricultural sector. The rapid increase of cultivated areas in combination with inadequate and unsustainable farming technologies have, by some, been associated with several environmental problems such as deforestation, soil degradation and a higher risk of water and wind erosion on different land areas, among other things (Franzel and Scherr, 2002: 1).

Since 1983 Vi Agroforestry has been present in the Lake Victoria region with the focus of trying to counteract the above-mentioned challenges for the rural population in Kenya, Uganda, Tanzania and Rwanda. With a sustainable rural livelihood approach, the focal point of the Non-Governmental Organisation (NGO) has been to restore soil fertility and to promote the re-establishment of a healthy and sustainable environment through rural-based agroforestry techniques and enterprise development. Through these efforts the goal has been to achieve economical growth and poverty reduction as well as to let small-scale farmers move forward beyond subsistence farming. The work of Vi Agroforestry could be seen as an integral part of the long-term development efforts in the Lake Victoria region and the organisation is supported and financed by development actors such as Sida and the East African Community (Nilsson, 2008: 7-13).

The definition of agroforestry used by Vi Agroforestry is taken from the definition made by the World Agroforestry Centre (ICRAF) from 1993:

"Agroforestry is a collective name for land-use systems and practices in which woody perennials are deliberately integrated with crops and/or animals on the same land management unit. The integration can be either in a spatial mixture or in a temporal sequence. There are normally both ecological and economic interactions between woody and non-woody components in agroforestry"

(Vi-skogen (a), 2010)

2 In 2006 Vi Agroforestry joined together with the Swedish Cooperative Centre (SCC) establishing a regional cooperation known as SCC-Vi Eastern Africa. Whereas Vi Agroforestry’s focal point is to interact with farmers on the local level and to teach and facilitate them about agroforestry and enterprise activities, the SCC’s main work is to sponsor and support farmer cooperatives and associations on a regional and national level. By focusing on different levels of society the two organisations could be said to complement each other in their work (interview - Ylva Nyberg, 2009). However, with this in mind, it is of importance to mention that we have decided to only refer to Vi Agroforestry in this thesis when discussing the work of the organisation and its effects on small-scale farmers in Tanzania. The explanation for this is simply that Vi Agroforestry could be said to be the fraction of the cooperation that is responsible for the small-scale farmers on the local level, which this thesis have had the aim to look at, and it is in their field we have conducted our interviews and observations.
It is with the above-mentioned challenges of widespread rural poverty and environmental degradation in mind that a deeper understanding of Vi Agroforestry’s possible impact on rural farmers’ livelihood situation and development could be of importance to study. For this thesis, a more in-depth field study has been conducted in the Kagera region in Tanzania where Vi Agroforestry has been present and operating since 2005 (Nilsson, 2008: 7).

1.2. Aim and Research Questions

The aim of this Bachelor thesis is to take a deeper look into and to gain a wider understanding of how and in what ways Vi Agroforestry’s project in Kagera, Tanzania, supposedly has had an impact on the rural small-scale farmers’ socio-economic situation so far. The importance of looking at both the possible social and economical consequences of the project is to highlight the fact that a person’s livelihood and situation could be said to contain other aspects in addition to the often-emphasised financial factors.

The thesis further aims at putting the farmers’ own views and thoughts about their livelihoods and the organisation’s approach and agroforestry-methods in focus. The overall objective is thus to try to identify how farmers in the Bugabo and Bugene zones in Kagera themselves evaluate the impact of Vi Agroforestry’s work concerning their own situation and living conditions. In order to come to this understanding the following research questions have been developed and studied:

- **How do the farmers in Bugabo and Bugene zones perceive their access to the five capital assets?** Have any changes occurred concerning their socio-economic situation over the recent years? To what extent could the work of Vi Agroforestry be said to have influenced such changes so far?

- **What possible differences and similarities could be detected so far between those farmers that are members of groups collaborating with Vi Agroforestry and those farmers that are non-members?** How could these possible differences and similarities be explained? How do non-members perceive the organisation and the fact that they are not members?

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3 The five capital assets, which are seen as the centre of the Sustainable Rural Livelihood (SRL) framework, could be said to altogether constitute a person’s livelihood. *For more information: 2.2. The Asset Pentagon*
In short, with a holistic perspective the mission has been to take a closer look and gain a greater understanding of whether Vi Agroforestry’s working strategy is a fortunate approach in order to enhance the rural farmers’ socio-economic situation.

The hope is that this thesis will be of use for Vi Agroforestry and that it will contribute to their understanding of how the project in Kagera is progressing. A wish is also that this thesis will serve as a possible empirical input in the global agroforestry debate because of the importance to highlight how the usage of agroforestry techniques are affecting the livelihoods of the people who are encouraged to use these methods.

1.3. Disposition

This thesis is divided into three different parts – Background, Analysis and Concluding Discussion. The first part begins with this introductory chapter one. The analytical framework of the thesis is then presented in chapter two, which is followed by the methodology chapter three where it is thoroughly explained how this field study was conducted. In chapter four the organisation of interest, Vi Agroforestry, is presented with its structure, working procedures and priority areas. Following this is chapter five that introduces the area where the study was conducted and describes its features relevant for the thesis. In the second part, chapter six – ten, the farmers’ perceptions of their access to the capital assets are elaborated as well as how these might have changed with time. Vi Agroforestry’s possible impacts are discussed as well as the eventual differences between farmers that collaborated with the organisation and those who did not. The third part, consisting of chapter eleven, then concludes the study and addresses its main findings in relation to the research questions.
2. The Analytical Framework

2.1. The Sustainable Rural Livelihoods Framework

In this thesis the framework of Sustainable Rural Livelihoods (SRL), also referred to as the framework of Sustainable Livelihood (SL), has been used when analysing the material collected. The concept, which is focusing on putting people at the centre of development, can be important when planning new development activities as well as when one wants to look at how ongoing activities and projects are contributing to a greater livelihood sustainability (Carney, 1998: 4-7), (DFIDa, 1999). The latter area of use reflects the incentives of this thesis.

An in depth definition of a livelihood, developed and studied by Robert Chambers, Gordon Conway and Diana Carney among others, is the following:

“A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base”.

(Carney, 1998: 4)

The focal point of the SRL framework is, in other words, to analyse and understand the situation and environment that people are living in. With its bottom-up perspective the framework takes the point of departure in what people themselves perceive as their main priorities and factors important for their livelihoods and looks at the relationship between these factors. By doing so the goal is to create understanding of how to help people build on their livelihoods’ existing strengths and potentials rather than their needs (DFIDb, 1999). Moreover, the framework emphasises that even though people in rural areas often are very poor, they always have some kind of strengths or potentials that can be built upon. The overall idea and hope are that the poor situation that many people are living in will be improved and that more beneficial livelihood outcomes will be achieved in a sustainable way (Carney, 1998: 6-8).

The livelihood framework, which was first introduced by Robert Chambers in the 1980s, aims at giving a wider and more holistic view of the concept of poverty by arguing that there is
more to a person’s livelihood than only one single aspect (DFIDb, 1999). Through his work, Chambers introduced a new way of looking at poverty with the argumentation that poverty is more than just a person’s or a household’s financial assets. He also believed that in order for development efforts to become more effective, a greater bottom-up perspective would be necessary where focus is put on individuals and households (Chambers, 1983: 108ff). Since its origin, the SRL framework has been developed further both by Chambers himself and other scholars such as Gordon Conway and Diana Carney, and is today commonly used by a number of development agencies and organisations such as the British Department for International Development (DFID) (DFIDb, 1999).

The starting-point of the SRL framework is that people are living in a vulnerability context meaning that they are frequently exposed to and affected by external trends, shocks and seasonality factors, which they often have a limited or no control over (DFIDa, 1999). Culture is by some also perceived to be one such factor (Carney, 1998: 11). Part of the vulnerability context, determining people’s ability to stand up against e.g. trends and shocks, is people’s access to different livelihood assets. Which these assets are and a person’s access to them is further dependent on a society’s structures and ongoing processes as well as the transformation of these. While organisational and institutional formations are examples of different societal structures; processes refer to e.g. the social norms, power relations, policies and rules that a society is built upon. When the societal formations and social settings transform it is also likely that the access to different assets will change. A society’s existing structures and processes could further be said to determine the characteristics of the different livelihood strategies that people choose in order to achieve their livelihood goals. Depending on the success of reaching these goals, the strategies chosen and implemented have to a degree the possibility to contribute to a variation of different livelihood outcomes. Altogether, these outcomes will give people the possibility to access new assets and the ability to choose new strategies (DFIDa, 1999).
2.2. The Asset Pentagon

Often said to be at the centre of the SRL framework are the five different capitals, which a livelihood is said to be built upon. These are the natural-, human-, social-, financial- and physical capitals and it is these five assets that this thesis has taken its point of departure from. By asking both farmers that were members of groups collaborating with Vi Agroforestry and non-members about their access to these five capitals and how this access might have changed over time, the objective of this thesis has been to try to detect and understand if, and if so how Vi Agroforestry’s work in Bugene and Bugabo zones in Kagera so far has affected the farmers’ access to the capital assets. Thus, no further analysis of the remaining parts of the SRL framework has been made in this thesis.

**Figure 1 - The Sustainable Rural Livelihood Framework**

**Figure 2 - The Asset Pentagon**

NR: Natural Resource

Source: DFIDa, 1999
The five capital assets can be explained more in depth as follows:

<table>
<thead>
<tr>
<th>The <strong>Natural capital</strong> is defined by a person’s supply of natural resources and the services gained from it. Examples are access to arable land, water and forest as well as the quality of air and biodiversity among other things.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The <strong>Financial capital</strong> is focusing on all economical assets that a person or a household have access to, such as salaries, savings and the supply of credit, which could be used in order to achieve various livelihood objectives.</td>
</tr>
<tr>
<td>The <strong>Human capital</strong> refers to people’s level of knowledge, skills, physical condition as well as labour capacity, which together are seen as important for implementing and achieving different livelihood strategies and objectives. A household’s level of labour capacity could more in detail be determined by its size, good health, possible leadership as well as its level of knowledge.</td>
</tr>
<tr>
<td>The <strong>Physical capital</strong> contains an individual’s or a household’s access to basic infrastructure and material goods such as shelter and equipment used for production. The term also refers to the supply of water and energy as well as means of transportation and communication, which is of high importance for people’s access to information.</td>
</tr>
<tr>
<td>To end with, the <strong>Social capital</strong> compromises the level of social resources that are of importance in people’s attempt to improve their livelihoods. This concerns for example membership in different social networks and groups as well as access to varying organisations and institutions in the society.</td>
</tr>
</tbody>
</table>


The access to the different capitals is constantly changing with time between societies as well as between households and individuals within the same community. A reason for this is for example that people and societies are exposed to trends and shocks as well as changes of societal formations and social settings, which might affect them in different ways depending on e.g. the dimension of such trends as well as the persons’ or the societies’ ability to adapt or stand up against different shocks.

Another reason is the possibility for people to use one capital to enhance one or several of the other four. However, an increase of one of the capitals does not necessarily have to result in a decrease in one of the others. If a farmer e.g. inherits a piece of land from his/her relatives, the access to natural capital increases in form of a greater land area and the farmer might be able
to grow more food on this plot. This could in turn both increase the human and the financial capitals as the farmer might have more food to feed his/her family and might even have the possibility to get an increased income by selling redundant crops (DFIDa, 1999).

Overall, this framework emphasises that an individual or a household most likely do not have an equal access to all the five capitals. An increase or decrease in one of the assets will most likely affect one or several of the other four. It is also important to mention that the possibility of transforming one capital into another creates a possibility for a person to influence his/her own situation and instead of relying on help from others, poor people have the means to change their own livelihood (Carney, 1998: 7).
3. Methodology & Literature

3.1. Qualitative Approach
The overall aim of the qualitative approach is to generate a greater understanding of an event, process or other phenomenon studied. Qualitative studies are often holistic, versatile and able to be further developed in future studies. A distinguishing feature of the qualitative research is the common focus on independent cases that for example could constitute institutions, a few persons’ life stories or a whole community. Accordingly, it is important to take into account in which contexts these cases are studied, since it is believed that it is partly from these contexts that the cases are gaining their specific significances (Danermark, et. al., 2009: 281-290). For example, in order to explain a certain farmer’s harvest output, it could be important to e.g. consider the farmer’s socio-economic conditions, what transport the farmer is enjoying and what local and national agricultural challenges and possibilities that he/she faces.

In this thesis the qualitative approach has been applied, since the research topic could be said to have required investigations conducted inter-actively with people. This, in order to reach a deeper understanding of the small-scale farmers’ livelihoods and their experiences do far from the Vi Agroforestry’s presence.

3.2. Semi-Structured Interviews
During the field study semi-structured interviews were used as the main source of information in order to put the small-scale farmers’ own concerns in focus. Semi-structured interviews constitute a more topic-based approach in the research, compared to performing interviews that are bound to specific questions. The goal of this approach is to make the interview situation more relaxed and conversational by letting the respondent talk in a casual atmosphere. The respondent then has the opportunity to express issues important to him/her personally, rather than answering questions that the researcher presupposes are important for the respondent. With these preconditions the researcher is aspiring to find information that he or she had not assumed to receive from the respondent in the first place. The researcher will thus gain a deeper understanding also concerning the surrounding context of the specific research topic (Mikkelsen, 2005: 169).
3.2.1. The Respondents
A researcher should be careful not to be too one-dimensional in her/his pick of respondents and try to include people with diverse backgrounds and e.g. different social status, sex, educational level, wealth and religion. This is because different social groups tend to experience the research topic differently, and the researcher would thus miss out on important inputs if this was not taken into account (Mikkelsen, 2005: 172-174).

For this field study, the selection process of the respondents was based on the attempt to cover as many different social groups as possible, why an equal amount of men and women were interviewed and factors such as age, family size, marital status, geographical location, level of education, wealth and size of farms were considered. Another important criterion was to interview both small-scale farmers that were collaborating with Vi Agroforestry and also some of those whom were not. In doing so it also became possible to hear views about the organisation from farmers that were not involved in Vi Agroforestry’s activities and to find out reasons for their non-involvement.

3.2.2. Implementation of Interviews
In this thesis the semi-structured interviews were based on the five capitals assets within the pentagon of SRL and the interviews were held in a topic-based approach according to those. In order to prevent the respondents from overemphasising Vi Agroforestry’s impact on the capitals, their thoughts about the organisation was not brought up until the end of each interview, complementing what might have been said about the organisation earlier during the interview. Moreover, a translator was used for all interviews, that took place in the homes of the respondents, in order to gain an increased understanding and feeling for their life situation.

3.3. Interviews / Personal Communication with Vi Agroforestry’s Staff
During the time spent at Vi Agroforestry’s regional office in Kagera and in the field, shorter interviews, discussions and information meetings regarding Vi Agroforestry’s work around Lake Victoria and specifically in the Kagera region were conducted in concordance with staff of the organisation. During these personal communications, Vi Agroforestry’s staff explained more in detail about the organisation’s working strategies and procedures, areas of operation as well as the organisation’s various priority areas. Occasionally, interviews were also held together with the staff in order to discuss and clarify certain views and uncertainties raised during interviews with the farmers in the field.
3.4. Secondary Sources
Applying secondary sources could be positive for a research in order to gain a broader perspective of the research topic. They constitute a good tool to use especially in the initial phase of the investigation since they could generate more general knowledge in a less time consuming way than what e.g. thorough interviews with relevant persons probably would do (Mikkelsen, 2005: 87-88).

To some extent, secondary sources have been appointed in the thesis for further developing the knowledge of the research topic. For starters, the secondary sources were applied to find relevant background information concerning both the analytical framework applied, and the socio-economic- and environmental situation at large, particularly for Eastern Africa. Secondary sources were also necessary in order to find out what could distinguish Kagera from other regions in Tanzania as well as general features of the zones of Bugene and Bugabo that were the areas of special focus during the field study. To reach this background information books, reports, documents and the Internet have constituted the main sources of knowledge.

Furthermore, concerning Vi Agroforestry’s vision, approach, working methods, and views of the project’s work in progress, information was received by reading documents and reports written by the organisation itself, as well as by visiting its Internet home pages. These sources helped to broaden the understanding of the project and the areas of operation from Vi Agroforestry’s viewpoint.

3.5. Observations
By conducting direct observations throughout the study one might have the possibility to distinguish patterns and changes within the area of study, such as differences in e.g. behaviours or social and physical structures that might be of relevance to better grasp the research topic. For example, the event of a certain merchant coming to a village to buy beans on a Tuesday could be either something that happens regularly every week or perhaps this is a very rare occasion. Another important aspect could also be to conduct observations together with people that are more familiar with the surroundings and to discuss what you see with them. From this, one might gain valuable local information to be able to tell what would, and what would not be central questions to ask the respondents (Mikkelsen, 2009: 88).
Direct observations were something that took place regularly during this field study. Through visiting the respondents’ homes for every interview and staying in their surroundings, one could better understand the farmers’ possibilities and choices made in relation to their living conditions. One could for example see what type of material the houses and roofs were made of, how the infrastructure in the villages affected means of transportation, what food that was accessible and how the climate affected the daily routine in the villages. During the visits it was further common that the respondents wanted to show practical examples of what was discussed during the interviews, in order to better explain matters important to them. If for example a respondent’s cassava had become sick he or she could explain it better by showing the plant itself. These observations constituted a great complement to the issues brought up during the interviews since they gave a more practical insight in the respondents’ life.

Direct observations were further a great tool in understanding how Vi Agroforestry’s working methods were carried out. Since the organisation has a steady group focus, a group meeting with one of the farmer groups collaborating with the organisation was for example visited, in order to find out how the groups worked in practice. Seeing the group in action was very beneficial for better grasping the social atmosphere, organisation, routine and difficulties facing them, which were issues often brought up during the interviews.

Another frequent observation technique was to consult the translator about thoughts and wonderings that came up during interviews and beyond, including Tanzanian customs, systems, traditions, and family matters. Since the translator was raised in the surroundings he was familiar with the culture and tribe languages spoken locally, which was very rewarding given that many things important for the thesis might not have been taken into account if this relevant information had not been attained.

3.6. Cross-checking
For a successful field study it could be of importance to constantly question the truthfulness of what the respondent is saying and to crosscheck the information received (Mikkelsen, 2005: 172–174). Because of this, whenever any information gathered for the thesis seemed questioning, rare or of high importance, it was custom to double-check it with another source. Some respondents were thus sometimes asked about additional things brought up by others previously interviewed. Likewise, issues found in reports by Vi Agroforestry or acknowledged through observations were checked through respondents or comparing various
secondary sources as well as through discussions with Vi Agroforestry’s staff. An example of this method was when several respondents had stated that they sold their coffee through a certain cooperative, why a former representative of the cooperative was interviewed in order to check prices and reach a greater understanding of the coffee market.

### 3.7. Limitations

The field study inhibited a few limitations that are of importance to stress as part of the thesis. Perhaps the most obvious one was the geographical limitation of only visiting Kagera, constituting only one of Vi Agroforestry’s seven project areas in Eastern Africa and that only two out of the five zones within the project area were visited, Bugene and Bugabo. This could imply that the organisation’s work in other areas not visited might have contributed to other outcomes than those observed in this thesis. Thus, what is written in this thesis only account for circumstances in the chosen area of study.

Additionally, a conceptual limitation is that the thesis does not take into consideration all factors and process of the SRL framework. Instead a deeper analysis have been conducted on one part of the framework, the five different capital assets, and how the presence and support of Vi Agroforestry so far have had an impact on the farmers’ access to these assets. Furthermore, all information gathered during the field study did exclusively come from either the farmers themselves or Vi Agroforestry’s staff, with only one exception (for more information: 3.5. Crosschecking). Hence, the thesis does not take into account other organisations’ or governmental representatives’ views or their possible impact on the farmers’ living conditions in the area of study.

Finally, as Vi Agroforestry is an organisation, which focuses on a vast variety of different problem areas and activities, it has not been possible to take all of these aspects into consideration in this thesis.

### 3.8. Aspects to Keep in Mind

Throughout the field study there were certain aspects affecting the gathering of material that might have influenced the outcome of the thesis, which are presented here to the reader. Firstly, the usage of a translator has signified a slight uncertainty of what the respondents said, and the nuances of both questions and their answers might have been lost in translation. Secondly, the usage of material and information received by Vi Agroforestry might have to
some extent resulted in the risk of biased information and that some facts and views empathised in this thesis could have portrayed the organisation’s work in a biased way. 

Thirdly, the usage of Vi Agroforestry’s cars and the fact that the organisation’s staff were the ones who notified and made the final selection of the respondents might in some circumstance have affected the material gathered during this study. Occasionally, farmers thought that Vi Agroforestry was responsible for the interviews, which could have led to that they felt uncomfortable of criticising the organisation and instead overemphasised its significance. However, this was avoided as much as possible by trying to make clear that the organisation was not responsible and by waiting to ask questions about the organisation’s possible impacts until the end of the interview. Fourthly, due to the lack of information about the farmers’ socio-economic situation in the Kagera region before the arrival of Vi Agroforestry or in the organisation’s initial phase, it has not been possible to do a more in depth comparison between the farmers’ situation in 2005 (the year of Vi Agroforestry’s arrival in the Kagera region) and their situation in late 2009 (when this study was conducted). Because of this a greater focus has been given to the farmers’ own memories, in order to grasp what possible changes that might have occurred with time concerning the farmers’ livelihood situation. 

Finally, as non-Tanzanians with only a short time in the country, the impression and understanding of the respondents’ lives and their willingness to be freehearted during the interviews might be limited, which in turn might have affected the analytical outcomes.

It should though be mentioned that since these circumstances have been known, a lot of effort has been put on trying to avoid or limit their possible negative consequences.
4. Vi Agroforestry

4.1. Introduction of the Organisation

Vi Agroforestry is an international, non-political, non-religious and non-profit NGO that is active in the Lake Victoria region and registered as a foundation in Sweden. The organisation, which was initiated through the Swedish magazine Vi, began as a tree-planting project with the objective of counteracting soil erosion and halting desertification in the West Pokot District in Kenya. Since its establishment in 1983 the organisation has spread to several new districts and is currently active in a total of seven project areas within Kenya, Tanzania, Uganda and Rwanda. Plans of expanding both within these countries and to other areas such as Burundi and around Lake Malawi are today also being discussed (Nilsson, 2008: 7, 65).

4.2. The Structure of the Organisation

With the focus on small-scale farmers around the Lake Victoria basin much of Vi Agroforestry’s work is conducted on the local level in concordance and interaction with the farmers. As a Swedish foundation the organisation’s headquarters is located in Stockholm, Sweden with a Regional Office in Nairobi, Kenya and a Programme Office situated in Kisumu, Kenya (Nilsson, 2008: 9).

The organisation is, as mentioned above, currently active in seven different project areas in East Africa, where each area is supervised by its own Project Office. The person responsible for each Project Office is the Project Manager. Each office also contains different units supervised by its own Unit Head, which represents the organisation’s different areas of work, and where each section has its own area of responsibility in order to facilitate the farmers and the organisation’s work in the field.

Moreover, each project area consists of different zones that are managed by a Zone Coordinator who is in charge of facilitating and coordinating the organisation’s different Field Officers. The Field Officer, who is the organisation’s most local member of staff and the person working closest with the farmer, is the one responsible for the different wards and villages within a specific zone. The aim of the Field Officer’s work is to teach and facilitate farmer groups about different agroforestry and enterprise activities and support the groups to become more self-sufficient (interview - Flavius Rwelamira, 2009).
Overall, the members of staff working within the organisation mostly originate from either the four different countries where the organisation is active, or from surrounding countries. However, some of the staff working at the organisation’s different offices also comes from e.g. Scandinavian countries such as Sweden and Denmark.

**Figure 3 - The Structure of Vi Agroforestry within the Kagera Project Area**

![Diagram of Vi Agroforestry's structure](image)

Source: interview - Flavius Rwelamira, 2009

An important part of the structure of the organisation is also its donors and their funding. Vi Agroforestry is mainly sponsored by individual donors through the foundation “Vi Planterar träd” and through different activities performed within and in concordance with the SCC, Coop Sweden and the Vi magazine. An additional and important part of the funding comes from the Swedish government through Sida (Nilsson, 2008: 61-63).

### 4.3. Vi Agroforestry’s Areas of Priority and Working Procedures

Since the organisation’s creation and the establishment of the foundation “Vi Planterar träd” the initial objective of planting trees for combating soil erosion and desertification has always been and will always be the core element of the work of the organisation. However, during more than 25 years of existence the expansion of the Vi Agroforestry’s working methods and new areas of priority have been significant parts of the organisation’s development.
With the vision of creating “A sustainable environment offering good living conditions for farmer families” the organisation is today focusing on creating a healthy and sustainable environment, while simultaneously reducing the levels of poverty and food insecurity. The importance of focusing on the environment and to find reliable sources of energy have over the last couple of years been given increased notice within the organisation concurrently as the threats of global climate changes have increased. The organisation highlights the importance of giving the poor the means of being able to protect and improve the environment, while the farmers themselves are benefited from it in form of an enhanced production and a decreased level of poverty. To be able to meet these needs and accomplish such a vision the organisation emphasises the need for implementing sustainable agroforestry methods together with different enterprise activities. Vi Agroforestry’s mission is thus “to make agroforestry and enterprise development engines of economic growth and poverty reduction” (Nilsson, 2008: 7-29).

**Box 1 - The Meaning of Agroforestry**

One focal point of Vi Agroforestry’s work is to educate small-scale farmers about agroforestry techniques. By planting more trees the aim is that the soil will become more fertile as the deep roots bind the soil and bring up important nutrients from the ground such as nitrogen. The trees also function as shades for other crops and protect them from strong winds. This in turn reduces the evaporation and the consumption of water by other crops. Additionally, when the leaves moulder various substances are created, which bind the important nutrients, make the soil more fertile and decreases the risk of decalcification. Various types of trees also have the ability to work with different bacteria, which are able to directly bind nitrogen from the air for the crops. This increases the amount of nitrogen and reduces the need for commercial fertilizers.

Trees could also increase the amount of timber, firewood, fodder, fruits and medicines, as well as have positive effects on the climate as their ability to absorb carbon dioxide decreases global warming. Nevertheless, agroforestry techniques could also increase the risk that trees and crops compete on the overall access to water, light and nutrition (Norberg, 2009: 16). Vi Agroforestry encourages farmers to plant fast-growing trees that are adapted to the local climate. Whereas trees for firewood could be harvested after one to two years, trees for timber and poles takes around 10-15 years to mature (Vi-skogen (b), 2010).

It should though be stressed that the concept of agroforestry inhibits several technologies beyond the tree planting itself. As for Vi Agroforestry, the concept’s most important aspect was breached to be
the ecological and economical interaction of woody and non-woody components of agroforestry. The small-scale farmers collaborating with the organisation in Kagera were, commonly adopting the agroforestry techniques of livestock husbandry (for income, nutrition and supply of manure), integrated pest management (through biological pest control, natural pesticides and crop rotation), water and soil management (through terracing, ridging and mulching), as well as tree planting (for nursing of coffee, fodder, nutrition from fruit trees, supply of wood fuel and sale of poles and timber), among other techniques.

With this in mind, it should however also be mentioned that farmers in the region seemed to have experienced hindrances that had limited their adoption of these different technologies. Such hindrances included for example limited financial resources, lack of labour capacity, as well as inadequate knowledge and skills for self-help to be able to apply the techniques. It was also breached that gender inequalities did occur in some cases where the farm work was mostly carried out by women with inadequate support form men in some families (Masologo, 2010).

4.3.1. Areas of Priority

A focal point for the organisation is to combat poverty among small-scale farmers by implementing sustainable agroforestry techniques. Through these efforts the goal is to achieve economical growth as well as to let small-scale farmers move forward beyond subsistence farming. Through the promotion of agroforestry methods, the organisation also aims at counteract soil erosion and degradation of the environment, improving water absorption and soil fertility, as well as enhancing the possibility of a more diverse agricultural production. This altogether intends to further improve the livelihoods of the farmers and their families. Vi Agroforestry also works to raise the level of food security by encouraging farmers to enable agriculture activities such as poultry, fish farming and horticulture, which produces food that is healthy and nutritious. Furthermore, the organisation promotes the farmers to establish and develop different enterprise activities such as the cultivation of cash crops and livestock keeping with the aim of increasing the farmer’s level of income.

A common element in the work carried out by Vi Agroforestry is the training and facilitation of farmer groups in adapting financial services such as the Village Savings and Loans Association system (VS&LA). By being able to save and borrow money within the groups the organisation’s objective is that farmers will have the possibility to increase their income and develop their business activities as well as giving the farmers an opportunity to deal with
unforeseen and costly events (for more information: Figure 4 - Village Savings and Loans Association system (VS&LA)).

In order to reduce poverty and injustice Vi Agroforestry also works with various crosscutting issues such as *gender awareness, HIV/AIDS prevention and mitigation* as well as to *empower young people* in their schools and at home. The focus on gender equality and to make women more self-reliant could especially be seen as evident concerning the VS&LA groups where a high number of the group members are female (Nilsson, 2008: 45-58).

In 2009 a new programme approach was adopted at the different Vi Agroforestry offices around Lake Victoria. The programme, known as Lake Victoria Regional Environmental and Sustainable Agricultural Productivity Programme (RESAPP) 2009 - 2011, replaced the organisation’s former programme approach called Lake Victoria Development Programme (LVDP). Since the adaptation of RESAPP the area of *climate change and sustainable environment* has become prioritised further. This development seemed to have been underway in 2007 during LVDP when climate change was highlighted as a developmental issue, though LVDP was mainly focusing on enterprise development among farmer groups with agroforestry activities such as tree planting, livestock keeping and village savings and loans. The new programme approach could be said to focus on these activities from a greater climate change and sustainable environment perspective. The aim of Vi Agroforestry is to educate the farmers about the impacts of the ongoing climate change and how it e.g. effects their cultivation and the soil-quality, as well as to teach and advice them on how to proceed with their farming activities in a way which is beneficial both for themselves and the environment (interview - Flavius Rwelamira, 2009) (SCC-Vi Programme Office Kisumu, 2008: 38).

**4.3.2. Working Procedures**

Vi Agroforestry works with capacity building and aims to strengthen the farmers’ living conditions through applying a participatory agroforestry approach with a strong focus on gender equality. Through implementing Participatory Rural Appraisal (PRA) activities the organisation works to encourage the farmers and their communities to identify the needs and actions required for a sustainable future. By doing so the aim is to promote community initiatives to a greater extent and to let farmers be at the centre of their own development process. To be able to more effectively facilitate and support the farmers and their
communities Vi Agroforestry works in close collaboration with other organisations, private companies, government employees and national and international NGOs focusing on rural development.

An integral part of the Vi Agroforestry’s working strategy is its strong group approach. By encouraging the farmers to work together and establishing their own networks and associations the organisation aims at facilitating the farmers to be able to support and help each other in achieving a sustainable future. Group planning and joint project implementation such as Farmer Field Schools\(^4\), Farmer-to-Farmer study tours\(^5\) or shared livestock keeping as well as other common activities, where farmers come together, share and discuss different ideas and methods, are being promoted. By conducting seminars where farmer groups can receive education and advices on how to implement and conduct various agroforestry and enterprise activities, Vi Agroforestry works to strengthen the groups in order to be self-sufficient when it is time for the organisation to phase out of that specific area of operation.

In order to work more effectively and extend the work of the organisation to new areas of operation, time limits are set up for Vi Agroforestry’s presence in a certain area. The organisation’s work starts with an intensive phase of two – three years where the Field Officer is responsible for spreading information and to facilitate the establishment of farmer groups. Each Field Officer is during this time period responsible for 500 – 1 000 households. The intensive phase is followed by an extensive phase of two – three years where sustainable levels of knowledge, practice and organisational strength are being established. The number of households per Field Officer is increasing during this period to around 5 000 – 10 000 due to the intended increased self-sufficiency among the established farmer groups (Nilsson, 2008: 33-37). However, the six years-limit in one area has not always been the organisation’s approach. This is rather something that has been developed during more recent years with the objective of applying pressure on the farmers to adopt the different activities, and for the staff to work hard to make the farmers independent from Vi Agroforestry’s personnel.

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\(^4\)Farmer Field Schools aim to increase farmers’ decision-making capacity and understanding of sustainable agriculture. This method focuses on the farmers’ active participation in the learning process by meeting regularly in the field to observe and taking part in various farming techniques and innovations, which they thus learn to adapt on their own farm (SCC-Vi Programme Office Kisumu, 2008: 32).

\(^5\)Farmer-to-Farmer study tours are based on letting farmers visit other farmers implementing new farming techniques. By doing so the aim is to increase awareness about such techniques and Vi Agroforestry’s interventions and to learn by observing others (Ibid: 32).
A focal point of newly established RESAPP is its greater demand-driven approach, which focuses on the importance of letting the organisation’s work reflect the farmers’ demands. Whereas Vi Agroforestry’s responsibility is to conduct mobilisation and sensitisation in an area, it is up to the farmers themselves to request services from the organisation as a group. This means that instead of telling the farmers what to do, the organisation’s work is centred around advisory services, meaning that when the farmers have established their own group it is up to the group members themselves to request support and training from the organisation in order for the Vi Agroforestry staff to provide the group with such training. After receiving the knowledge and facilitation needed, the members of the farmer group are expected to be able work and support each other with little and eventually no involvement of Vi Agroforestry. So in comparison to LVDP’s more individual and less demand-driven approach, RESAPP implies that a farmer must first be part of a group and in order to receive training it is up to the group itself to demand such service from the organisation. The reason for initiating this demand-driven approach was to avoid creating a dependency on the organisation by making the farmers accustomed to receive free handouts and services automatically, which might restrain the farmers’ confidences to develop their own capacities (interview - Flavius Rwelamira, 2009; interview - Thomas Ølholm, 2009).
5. Area of operation

5.1. Kagera Region

The Kagera region is situated in the northwestern corner of Tanzania, just below the equator. It borders with Uganda in the north, with Rwanda and Burundi in the west, and its eastern border is found in Lake Victoria. It is a region covering about 40,800 square kilometers whereof about 30,000 square kilometers are land and about 10,000 square kilometers is covered by water bodies of Lake Victoria, Burigi and Ikimba lakes and Ngono and Kagera rivers (National Bureau of Statistics, Ministry of Agriculture and Food Statistics, et. al., 2007: 1).

Kagera consists to a large extent by hilly terrains and deep valleys, with a lot of tropical vegetation of both open grasslands and forest. The rainfall stems from 800 – 2,000 millimeters per year with two rainy seasons in March - May and October - December, where the more inland parts of the region receive less rains. These preconditions make the soil of Kagera relatively fertile, though due to over-usage the soil has become somewhat exhausted why fertilizer today is necessary in certain places. The closeness to the lakeshore in combination with heavy rainfalls and poor soil management further leads to that Kagera, and foremost the eastern parts of the region, suffers from soil erosion (Tanzania Chamber of Commerce Industry and Agriculture, Kagera, (a) (b) (c) 2005).

The latest estimation of Kagera’s population was made in 2002 and was then 2 033 888 people with an annual growth rate of 3.1, which made Kagera one of the five most populated
regions in Tanzania (National Bureau of Statistics, Ministry of Agriculture and Food Statistics, et. al., 2007: 1). The Kagera gross domestic product (GDP) is currently on the rise and is mainly supported by agriculture, where the coffee production is the most commercially prominent crop and bananas, beans and maize constitute main food crops. Other income bringing activities in the region include fishing, mining, livestock keeping and industries of e.g. grain mills and sugar factories (Tanzania Chamber of Commerce Industry and Agriculture, Kagera, (d) (e) 2005).

5.1.1 Vi Agroforestry’s Presence in the Kagera Region

Kagera is the youngest of the Vi Agroforestry’s project areas in Eastern Africa, and was appointed in year 2005 (interview - Flavius Rwelamira, 2009). The work carried out in the region is said to focus on for example facilitating group and network formation and development, financial services and farmer enterprise development, Farmer Field Schools, sustainable land use management, to inform about and carry out demand-driven services such as the distribution of seeds and focus on crosscutting issues such as gender equality, nutrition and HIV/AIDS. Due to a high level of soil erosion in the area, Vi Agroforestry’s strategy has also been to advise the farmers on agricultural techniques such as slope cultivation and composting (SCC-Vi Eastern Africa, 2009: 1; interview - Clement Tui, 2009; interview - Vincent Murongo, 2009).

In this thesis, the areas of interest within Kagera are the zones of Bugene and Bugabo. These specific zones were chosen for this study due to their diverse geography, climate, and location in the region. Both zones were also initiated in 2005 in the Vi Agroforestry project, which could be said to make the areas convenient to compare (SCC-Vi Eastern Africa, 2009: 17).

5.1.2. The Bugabo and Bugene Zones

The **Bugabo zone** is situated in the north-eastern corner of Kagera, with its boundaries to a large extent along the shores of Lake Victoria. In 2009, it was estimated to be 8447 households in Bugabo zone and according to Vi Agroforestry, the organisation was working with 1453 of these at the time (Kipondya, 2010) and was present in all of the zone’s 17 villages. The zone is divided into five wards and Vi Agroforestry was active in all of these, though from September 2009 it lacked field officers in two of them – Rubafu and Kishanje. The organisation was, however, at the time of this study working to fill these spaces.
During the field study, interviews were carried out in five villages of Bugabo in total - Ibosa, Kiilima, Rushaka, Katale and Bumai. These villages are situated in Nyakato, Buhendangabo, Rubafu and Kishanje wards, which imply that four out of the five wards in the Bugabo zone have been visited during the study.

In **Bugene zone**, which is located in the inland part of the Kagera region, Vi Agroforestry was active in four of the zone’s five wards when this study was conducted, where the Kahanga ward was the exception with the explanation that this ward was part of the town. All in all, there were 16 villages in the zone when this study was conducted and the organisation was operating in all but two of them, since these are situated in the Kahanga ward (interview - Vincent Murongo, 2009). There were further 11 005 households in total in Bugene in 2009, whereof Vi Agroforestry was working with 1811 of these (Kipondya, 2010).

In the Bugene zone, interviews were conducted in the seven villages of Bujuruga, Chonyonyo, Ihanda, Nyakahanga, Lokole, Nyabwegala and Besheshe, which belong to Nyakahanga, Ihanda, Bugene and Ndana wards. Thus, the field study covered four out of the five wards of Bugene.
PART II - Analysis

In this second part of the thesis the farmers’ socio-economic situation is analysed in concordance with their own perceptions of their access to the five capital assets. The part is divided into five chapters according to the five capital assets. Each chapter begins with examining the farmers’ overall capital access, which is followed by an analysis of Vi Agroforestry's potential impact. Here are also the possible differences and similarities between farmers that were members of groups collaborating with the organisation and non-members elaborated. The analysis takes its point of departure from the farmers’ situation when this study was conducted, accompanied with continuous reflections of the past in order to explain possible changes that might have occurred with time.

6. The Natural Capital

Being a small-scale farmer, access to a healthy and accessible natural capital could be said to be of highest importance for both own subsistence as well as for having a possibility to generate a varying degree of income. In this chapter farmers’ access to natural capital such as land, forest/wood and water is discussed and analysed.

6.1. Access to and Quality of Land

For the farmers interviewed the size of their land varied between a quarter of an acre to 51 acres. Several of the farmers had more than one plot that they either had bought themselves or inherited from relatives. However, due to lack of financial capital to cultivate the land or to pay for manpower as well as a low access to fertilizers, many farmers only had a possibility to use parts of their land for farming activities (interview no. 2, 5, 8, 10, 13, 15, 17, 18, 23-25, 27, 29-35, 37). In contrast, a few farmers also explained that they did not have enough land for self-sufficient cultivation. Instead they needed to buy additional food for the families or had started to cultivate land owned by other farmers. A common feeling among these farmers was that they wished to have more land in the future to be able to increase their cultivation (interview no. 1, 3, 10, 12, 25, 31, 32, 36, 37).

Concerning the quality of land, a common impression was that the soil on either all or some of the farmers’ plots was infertile, which had a negative impact on their cultivation. In order to improve the soil quality most farmers used manure from either own livestock such as cows,
goats, hens and pigs or had to buy manure from other farmers to fertilize their land. The problem for many farmers was, however, that their own livestock did not produce enough manure and that manure often was very expensive to buy. Few farmers used composted weed or banana leaves, the method of shifting cultivation or let the soil rest during different seasons to make the soil healthier. Moreover, while some farmers expressed that the quality of the soil had always been infertile, others explained that it had become a problem especially in the more recent years. A cause for this was breached to be that the land had been used for many generations, which had made it tired. One farmer also believed that the problem had erupted due to soil erosion (interview no. 2, 3, 5-11, 13, 14, 16–24, 26–28, 30-37).

6.2. Cultivation of Crops

The study further showed that the small-scale farmers seemed to be highly dependent on their cultivation of crops for own food consumption and as a source of income. Even though few farmers referred to the term “agroforestry” when explaining about how they were cultivating their crops, it became clear both during the interviews and through observing the farmers’ plots that mixing crops, sometimes together with livestock, was very common.

The most common crops cultivated in the two different zones were permanent crops like bananas (harvested year around), coffee (harvested approximately twice per year) and seasonal crops such as beans, cassava, yams, sweet potatoes, maize, ground nuts and tomatoes (harvested approximately once per year or every second year). Some farmers, even if they were fewer in number, also grew mangoes, passion fruits, avocados, pineapples, chilli, soya beans, peas, pumpkins, vanilla, Irish potatoes as well as cabbage and carrots. Even if several farmers expressed that they sold some of their food crops during seasons of good harvest, the most common cash crops were said to be coffee, bananas, beans, maize, vanilla and tomatoes (for more information: 7. Financial Capital) (interview no. 1-37).

Throughout the study it became apparent that several of the farmers suffered from obstacles restraining their cultivation. Except problems with infertile soil, this included difficulties with sick crops or the more recent challenge of strong winds and hail that caused crops like banana trees to fall down. Several of the farmers had experienced that some of their crops, e.g. coffee, beans and cassava, had been affected by different diseases or insects, which in turn decreased their amount of harvest. While a few of the farmers had the ability to buy medicine to cure their crops, this did not appear as being very common due to its high price. Some farmers also
answered that no cure for the diseases existed and that they were waiting for the Tanzanian government to give them advice on possible treatments (interview no. 4, 6–8, 13, 18, 20, 13–25, 28, 31–34, 36).

The most common changes over time detected regarding cultivation were that after receiving education and training about how to more effectively carry out various farming activities and to cultivate different crops, many farmers had the possibility to improve their cultivation and indirectly their income. Such education had been provided by e.g. the Tanzanian government, the Kagera Cooperative Union (KCU)\textsuperscript{6}, World Vision\textsuperscript{7}, Community Habitat Environmental Management (CHEMA)\textsuperscript{8}, Kagera Agricultural and Environmental Management Project (KAEMP)\textsuperscript{9}, the MAVUNO project\textsuperscript{10}, Vi Agroforestry (for more information: 6.5. Vi Agroforestry’s Impact on Farmers’ Access to Natural Capital) and/ or been taught by parents and in the formal school education (interview no. 1-9, 11, 13–15, 17–19, 22-25, 28–32, 36).

6.3. Access to Forest and Firewood

Regarding access to firewood, farmers seemed to either be fetching branches from the natural forest or grew trees themselves. Some farmers also bought charcoal from sellers in the village. Growing own trees was something that the majority of the farmers appeared to be doing. Except for firewood purposes, the tree was also used for timber, poles for constructing houses and supporting banana trees during windy periods, medical purposes or for shading other crops. Furthermore, whereas a few of the farmers seemed to have inherent tree farms from relatives or established their farms on land where trees already grew, the most common answer was that the farmers had started growing trees themselves, some of them already in the 80s and 90s, but more commonly during the last decade.

\textsuperscript{6} For more information about KCU – 6.2.3. Access to Market
\textsuperscript{7} \textit{World Vision} is an international Christian relief, development and advocacy organisation that has been working in Tanzania since 1970 to e.g. increase the education level; to improve peoples’ health by developing existing water sources and increasing peoples’ knowledge about diseases and the environment; and to provide help with the development of income generating activities (World Vision, 2009).
\textsuperscript{8} \textit{CHEMA} is an environmental-based grassroots organisation established in 1991. The organisation, active in the Kagera region, provides support and education about e.g. agroforestry, beekeeping, tree planting and the environment (CHEMA programme, 2010).
\textsuperscript{9} \textit{KAEMP}, a project effective in the Kagera region in 1997 and 2003, had the overall goal of supporting the rehabilitation of the Kagera region, by improving the food security for the household in the region; developing the rural infrastructure though providing access to safe drinking water, primary health facilitates and by rehabilitating the roads; improving the natural resource management practices; and strengthening the capacity of implementing the project (International Fund for Agricultural Development, 2002: 1).
\textsuperscript{10} The MAVUNO project is a NGO, established in 1993, that currently is working on grassroot level in the Karagwe district in Tanzania. The project has a rural development approach and focuses on areas such as health, agriculture, education, women and youth development, HIV awareness as well as water and sanitation assistance (MAVUNO project, 2010).
One major reason for the enhanced number of tree farms could be much due to the ongoing decrease of the natural forests both in Bugabo and Bugene. Common replies by many of the farmers were that they nowadays had to go much further to be able to fetch firewood from the forests (interview no. 3, 4, 6, 7, 12, 14, 19, 20, 23–33, 36, 37). The explanations given for this were for example that more people had moved to the zones during the recent decades and the forests were cut down in order to build more houses, create more land for cultivation and to be used as firewood and charcoal. However, even though the majority of farmers interviewed explained that they were cultivating trees, this was, as mentioned above, a rather new and so far less established farming activity (interview no. 26–29, 31, 36).

Regarding access to seeds for cultivating trees and different food crops, the farmers had either bought seeds from the market or the Tanzanian government and/or had received them from neighbours, friends, KAEMP and/or Vi Agroforestry (for more information: 6.5. Vi Agroforestry’s Impact on Farmers’ Access to Natural Capital). A change over time had nevertheless been that after receiving or buying seeds in the past the farmers were now able to collects seeds on their own farms from previous harvests (interview no. 1-37).

6.4. Access to and Quality of Water

The farmers’ ability to fetch and contain water proved to differ very much depending on the farms’ location and between rainy and dry seasons. Through the study it became evident that the access to water was especially challenging for the farmers living in Bugene due to the zone’s geographical location and its longer distance to Lake Victoria in comparison to Bugabo. Even though a few of the farmers in Bugene explained that they had access to water taps or pumps built by either the Tanzanian government, foreign companies or older family members; were able to collect some water from a neighbouring school due to an employment as a teacher at the school; or could buy some water at the nearby hospital, the majority of farmers were depending on rainfall that they collected in self-made water tanks kept in connection to their houses. However, as the contained rainwater sometimes got finished during dry seasons many farmers in Bugene had to walk long distances to collect water from the rivers during these periods (interview no. 20-37).

For Bugabo, the farmers were mainly fetching water from surrounding rivers and sometimes also through pumps and tanks made by e.g. the Tanzanian government or World Vision. In similarity to Bugene, some of the farmers in Bugabo further expressed that they experienced
problems of fetching water from the nearest river during the dry seasons as some rivers could become completely dry. When this happened the farmers had to walk further, often to the main river, to collect sufficient water. Few farmers in Bugabo also explained that they collected rainwater in tanks and buckets during rainy seasons (interview no. 1-19).

When it came to the quality of the water it seemed to differ much from river to river or between tanks. Out of the farmers mentioning that World Vision had built tanks in Bugabo some answered they did not have to boil the water before drinking it, while other said that the water in the tanks became dirty while kept in the container. Concerning the water coming from the rivers both in Bugabo and Bugene, a consensus was lacking whether the water was drinkable straight away or had to be boiled before drinking it as it contained bacteria such as typhoid (interview no. 1-37).

In short, it appeared as if common challenges in the zones included obstacles such as infertile soil, insufficient water access, deforestation, problems of sick crops and strong winds. However, with increased education and training about crop cultivation and various farming activities, and a gradual enhancement of tree planting, especially during the last decade, it seemed as if the farmers’ overall access to the natural capital was moving in a slow but positive direction.

6.5. Vi Agroforestry’s Impact on Farmers’ Access to the Natural Capital

One of Vi Agroforestry’s main focuses over the years has been to achieve sustainable development and decrease poverty through promoting rural-based agroforestry techniques such as providing farmers with education about how to further develop their farming activities to become more sustainable and profitable (Nilsson, 2007: 8-13).

6.5.1. Education in Crop Cultivation

Through the interviews, it became evident that the majority of the farmers that were members of groups collaborating with Vi Agroforestry had received some type of training and education from the organisation about how to develop their farming activities. Being dependent on the cultivation of crops it seemed as if Vi Agroforestry had been focusing on giving the farmers the possibility to learn more about cultivating different crops. This included both how to improve their existing cultivation of different crops but also to start
growing new types of crops such as tomatoes, which might not have been a new crop in the zone but a new crop for some individual farmers. Furthermore, some of the farmers did for example explain that the organisation had taught them about how to cultivate crops such as vegetables, bananas, maize, beans and passion fruits for both own consumption and for selling (interview no. 1-6, 8, 9, 11, 13, 19, 22–24, 28–32, 36).

6.5.2. Addressing the Challenge of Soil Infertility

Another type of training offered by the organisation included the importance of adapting various agroforestry techniques, such as mixing different crops on the same plot and the importance of planting and cultivating trees. Some farmers also mentioned that Vi Agroforestry had taught them about shifting cultivations and to keep livestock for manure to maintain the quality of the soil (interview no. 1-6, 8, 9, 11, 13, 19, 22–24, 28–32, 36). The organisation’s focus on teaching the farmers about adapting these kinds of techniques could be said to be an important factor in order for the farmers to come to terms with the challenges of infertile soil. By keeping livestock and mixing crops and trees, which e.g. could increase the level of fertilizing and nutrients, the soil could be said to have the possibility to become more fertile with time (Vi-skogen, 2009: 16).

To combat soil erosion, which could be seen as one cause for the infertile soil and that was expressed by Vi Agroforestry’s own staff to be a big problem in the area due to its hilly terrain, the organisation explained that they had been advising farmers to adapt agricultural practices such as slope cultivation and composting. Instead of cultivating along the slopes, Vi Agroforestry was now aiming at encouraging farmers to cultivate across the slopes to decrease the level of soil erosion (interview - Vincent Murongo, 2009; interview - Clement Tui, 2009). It should though be mentioned that only one of the farmers interviewed expressed that soil erosion was a big problem (interview no. 26).

Overall, this information could be said to demonstrate that Vi Agroforestry’s strategy seemed to have been to try and combat the problem of infertile soil, which the majority of farmers appeared to be faced with. However, despite the organisation’s seemingly strong efforts on this, infertile soil still appeared to be a big challenge for the majority of farmers.
6.5.3. Facilitating Tree Cultivation

Furthermore, Vi Agroforestry’s approach of providing farmers with a possibility of receiving training on how to plant and cultivate trees could also be seen as an important step in order to reduce the level of deforestation, to counteract the negative consequences caused by strong winds as well as to increase the access to and possibility to sell timber and firewood. Some farmers explained that they believed that more farmers had begun planting trees after Vi Agroforestry’s presence in the two zones. One contributing factor for such development could be that during the organisation’s first years in the area, farmers seemed to have received seeds for free from the organisation (interview no. 1, 2, 4–6, 13, 19, 22, 25, 36). However, as a result of the 2009 initiation of RESAPP, with its more demand-driven approach, it was decided that farmers should from now on buy seeds themselves and that Vi Agroforestry should only contribute with a small percentage of the price. A reason for this decision was said to be to decrease the risk of dependency and create better opportunities for farmers to be able to sustain themselves after the organisation had phased out of a certain area (interview - Flavius Rwelamira, 2009). Nevertheless, it was only explained by one farmer that his group members had to pay for seeds themselves with minor support from the organisation and farmers still seemed to believe that the organisation was handing out seeds for free (interview no. 4, 6, 8, 30, 31). The reason for this might be that RESAPP had just been implemented when this study was conducted and the message that the organisation no longer will provide seeds for free had so far not been widely disseminated.

6.5.4. Limited Focus on Sick Crops and Insufficient Water Access

Concerning other common challenges and areas of importance for the farmers, such as sick crops and lack of sufficient and easy access to water, it was explained that Vi Agroforestry only focused on these aspects to a limited degree (interview - Thomas Ølholm, 2009). Instead it seemed as if it was mainly other actors, such as the Tanzanian government and other organisations present in the area that were focusing on these issues. Accordingly, when asked if there was something the farmers missed from the organisation some farmers for example mentioned that they wished to receive more help of finding other ways of facilitating water or would like the organisation to provide them with treatment for their sick crops (interview no. 10, 22, 23, 30, 31). Although Vi Agroforestry might not have directly addressed these issues it could be argued that through the organisation’s introduction of VS&LA groups the farmers possibilities to save and borrow money had increased, which in turn could be said to have
enhanced the farmers possibilities to e.g. build or enlarge their water tanks or buy medicine for their sick crops.

6.5.5. Possible Differences and Similarities between Members and Non-Members

Regarding any possible differences in access to natural capital between farmers that were members of groups collaborating with Vi Agroforestry and non-members, it seemed as if no clear and direct patterns could be detected. The access to land and cultivation of food crops and trees as well as difficulties with infertile soil and access to water did not seem to differ depending on if you were a member or non-member. What could be discussed, however, is that even though non-members were receiving education about farming and agroforestry from the Tanzanian government and other organisations, it seemed as if it was in general those farmers that were members of groups working together with Vi Agroforestry that had received most education and training of this kind. This is an aspect that most likely could be to their advantage and which might result in greater differences in the next couple of years.

Another theory of why few differences could be detected might be that farmers that were members of groups collaborating with Vi Agroforestry might have trained non-members on what they themselves had been taught. However, although this appeared to have occurred on a few occasions it did not seem to be something of a common nature among the farmers interviewed (interview no. 3, 6, 22). Even though groups were welcome to teach other farmers and that it could be beneficial, it was explained by Vi Agroforestry staff that they did not ask groups to tell other farmers about the organisation’s presence. The idea was instead that successful groups could constitute positive examples by being well functional, and that non-members could be attracted to establish groups in this way (interview - Thomas Ølholm, 2009).

Nevertheless, it appeared as if a few spill-over effects had occurred due to Vi Agroforestry’s presence, which had also benefitted those farmers who were non-members. One non-member did for example explain that he had received some support about how to cultivate his crops by a woman that most likely was working for Vi Agroforestry (interview no. 33). Even though this could be seen as a positive spill-over effect for this single farmer, this is not one of the organisation’s working strategies. After the implementation of RESAPP farmers should only be able to receive education by Vi Agroforestry as a group (interview - Thomas Ølholm, 2009). Another spill-over effect mentioned by a non-member was that since the organisation’s
presence in their village more people had received information about agroforestry, which had made them able to cultivate more food crops. This in turn had led to that the village now had a greater variety and availability of food (interview no. 20).

*Overall*, even though the farmers still seemed to be faced with various challenges such as infertile soil, deforestation and lack of sufficient water access, the general understanding appeared to be that Vi Agroforestry’s presence in the area had increased the farmers’ level of knowledge about agroforestry and farming activities as well as cultivation of trees and other crops. Whereas the increased level of knowledge could be seen as an important step forward to increase the farmers’ overall access to the natural capital, it should though be mentioned that at the time of this study it seemed difficult to determine more in detail which specific results Vi Agroforestry’s presence and training had contributed to regarding the natural capital. Although it was expressed by the farmers that the organisation’s presence had led to an increased cultivation of trees and different crops in the area, few other differences between farmers that were members of groups collaborating with Vi Agroforestry and non-members were detected.
7. The Financial Capital

Accessing financial capital could be of great value to the small-scale farmer, considering how opportunities to invest and access credit can be stepping-stones to develop by one’s own force, in directions chosen independently. In this chapter varying angles of the financial capital is elaborated, including conditions for wealth and poverty, income, market opportunities, and possibilities for saving money and taking loans.

7.1. Conditions for Wealth and Poverty

Among the small-scale farmers in Kagera, possessing good financial assets was perceived as a key for one’s further economic development (interview no. 1, 6-8, 11, 14, 17, 20, 25, 27, 30, 32). Once you had money you also had the possibilities to invest in the expansion and diversification of your cultivation and to start up a small business of your own. You could e.g. open up your own shop selling soda and groceries, or buy larger quantities of crops, goods and livestock at a good price and sell it in small scale with interest (interview no. 18, 21, 24-28, 30-32, 36, 37). You could also afford to invest in larger landholdings to grow more crops and be able to cultivate your whole land, a feature that many farmers lacked (interview no. 2, 6, 8, 12, 14, 17, 19, 26, 30, 31, 36).

Furthermore, having livestock and in particular cows seemed to be a prominent characteristic for economic advancement and a higher economic status. With investments in livestock you had e.g. a security back up for hard times, a natural fertilizer for your soil and a constant source of income by selling the animals’ products (interview no. 20, 21, 27-30, 36). This was also true for having a good house, one built of bricks and cement with a roof made of iron sheets; having good transportation such as a car or motorbike; and being part of groups involved with savings and loans (interview no. 16, 23-27, 29, 32). It should, however, be mentioned that it was to some extent also considered that most of the youths had inherited the house they were living in, making it possible for young people to live in a fairly good house but to still be poor (interview no. 1-37).

However, landholdings and physical preconditions aside, it was frequently mentioned that your mentality and willingness of working hard constituted a crucial necessity for your economic and overall development. It was assumed that many people perceived as the least well off in the villages did not advance due to laziness and the inability to plan in a longer-
term perspective. These perceptions were often applied to youths who were perceived as not being interested in working, but spending their money on drinking or buying luxury things (interview no. 6, 9, 10, 17, 22, 24, 25, 27, 28, 30, 34, 36). Additionally, it was emphasised that one’s level of education in general and in business and farming techniques could determine your chances of advancing economically (interview no. 19, 28, 33).

7.2. Access to Income
The main income activity was to sell coffee and bananas, and also other crops such as beans, maize, vanilla, tomatoes and groundnuts. While the coffee was expressed as only being for selling, banana was popular for its multipurpose of also constituting food for the household (interview no. 1-37). Some farmers also cultivated and sold garden crops, or at least wished to do so, since these gave a good interest on the market (interview no. 4, 7, 13, 20, 23, 29, 33). To avoid being too dependent on only one type of crop, it was common to grow and sell e.g. coffee, beans, bananas and/or maize, as well as focusing on selling various other crops in a smaller scale.

Even though the main income activity constituted selling crops, the need to have more than one source of income was further expressed, in order to avoid problems if this one would fail. Additional sources of income could include running a small shop to sell e.g. sodas and alcohol, making a business of having a sewing machine, as well as producing alcohol out of parts of the banana harvest (interview no 1, 2, 4-16, 19-37).

While selling crops and alcohol signified a fairly steady, continuous, though small income to the household, some farmers also occasionally found ways of receiving a larger sum. Keeping livestock was one example and signified a source of income among the farmers who could afford and had the knowledge of keeping it. While livestock keepers gained continuous income from selling e.g. milk, eggs and hens, it also signified a possibility to receive larger amount of income at once, since they could e.g. sell one or two goats or cows to overcome immediate needs or to invest in e.g. a new house or a small business (interview no. 4-6, 9, 21, 23-25, 29, 31, 33, 34, 36). Another way was to cultivate trees. Except for own consumption, trees could also be seen as a good investment. While firewood could be sold continuously, selling a number of fully-grown trees for timber could signify a larger sum of money at once for the farmer. Further, it was very common to include the cultivation of trees in future
aspects for securing a good income for one’s sunset years and children’s future (interview no. 3-5, 13, 23-28, 30, 32, 33).

A very small fraction of the farmers interviewed mentioned them having an employment, which was something many of the total farmers longed for themselves or their children to attain. Employments included being a schoolteacher, pharmacist, carpenter, and building constructor (interview no. 12, 23, 30, 31, 35).

A few years back, people had been able to support themselves as fishermen. Though, due to the Tanzanian government’s recent ban of fishing nets with small holes to reduce the catch of not fully grown fish, the ordinary people in the villages could no longer afford fishing since you needed to buy a more expensive, approved fishing net. Nowadays the lake seemed to have become overfished, which had led to that one needed a boat with an engine in order to go out to the middle of the lake to get a good catch. Despite this, it seemed as if some farmers were still continuing with their fishing by using illegal nets. These farmers were not able to bring their fish to the market because if the government caught them they would be taken to court. So those who were able to afford fishing illegally were said to only do it to get fish for their families. The conclusion that could be drawn based on this background were that fishing, which before had been a profitable source of income, was now only possible for people with a higher financial capital that were able to invest in new nets and motor boats. Many fishermen that before were dependent on the fishing were now instead engaged in farming activities or had gone to for example Uganda to continue their businesses (interview no. 16-18).

Concerning how the farmers chose to spend their income, the most common aim of using their money for was further to pay school fees or for covering family consumption (interview no. 1-37).

Regarding changes over time concerning the small-scale farmers’ income, it became clear from the study that the income possibilities might have improved for many through varying forces. One of these was the opportunity that came with attaining livestock; another constituted the possibility to start up new businesses and starting to cultivate new cash crops, such as garden crops. Though overall, it seemed like the farmers generally had been able to little by little pick up more income generating activities than they had before, which had spurred their income in total. A probable reason for this also ought to be the increased
possibilities gained during the recent years to access loans (for more information: 7.4. Possibilities for Saving Money and Taking Loans) (interview no. 1, 2, 4, 7, 24).

7.3. Access to Market
The most common way to transport crops among the farmers to the market or customers appeared to be by bicycle, though when the farmers’ harvests were larger some of them tried to get hold of a car. However, since not even a handful of the farmers interviewed owned a car, the ways of transporting crops to the village market usually constituted using the household’s bicycle, hiring a car or paying someone else who owned a car to transport their crops for them. It was also expressed that the lack of a car could further signify a lesser price for one’s crops due to the difficulty of accessing a more attractive market for that crop, situated further away.

The lack of sufficient markets for certain crops further seemed to constitute a problem in general for some farmers (interview no. 2, 12, 15, 19). A consequence of this problem appeared to be that the farmers turned to gate selling and customers came straight to the farmers’ houses to buy their products instead, which was more common for farmers living closer to the road. It was explained by a few farmers that when the harvest was good for a certain crop, the farmer had to go and find customers at the market. Though, if the harvest had been bad, the customers usually came by the farmer’s house to buy it, since there was more demand on this crop in this circumstance (interview no. 2, 6, 7, 9-12, 14, 15, 17-20, 22, 23, 25, 27-29, 32-37).

Coffee was a very common market-product, though the thoughts about the prices differed slightly between the Bugabo and Bugene zones. In Bugene the coffee was mainly sold through the Karagwe District Cooperative Union (KDCU), and in general the farmers did not seem to complain about the prices offered here (interview no 20-22, 24-27, 32, 34, 37). In Bugabo there was, however, in general a discontent with the prices. In this zone the main alternative was to sell their coffee through the Kagera Cooperative Union (KCU), where the prices were said to be low and had further gone down in recent years (interview no. 1-19).

The reason for why the KCU to a large extent constituted their only coffee customer in Bugabo, was for starters explained to be the result of governmental policies saying that you could not sell the coffee outside national borders, even if the prices might be higher there.
Since there also seemed to be a lack of private buyers in the area, the cooperative pretty much constituted the only prominent coffee customer in the zone. Additionally, even though the prices currently seemed rather low, as a member with shares in the KCU the farmers were able to receive the interest gained by the KCU from selling the coffee further (interview - retired board member KCU, 2009). Also, the KCU was said to offer higher prices if the farmers processed their coffee beans, which some farmers had been able to do since a few years because of the introduction of coffee processing machines by the Kolping Cooperative11 (interview no. 16). The more members the KCU had the more coffee the cooperative was able to sell and thus making it possible for the farmers to gain more interest. Because of this the welfare of the cooperative supposedly ought to be in most farmers’ interest, since it increased their overall gain (interview - retired board member KCU, 2009).

Concerning changes of prices for different crops, it was explained that the falling prices of coffee depended on fluctuations on the world market, which in turn determined the fixation of prices at the cooperatives (interview - retired board member KCU, 2009). The prices for other crops sold locally seemed, however, to depend on the season. When there was an abundance of a certain crop during harvest in the villages, the price would be low for this crop, and naturally vice versa. When the study was carried out it was said to be e.g. a hard season for cultivating tomatoes, why the ones who had succeeded in growing them could then enjoy a good market for them. Because the price depended on seasons, many farmers had further adapted a market technique of waiting with selling certain crops for a few months after harvest time, in order to gain higher prices when there was a scarcity of this crop later on (interview no 13, 20, 25, 28, 29, 32, 33, 36).

Furthermore, the market in Kagera seemed to have changed to a varying degree over time. An example from Bugene was that a new factory called Banana Wine had opened up in the last couple of years and had become a new customer for the banana-cultivating farmers that offered to buy the bananas at moderate prices (interview no. 33). Another change in this zone seemed to have been that the prices for beans recently had exploded from 30 000 Tanzanian Shilling (TZS)/bag of beans to 60 000 TZS/bag, and from 90 000 TZS/bag to 120 000

11 The Kolping Cooperative is part of the Kolping Society of Tanzania (KCT), which is a Catholic social organisation that focuses on improving the socio-economic conditions in the rural areas in Tanzania though e.g. agricultural activities, solar installation; local, national and international collaborations and co-operations; and spiritual transformation activities (Kolping Society of Tanzania, 2008)
TZS/bag in non-seasonal times. The reason for this drastic market change was explained by that since 2005 the authorities had allowed the farmers to sell their beans outside the district, introducing new buyers such as a close by refugee camp and businessmen coming from far away (interview no. 22, 23).

7.4. Possibilities for Saving Money and Taking Loans

Overall, it seemed rather difficult to save money for most farmers in the villages in Kagera. It was explained that if you received a little extra money you were likely to spend it all within a short matter of time, for covering family consumption or activities on your farm (interview no. 12, 15, 34, 37). However, for those who succeeded in saving some money, this included having a bank account or keeping some savings with a reliable person in the village (interview no. 10, 13, 14, 16, 27, 29, 30, 32, 36). Another way of saving money, though indirectly, was to join local groups whose members for example contributed with bananas for selling and shared the interest from this business between all the members at the end of each year (interview no. 6, 7, 15, 16, 19). Further, the reasons for saving seemed to be quite individual, including buying or maintaining livestock, developing the farm, starting an own business, paying school fees, buying a sewing machine or paying fees to be able to join a VS&LA group collaborating with Vi Agroforestry (interview no. 1-6, 8-10, 13, 17, 33, 36).

Additionally, the ability to take loans was breached as being very important for developing oneself, as you were able to invest in your established activities as well as developing new ones. It was expressed that possibilities for borrowing money included for example taking a loan from the bank or through SACCO, borrow money from a neighbour or through membership in VS&LA groups (for more information: 7.5.3 Focusing on Micro Finance). Taking a loan from the bank seemed to be very difficult, as the loans here concerned larger amounts. Since the small-scale farmers in general lacked assets valuable enough, they did not have the safety back up required from the bank needed if the farmers were not able to pay back the loan. Moreover, taking a loan from SACCO was a more realistic option even though it was expressed as being rather complicated. Finally, borrowing money from a neighbour was also something achievable, though this mainly signified smaller sums of money (interview no 1-6, 8-10, 13, 19, 23-26, 28-31, 34, 35).

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12 **SACCO** stands for “Savings and Credit Co-operative” and is one of the programmes under the Evangelical Lutheran Church in Tanzania (ELCT). It is a member driven, self-help, not for profit financial cooperative where members save money together in groups and have the possibility to take low-interest loans (ELCTa, 2010).
In sum, the farmers’ access to the financial capital appeared to experience a slow but positive and steady development since the farmers in general appeared for example to have started relying on more cash crops, seemed to have become able to start up small businesses and appeared to have experienced a remarkable upswing in the bean market. At the same time though, some farmers had lost an income activity with the recent fishing restrictions and there were also complaints about insufficient market possibilities with for example the small range of customers for their coffee beans and unsatisfying prices for crops in general.

7.5. Vi Agroforestry’s Impact on Farmers’ Access to the Financial Capital

7.5.1. Focus on Enterprise Development

Overall, Vi Agroforestry seemed to have had an important impact on the small-scale farmers’ financial capital. For starters, many farmers expressed the importance of education and training in business for advancing economically (interview no. 19, 28, 33), something that Vi Agroforestry also acknowledged with the strategic focus of educating in enterprise development for smaller businesses (Nilsson, 2008: 33-34). This approach seemed to have developed the farmers’ financial capital in a positive direction, since it supposedly contributed to their ability to start up new businesses and thus also the opportunity for them to rely on more income generating activities besides farming that they had breached as desirable.

7.5.2. Encouragement of Growing Garden Crops and Trees

Furthermore, Vi Agroforestry also seemed to have affected the farmers’ access to financial capital through the organisation’s encouragement and education of growing vegetables, that many farmers spoke of positively since these gave a good interest on the market (Ølholm, 2009: 1). It seemed further fairly common among farmers collaborating with Vi Agroforestry to make plans or at least express the desire for growing vegetable plots in the future (interview no. 1, 2, 8, 10). It should, however, be noted that also farmers whom did not collaborate with Vi Agroforestry happened to grow garden crops as well (interview no. 32, 33). Similarly, the overarching encouragement by the organisation of growing trees might be a possible contributing reason to why many farmers used tree cultivation as a source of income or wished to do so (interview no 3-5, 13, 23-27, 32, 34).

7.5.3. Focusing on Micro Finance

Moreover, a strong focus within Vi Agroforestry was its innovation of VS&LA that almost all of the farmer groups collaborating with Vi Agroforestry appeared to be involved with.
Through membership in VS&LA groups farmers had been able to receive education from Vi Agroforestry on savings and loans. This in turn appeared to have resulted in that they were now able to borrow larger amounts of money at one time, which many had not been able to do before (interview no. 1–11, 13, 22–29, 31, 35, 36). As a result of this new possibility, the opportunity to make investments and to attain the things that were perceived by the farmers as signs of wealth, such as livestock and good housing, and to further develop one’s livelihood could be said to have increased.

**Box 2 - Village Savings and Loans Association system (VS&LA)**

A common element in the work of Vi Agroforestry is to train and facilitate farmer groups in adapting financial services such as the VS&LA system. The general procedure of a VS&LA group, also referred to as a group of shares, is that its members meet twice each month to contribute with shares to the group’s joint savings. In order to keep a healthy group dynamic it is recommended that a group only consists of maximum 30 members (interview - Thomas Ølholm, 2009). The value of each share and number of shares collected each time differ between groups and the farmers’ possibility to contribute. The farmers then take turns in borrowing money from the group’s joint savings; money that needs to be paid back within a certain time period agreed upon by the members of the group. In the end of each year the group divides the contributed money between the members and starts to contribute new shares in the beginning of the next year. A requirement is also that the farmer has to agree upon something valuable e.g. a piece of his or her land before joining, as a deposit that the group has the right to confiscate if the farmer is unable to pay back the loan before the time period has expired (interview no. 1-11, 13, 22-31, 35, 36).

It was further mentioned that the innovation of the VS&LA groups had led to that people joining these had started to focus on how to increase their income in order to contribute with larger shares, and felt more able to take control of the direction of their development. This might also signify that through joining VS&LA groups, these farmers attained a greater mentality and ability of planning ahead that they generally expressed as necessary in order to advance financially. The majority of the farmers whom were part of these groups had further mentioned that they had been able to steadily raise the shares, for example from 500 TZS to 1000 TZS, or from 1000 TZS to 1500 TZS. Thus, the membership in a group collaborating with Vi Agroforestry seemed automatically to have opened up doors for further economic development by the strength you got from a group (interview no. 8, 10, 16, 24, 26).
A worrying aspect in this context was, however, that a few farmers seemed to have joined two VS&LA groups or more, and then borrowed money from one of the groups and in order to pay back they just went to the other group to borrow more money (interview no. 1, 5, 13). The idea of advancing economically might be diminished through this system, as the aim of encouraging the farmers into finding new sources of income or developing their established ones to repay their loans and to further raise their shares will not necessarily be achieved. In the long run this system might not be sustainable since the farmers in question seemed to borrow more money than what they attained. This habitual behaviour by some of the farmers collaborating with Vi Agroforestry constituted new information for the organisation that considered this to be a problem in need to come to grips with (Nyberg, 2010).

Another feature of the system of the VS&LA groups was that since the amount of money that each farmer was able to borrow depended on how high the shares of the group were, a few farmers interviewed complained about them not being able to borrow larger amounts than what their fellow group members’ economy allowed. Because of this a wish was brought up for Vi Agroforestry to facilitate the possibility for a group to borrow money together from the bank, in order to reach larger amounts (interview no. 35).

Moreover, it was mentioned by some of the women interviewed that since many women had been able to join VS&LA groups it had increased their possibilities to develop themselves. Before joining these groups it was said to be much more difficult for women to access money and they had to ask their husbands to e.g. give them money to buy new clothes. However, since the women had been able to borrow money for own projects they could now, just as their husbands, also be perceived as businessmen (interview no. 2, 19, 24, 26-28, 31, 33, 35, 36). It was also explained by Vi Agroforestry’s staff that the majority of the VS&LA groups were female dominated and that this was a deliberate strategy made by the organisation to empower women in the society (interview - Thomas Ølholm, 2009).

**7.5.4. Limited Progress Concerning Fishing- and Insufficient Market Possibilities**

Concerning the farmers’ problems of restrained fishing possibilities and their limited access to sufficient markets for their crops, according to the farmers, Vi Agroforestry seemed to have focused on these areas to a somewhat limited extent. When it came to fishing possibilities the organisation could be said to have eased the problem by offering to facilitate the introduction of fishponds. Though, this might be seen as a possible replacement of the lost income source
but did not seem to be equivalent to what they previously earned as fishermen (interview - Thomas Ølholm, 2009). Turning to the insufficient market in the region, even though Vi Agroforestry aimed at providing the farmers with possibilities to start up businesses through education in entrepreneurship, it seemed hard to somehow affect the market itself. The organisation could probably not be expected to for example find suitable buyers of the farmers’ crops, or change the national regulations of not allowing farmers to sell coffee beans abroad, why this appeared to be a remaining problem at the time.

7.5.5. Possible Differences and Similarities between Members and Non-Members

It was further possible to see a rather large difference regarding the financial capital between those farmers who were members of groups collaborating with Vi Agroforestry and those who did not in this context. Both members of groups and non-members expressed that saving and borrowing money became much easier once you joined a group, since it was not easy to take a loan of small sums at the bank, and saving was difficult due to reasons mentioned earlier (interview no. 9, 13, 17, 22, 24-26, 35). With this said, it is however crucial to once again mention that it did not seem completely impossible to take loans or saving money through other means in the villages, even though these clearly stood in the shade of the Vi Agroforestry groups. Likewise, some of the farmers interviewed were not interested in taking any loans from the bank or a group because they were troubled of how to be able to pay the loan back again and sometimes rather borrowed lower amounts from people they knew like their neighbours (interview no. 10, 13, 14, 19, 37).

To sum up, the organisation did not seem to have had a main focus on solving problems of for example lack of alternative buyers and the difficulties to sell crops at satisfying prices, which seemingly remained fairly troublesome aspects for the farmers’ financial development. Despite this, the overall impression was, however, that Vi Agroforestry had affected the farmers’ access to the financial capital positively with for example new possibilities of saving and borrowing money. It also seemed like those farmers who where members of groups collaborating with Vi Agroforestry had been able to increase their possibilities to save and borrow money after they had join VS&LA groups. Membership in VS&LA did not only appear to have spurred the farmers’ economical advancements but also decreased the women’s dependence on their husbands.
8. The Human Capital

Good health and access to education and training that increases the level of knowledge and skills could be seen as key ingredients for the human capital and important factors in order for the small-scale farmers to be able to develop their farming and their lives further. In this chapter the farmers’ labour capacity, health conditions and access to formal and additional education are presented and analysed.

8.1. The Households and their Labour Capacity

The number of people living in the households visited and their level of labour capacity differed between two up to 17 people and consisted mainly of a husband and a wife that lived together with their children and/or grandchildren. Additionally, some households consisted of grandparents, orphans and/or other children belonging to relatives that either had passed away or were living somewhere else, which these families now cared for. Throughout the study it also became evident that some of the households were female-headed where the wives either had become widows or been divorced. Households where the husband had more than one wife were few in total but it occurred.

Whereas the farmer and his/her spouse were the ones responsible for the daily work on the farm, the children living in the household were also said to be helping their parents when they were not in school or busy with homework (interview no. 1–37). A couple of farmers also explained that they paid for servants or manpower to increase the family’s labour capacity. The extra labour capacity helped the families to look after their land and livestock and assisted them with their small businesses (interview no. 21, 22, 25, 26, 28–31, 33, 35)

8.2. Access to and Level of Education

Box 3 - The Tanzanian School System

The formal educational system in Tanzania has three levels:

- **Basic**: Pre-primary education and seven years of primary (standard 1-7) education.
- **Secondary**: Four years of junior secondary (form 1-4) education and two years of senior secondary (form 5 and 6) education.
- **Tertiary**: Up to three or more years of tertiary education including programmes and courses given by non-higher and higher education institutions at universities and colleges.

Source: The Tanzania National Website, 2010
Most of the farmers interviewed and their spouses had received primary education up to standard seven and some had also been able to accomplish form four of the secondary education. Only a few farmers, however, seemed to have attended university or vocational colleges to become e.g. a mechanic, a building constructor, a teacher or a carpenter. Moreover, a noticeable change over time detected was the level of education between the farmers and their children. A conclusion drawn was that children in general seemed to have a somewhat higher level of education in comparison to their parents, where more children seemed to have or were attending secondary schools, colleges and universities. The overall impression throughout the study was that access to a higher level of education was of high importance and a key factor to be able to develop your life further (interview no. 1–37). Several farmers expressed that they wanted to make it possible for their children, as well as for themselves, their spouse or siblings, to receive a higher level of education. With such education they could be able to develop the household and the farming, become businessmen and earn more money to support their families (interview no. 2, 6, 8, 13, 15, 16, 21, 22, 24, 26, 27, 29, 30, 33-36).

When it came to access to education, nursery and primary schools often seemed to be located nearby the farmers’ houses, making it possible for their children to live at home during this part of their studies. No school fees were according to the farmers charged during this lower level of education, except for those children who attend boarding schools, and the main cost included school uniforms, books and pencils. Regarding higher education in secondary schools, vocational colleges or universities, these were mostly located further away from the household, with some exception to nearby secondary schools and colleges. This distance, however, did not seem to undermine the possibility to attain higher education. Some of the children in secondary school was said to attend boarding schools, where they were able to live at the school properties during their studies. Moreover, due to the requirement of having to pay for school fees during the higher level of education, some of the farmers expressed that they had to work very hard to be able to provide their children with this type of education (interviews no. 1-37).

One change over time that seemed to have occurred in Bugene was that the Tanzanian government, with the help of foreign companies, was said to have built more schools (especially secondary schools) in the zone. Additionally, it was also mentioned that a
development of the schools had occurred over time and instead of having to sit on the grass, children were now able to sit at wooden desks during classes (interview no. 22, 28, 30, 33).

8.3. Health Conditions and Access to Health Care
The general answer received when asking the farmers about their family’s health, was that it was usually good or moderate, even though some replied that family members occasionally suffered from high blood pressure, unbalanced diet, drinking problems, ache in their bodies and/or diseases such as malaria and typhoid (interview no. 1-37).

With this in mind it is also important to mention that whereas some of the farmers and their families seemed to always have been of good health, others appeared to have noticed an improvement of the health conditions both within their own families and among other villagers in general over the more recent years (interview no. 1–4, 8, 10, 11, 13–15, 17–21, 24–26, 30, 32–34, 36). One contributing factor for this development seemed to have been that the increased focus in trying to prevent the risk of being effected by malaria. It was told that in many of the villages visited, the Tanzanian government had recently started to regularly spray the houses to decrease the level of mosquitoes. Even though the spraying seemed to have enhanced the level of “jaggers”\(^{13}\), it was said to be very effective in reducing the number of mosquitoes and therefore also the risk of malaria. Mosquito nets had also been handed out by the Tanzanian government, hospitals or organisations like the United Nations Children’s Fund (UNICEF), especially to pregnant women or families with young children. Some families had also bought nets themselves (interview no. 8, 12, 11, 15, 17, 19–22, 25–34, 36).

A contributing factor to this high focus on combating malaria was said to have been the introduction of an anti-malaria campaign during 2008. The campaign, in which the Tanzanian government was said to have been sponsored by the United States and George W. Bush, focused on improving the health of the Tanzanian population through e.g. handing out mosquito nets to people within the country\(^{14}\) (interview no. 19, 22, 25, 28, 30). In addition to

\(^{13}\) “Jaggers” was said to be a parasite that lived off people’s flesh and resided in grass that covered the farmers’ floors. Even though it did not seem to be a life threatening syndrome, the parasite was said to create unease among the farmers affected. Additionally, no explanations were given by the farmers to why the level of jaggers seemed to have increased as a result of the spraying for malaria. It might have been that while the spray decreased the risk for malaria, it did not kill the jaggers resulting in that the unease caused by the jaggers became more acknowledged.

\(^{14}\) In the beginning of 2008, Georg W. Bush announced that as part of a broader malaria campaign in the SSA the United States would, together with the Tanzanian Government, the World Bank and the Global Fund to fight Aids, Tuberculosis and Malaria, help to provide free mosquito nets to improve the health in Tanzania and in
this, it was also mentioned that the health of a family was often corresponding to the family’s level of income, access to food and level of harvest. If the family’s harvest or income was low, this would most likely have a negative effect on the family’s health and vice versa (interview no. 9, 12, 16, 19, 30, 31, 37). As mentioned earlier (7.2. Access to Income), the farmers’ level of income seemed to have increased over time, which could signify that the farmers’ health in general had improved during the recent years.

When someone in the family got sick it was common that the family took the person to the closest dispensary or hospital. Regarding possibilities for transport, the sick person would most often be transported either on a stretcher, by bicycle or motorbike, or by foot directly to the hospital or to the closest road to wait for passenger car or a minibus to pass by. Some farmers also explained that they would go with a neighbour’s car or pay extra for a passenger car or taxi if the person was seriously sick. Additionally, in some of the households, minor ailments would firstly be treated through first aid, local medicine from the nature or medicine stored in the house (interview no. 1–4, 7–13, 16–21, 23, 24, 27, 30, 32, 34–37). It was also expressed by some that the prices for health care and medicine for people over the age of five (children younger than five got free health care) was rather expensive and only one of the farmers had access to health insurance through her occupation as a teacher. The prices were also said to have arisen in the last couple of years due to increased privatisation within Tanzania (interview no. 9, 22, 23, 30, 31, 36).

Except access to health care at hospitals and dispensaries, it was also mentioned that some villagers, including some of the farmers interviewed, were part of different organisations and churches through which they were providing medical help to other farmers in the villages. This included for example Continuum of Care for Persons Living with HIV/AIDS in Tanzania (CHAT)\(^\text{15}\) and ELCT\(^\text{16}\) that were active in the villages helping and consulting people with HIV/AIDS and other chronic diseases such as cancer. One farmer also mentioned that she was part of groups that helped pregnant women during their pregnancies by e.g. informing them of

\(^{15}\text{CHAT is a New Partner Initiative (NPI) collaborative project, which aims at expanding existing programs on home-based care for people living with HIV/AIDS as well as orphans and vulnerable children. It intends to reach populations in remote and underserved geographical areas and help create a continuum of care by linking with existing treatment programs (African Palliative Care Association, 2007).}\)

\(^{16}\text{The ELCT works with different programs regarding AIDS, dairy cattle, mission and evangelism as well as establish and support financial cooperatives (ELCTb, 2010).}\)
the importance of hospital care and sometimes helping women to give birth (interview no. 22, 26, 32).

8.4. Access to Additional Education and Training
Access to education about how to stay healthy and how to possibly avoid different diseases seemed to differ a lot between the farmers. Whereas some of the farmers had got multiple educations about health and attended several seminars, others explained that the only knowledge they had received was through radio messages, formal school education or by parents and grandparents (interview no. 1–37).

Out of those that had received additional education, this information and training had in most cases been given to the farmers through seminars held by or in cooperation with either the Tanzanian government, the ELCT or organisations such as World Vision, SAidia WAzee TAnzania (SAWATA)17, CHAT, African Medical and Research Foundation (AMREF)18, the Red Cross and Vi Agroforestry (for more information: 8.5.2 Limited Progress in Addressing HIV/AIDS and other Health Problems). Moreover, the aim of these seminars had been to educate people on how to keep the family healthy by e.g. protecting themselves and their families from malaria and HIV/AIDS, prepare food and a balanced diet or the importance of keeping the kitchen clean to avoid diseases. Additionally, people were said to be able to receive advices about how to stay healthy when one of their family members were seeking health care at the hospital (interview no. 8-10, 12, 17, 18, 23-28, 30–34).

Except health education, additional training regarding farming and cultivation, livestock keeping and fish farming was said to have been provided by e.g. the Tanzanian government, the KCU, World Vision, CHEMA, KAEMP, the MAVUNO project, KADET19 and Vi Agroforestry (for more information: 6.2. Cultivation of Crops; 6.5. Vi Agroforestry’s Impact on Farmers’ Access to Natural Capital; 9.4. Access to Livestock and Tools) (interview no. 1-9, 11, 13–15, 17–19, 22–25, 28–32, 34, 36, 37). Some farmers also seemed to have received extended education and training in subjects related to their occupation such as sewing,

17 SAWATA is an NGO that works in Tanzania, including the Kagera region, and focuses on sectors such as Human Rights, micro credit, health with focus on malaria, environmental conservation as well as agriculture and livestock (The Foundation for Civil Society, 2008).
18 AMREF is an international organisation working for a better health for people in Africa. The organisation, established in the 1950s, aims at e.g. empower communities to take control over their own health and to contribute with training and consulting support to different countries throughout the continent (AMREF, 2010).
19 KADET – no further information about this organisation has been found.
carpentry or how to work in a library (interview no. 5, 31, 32, 35) as well as been trained by Vi Agroforestry on how to develop small businesses and how to save and borrow money within groups (for more information: 7.5.1. Focusing on Enterprise Development; 7.5.3. Focusing on Micro Finance) (interview no. 1–7, 9–11, 13, 22–29, 31, 35, 36). Important to emphasise regarding all access to additional education and training is though that few explanations were given regarding how extensive such training had been. Whereas some farmers might have received several hours of training on one issue, other farmers might only have attended one single seminar. A general impression was, however, that despite the type and extent of education and training received, the farmers seemed to think that the information had been useful and many expressed that they would like to receive more (interview no. 1, 2, 4, 11, 19, 22, 23, 25, 31, 32).

All in all, even though the farmers expressed that the they suffered from different diseases, mentioned that the costs for health care and medicine had gone up and that they wanted to increase both their own and other family members’ formal and informal education, it seemed possible to conclude that the farmers’ overall access to the human capital had improved over time. The reasons for such improvement appeared to have been the seemingly enhanced focus in the last couple of years to combat malaria, a higher level of education among children than their parents, and the Tanzanian government’s and organisations’ focus on increasing the farmers’ knowledge and skills through organising seminars and trainings.

8.5. Vi Agroforestry’s Impact on Farmers’ Access to the Human Capital

8.5.1. Focusing on Improving the Farmers’ Knowledge and Skills
An important part of the farmers’ access to human capital, which the farmers themselves seemed to value to a high extent, could be said to be their access to education and training. The importance of education and training also appeared to be one of Vi Agroforestry’s corner stones in order to e.g. reduce the levels of poverty and food insecurity as well as for providing the farmers with knowledge and skills for improving their living conditions and move forward beyond subsistence farming (Nilsson, 2008: 7-13). A common opinion among farmers who were members of groups collaborating with Vi Agroforestry was that their groups had received training and education from the organisation on adapting agroforestry techniques on how to fertilize the soil and how to cultivate food crops and trees as well as information on
livestock keeping. Additionally, some farmers had received training on how to save and borrow money within their groups to be able to e.g. develop their farming and small businesses (interview no. 1–11, 13, 19, 22–32, 35, 36). With this in mind, it was also emphasised among some of the farmers that they would like to receive more education of this kind from Vi Agroforestry before the organisation would begin to phase out of their villages, in order to develop their farms and lives further (interview no. 26, 28, 31, 36).

8.5.2. Limited Progress in Addressing HIV/AIDS and other Health Problems

Despite the seemingly improved health, much due to the efforts of decreasing malaria, farmers still expressed that people suffered from e.g. malaria, HIV/AIDS, typhoid and an unbalanced diet. Regarding Vi Agroforestry’s work on this, one of the organisation’s crosscutting strategies is said to be working with SCC to reduce poverty and injustice through mainstreaming HIV prevention and AIDS mitigation in all its project activities (Nilsson, 2008: 58). It should, however, be emphasised that only a low number of farmers mentioned that they had received information from the organisation regarding HIV/AIDS (interview no. 9, 10). Even though no specific explanation for this was given during the study, one reason could be that Vi Agroforestry might not have fully implemented their ambition of mainstreaming HIV prevention and AIDS mitigation in all its project activities so far when this study was conducted and all farmers had therefore not received this kind information. According to *Vi Agroforestry’s strategy for 2008 – 2011*, one of the strategic ambitions for 2004 – 2007 was to develop activities relating to HIV/AIDS within all project areas, a process, which by 2008 was said to have begun but needed further development (Nilsson, 2008: 69).

A further explanation could be that instead of providing farmers with direct information on HIV/AIDS through seminars and meetings, the organisation might have had a greater impact on HIV/AIDS infected farmers through promoting farmers to implement various farming activities and agroforestry techniques. According to the *Vi Agroforestry’s strategy for 2008 – 2011* it is argued that implementing different agroforestry techniques that improve the soil quality, could create possibilities to increase the variety of nutritious foodstuff and provide food security that could give families affected by HIV/AIDS a better living (Nilsson, 2008: 57 – 58, 66). It could, in other words, be that farmers had been informed and trained by Vi Agroforestry to adapt different agroforestry techniques without necessarily thinking about the training’s possible impacts on people living with HIV/AIDS.
Overall, even though it seemed like only a few farmers had received information about HIV/AIDS by Vi Agroforestry, it should however be expressed that such information was perceived as being very useful. One of the farmers interviewed did for example explain that the only access to information about HIV/AIDS she had before Vi Agroforestry came to their village, was through messages broadcasted on the radio (interview no. 9).

Concerning Vi Agroforestry’s focus on other health problems such as malaria, typhoid and an unbalanced diet, the general understanding among the farmers interviewed was that the organisation’s direct focus on this had been rather limited. However, by encouraging farmers to adapt various agroforestry techniques and offering training about entrepreneurship and VS&LA, the farmers might be able to improve their financial situation, their access to various food stuff and level of harvest. Aspects that the farmers themselves expressed as important in order to attain a good health (interview no. 9, 12, 16, 19, 30, 31, 37).

8.5.3. Limited Focus on Health Care and Formal Education

Regarding access to health care and formal school education, it seemed as if Vi Agroforestry’s impact on these areas so far had been rather limited. The main reason for this might be that this is not the focal point of the work carried out by the organisation. It was, however, mentioned by some of the farmers that were members of groups collaborating with Vi Agroforestry that after they had joined groups that was focusing on VS&LA, it had become easier for them to borrow money to pay for their children’s school fees and for health care (interview no. 3, 6, 8, 10, 24, 26, 29, 31, 36). However, if this opportunity had contributed to higher education or better health among farmers that were members of groups collaborating with Vi Agroforestry than non-members seemed difficult to detect or measure.

8.5.4. Possible Differences and Similarities between Members and Non-Members

The most evident differentiation between farmers that were members of groups collaborating with Vi Agroforestry and non-members, seemed to be their access to training and additional information. Even though almost all farmers seemed to have received some type of training regarding e.g. how to improve their health and/or develop their farming, from either the Tanzanian government or different organisations, the overall conclusion was that members of groups collaborating with Vi Agroforestry had in addition to such training also attended more seminars and received more training than non-members. As stated earlier, such seminars and training focused mainly on the importance of adapting different agroforestry techniques and
developing different farming activities, how to save and borrow money in the groups and how to develop small businesses (interview no. 1–37).

**Overall,** the main impact that Vi Agroforestry seemed to have had on the farmer’s access to the human capital is the enhancement of the farmers’ level of knowledge and skills through focusing on educating and training farmers in different agroforestry techniques, saving and borrowing money and business enterprises. The overall understanding was that farmers that were members of groups collaborating with Vi Agroforestry had in general attended more seminars and trainings than non-members. However, even though such trainings could be said to some degree have increased the cultivation of crops and trees and possibilities to save and borrow money, it was still difficult to detect clear differences between members and non-members concerning what this training had led to. Regarding the organisation’s possible focus on farmers’ access to formal school education, access to health care and farmers’ health conditions appeared to be rather limited. Instead, Vi Agroforestry seemed to have a more indirect impact on these aspects by providing the farmers with training that could increase their financial assets, varieties of food and improve their harvests, which in turn could lead to an improved health and greater possibilities to pay for school fees.
9. The Physical Capital

The access to the physical capital can be significant for the small-scale farmer with relevance to the ability to attain the basic necessities and material belongings needed for pursuing a normal everyday life and to further his/her development. In this chapter the farmers’ physical capital has been analysed regarding their housing, livestock, tools, means of transport, and access to information.

9.1. Housing

Something that appeared to be of great importance to the farmers, regardless of financial assets, geographical location or general life situation, was to have a good and strong house, made of bricks with an iron sheet roof. Furthermore, through interviews and observations during the field study, it seemed as if many farmers at the time were underway of establishing such housing and were seemingly advancing from living in houses made of mud and poles with dried grass roof (interview no. 1-37). This fact could further be used to emphasise that many of the farmers perceived that to improve one’s house was among the highest priorities for the future and in times of a better financial situation. The desired improvements ranged from constructing a new house to attaining a ceiling board, more furniture, plastic for the floor and painting the walls (interview no. 1, 4, 8-10, 16-27, 29-37). An explanation to the increased construction of brick- houses might be because of the seemingly somewhat raised income level in the area, making it possible to invest in better building material than earlier (for more information: 7.2. Access to Income).

The most important thing you could add to the house, however, and the thing that most farmers were satisfied of having, seemed to be iron-sheets for the roof. Attaining iron-sheets could be seen as an upgrading from a roof made of dried grass, which you had to change every few year. The iron-sheets also created better possibilities of collecting rainwater. The only problem was that these sheets appeared to be too expensive in order for some farmers to attain them easily (interview no 7, 12, 17, 22). In relation to this, a basic necessity of the houses in Bugene was to have a good water tank that had the capacity to collect rainwater and withhold it throughout the dry season (for more information: 6.4. Access to Water). Due to the importance of these water tanks some farmers planned to focus on improving their existing ones in the future, so that they could rely on them to attain water even in the dry season (interview no. 26, 30).
Another popular future improvement was to get electricity in your house, even though at the time it was only a handful of the farmers who had it when the study was conducted (interview no. 19, 27, 29, 31, 33, 36). Most of the electricity-owners seemed to have generators to provide the service, though a couple mentioned that they had the possibility to access electricity through an electricity company or by solar panels. A change over time mentioned by a few farmers was that the Tanzanian government was slowly on its way to provide the whole area with electricity, though no one appeared to know when this would happen. This promise had led to that many farmers had started to prepare for attaining electricity, by e.g. installing fluorescent lamps, thus it seemed like something many looked forward to (interview no 11, 13, 14, 29-31). The electricity was mostly used for watching television, charging cell phones and for light in the house. However, in a few cases, farmers who yet did not have the service also thought that electricity would improve their income by attaining the ability to e.g. produce and sell fruit juice to a higher price than the unprocessed fruit, or to let a special heating lamp expand the egg production (interview no. 29, 36). From this, it could be interpreted as if it might be beneficial production wise for the farmers to attain electricity, apart from the also welcomed though more basic usages e.g. for light and keeping goods cold in a fridge.

9.2. Means of Transport

In the zones visited, various means of transport were used for e.g. transporting crops to the market and cooperatives; taking people to the hospital, dispensary or schools; and for occasionally going further distances. The most common form of transportation was the bicycle, which was owned by the vast majority of the households or could in most cases be attained by hiring or borrowing from neighbours for those without one (interview no. 3-6, 8, 9, 11, 13, 17-19, 21-25, 28, 32-35). More seldom farmers owned a motorbike or a car, which had the advantage of being able to transport a larger amount of crops or goods at once. However, since the fuel was perceived as very expensive, a car or motorbike was in general sparsely used for far distances and when the household had some extra money (interview no. 9, 13, 14, 19, 25, 28). A car in particular was, furthermore, perceived as something very valuable and useful to attain among some farmers, as this could improve their access to customers and more satisfying markets. It was also mentioned that getting hold of a car would open up for new business opportunities of driving passengers (interview no. 19, 25).
Additionally, the farmers could pay to go with the collective minibuses. The frequency of using this form of transport appeared to depend on the closeness to the road, if they had e.g. an own bicycle as an alternative, and how far they needed to go (interview no. 24, 27, 32, 34-36). A change over time seemed to be that more minibuses were nowadays running on the roads than before, which was perceived as an important change as the farmers now only had to wait for a short while by the road before a minibus would appear to pick him/her up. A reason for this change could be that the Tanzanian government improved the roads in the area approximately five years ago, which made the area more accessible for the minibuses (interview no. 18, 19, 22, 25, 27, 30).

It should though be mentioned that about a third of the farmers interviewed did not have any bicycle or other means of transport in the family at all. In some cases a lack of sufficient transport was expressed as limiting the farmers’ access to e.g. the market, and selling their products, but mostly these farmers seemed to be able to borrow or pay for using other farmers’ bicycles, motorbikes or cars to get to places (interview no. 1, 5, 12, 15, 16, 18, 20, 30, 31).

9.3. Access to Information

Almost everyone in the villages in Kagera owned a radio and by this consensual attainment of a radio, the access to national and district news appeared to be very positive. For those who did not attain one, many voiced that they could always go to a neighbour and listen to the radio for news. Thus, the lack of an own radio did not seem to stop the news from reaching the general small-scale farmer (interview no. 1-37).

In contrast, owning a television was, however, rare in the area, perhaps partly due to the relative high cost of buying one, as well as the requirement of electricity in order to watch it. The television was, however, mostly used for watching national and international news and had in some cases replaced the household’s radio in this respect. For people who did not own a television, they could sometimes go to someone who did to watch the news. In relation to this, it was mentioned that in one particular village there were seven television-owners in total, and some of them had built local television-halls where people could pay for watching television (interview no. 2, 9, 11, 12, 17-19, 28, 30, 36). Apart from receiving news from the radio or television, it was also common to once in a while buy a newspaper and to receive
local news by attending village meetings and/or go to church gatherings (interview no. 8, 12, 14, 15).

Furthermore, cell phones were owned by almost all of the farmers interviewed and if you did not have one yourself you could in general borrow one e.g. from a neighbour. There was generally one phone per household and these were used in order to reach friends and relatives who lived further away. In a few cases it was mentioned that before they had a phone it was more difficult to reach their family members living far away, and in lack of a phone they instead wrote their close ones letters (interview no. 1-37).

9.4. Access to Livestock and Tools

The possibility to own livestock was in general perceived by the small-scale farmers as being very valuable and a sign of wealth. Keeping livestock meant an additional source of income by selling the animal products, such as eggs, chickens and milk, and to be able to gain a larger amount of money at once, in times of need or for further investments, by selling a couple of animals. Having livestock further signified that you owned a fertilizer, which was favourable since the soil quality usually was seen as bad or moderate (for more information: 6.1. Access to and Quality of Land), (interview no. 1-11, 13-28, 31, 33-37).

A precondition was, however, perceived to be to have the knowledge of how to attain the livestock in a good manner. This knowledge was brought to some of the farmers and current livestock-keepers through training and seminars organised by World Vision, the government of Tanzania, KADET and Vi Agroforestry (for more information: 9.5.1. Facilitating Livestock Keeping) (interview no. 1-3, 6, 9, 13 16-18, 20, 21, 23, 25, 30, 36). Another precondition necessary to have, though not as frequently mentioned as a proper training, was the capacity to provide appliances for the livestock. This meant e.g. to have poles for building a shed for your cows and larger animals, as well as being able to build fences and smaller houses for hens. Further you needed to be able to treat the animals in case of diseases, which might signify the need to buy expensive medicine (interview no. 1, 19, 30).

Concerning tools, the small-scale farmers usually used a hand how for their farming activities (interview no. 14, 20-22, 25, 27, 32-34). Even though the hand how had been used for a long time, concerning tools for processing one’s products it was mentioned that the Kolping Cooperative had brought machines to a particular village in the area that were used for
processing your coffee beans, which gave you a better price when selling them. This could in turn be perceived as a change over time for the better in the area, since the farmers had not been able to process their coffee beans before. It was also mentioned that there now was a machine for processing one’s maize into flour in one village, which had led to that farmers nowadays did not have to go as far as to the city centre in order to process their maize (interview no. 16, 22).

The overall impression was that, even though the farmers’ access to the physical capital was restricted due to their low living standard as small-scale farmers, their access to the capital seemed to slowly be improving with better and stronger houses built, the gradual innovation of electricity, better roads as well as general good access to information.

9.5. Vi Agroforestry’s Impact on Farmers’ Access to the Physical Capital
From what could be noticed during the field study, the working strategies of Vi Agroforestry did not seem to have directly affected the farmers’ access to the physical capital. However, this outcome did not seem surprising due to the organisation’s policy of not giving away physical things as charity, as this is seen to undermine the farmers’ confidence of being able to develop themselves in the long run. The focus of Vi Agroforestry is rather to provide advisory services on a demand-driven basis (interview - Thomas Ølholm, 2009). Therefore, possible impacts on the farmers’ physical capital by the organisation ought to have been more indirect, through empowerment and confidence-building measures.

9.5.1. Facilitating Livestock Keeping
Attaining livestock was, as earlier mentioned, something perceived by the farmers as valuable and Vi Agroforestry had seemingly acknowledged this by providing education in how to keep livestock. The farmers whom attained this education mentioned that they had learnt how to take care of various livestock of their interest, had become more secure in their role as livestock keepers, and had been able to treat their animals in a better manner than what they probably would have been able to do without this education (interview no. 1, 6, 13, 36). Overall, this seemed to have enhanced the farmers’ opportunities of keeping cattle and expanding livestock activities already pursued.
9.5.2. Possible Indirect Impacts through Micro Finance

Furthermore, another indirect impact on the physical capital by Vi Agroforestry might have been through its contribution when it comes to the farmers’ ability to take loans through the groups facilitated by the organisation. Many farmers mentioned that they had been able to e.g. improve or build a new and better house as well as buying livestock when taking loans from their groups (interview no. 1, 4, 10, 13, 23, 28, 30). So even though the farmers had not received any material things for free from Vi Agroforestry in order to improve their physical capital, they had instead been given the opportunity to access credit and increase their savings, which in turn appeared to have given them the chance to attain things of own choice.

9.5.3. Possible Differences between Members and Non-Members

Concerning differences between farmers that collaborated with Vi Agroforestry and those who did not, it was not easy to detect any clear divergences. For example, the only one interviewed who had a car was a farmer who was not a member in a group collaborating with Vi Agroforestry, and likewise a farmer who was not a group member constituted one of the few who owned a motorbike. Furthermore, it was not rare for also non-members to own livestock (interview no. 12, 14-17, 19-21, 32-34). With this in mind, it seemed as if there were no automatic advantages concerning the access to the physical capital for farmers who collaborated with the Vi Agroforestry, apart from the possible indirect impacts mentioned above.

All in all, what could be concluded is that with Vi Agroforestry’s approach of not handing out things for free, affecting the farmers’ physical capital directly did not appear possible. Regarding indirect impacts on the capital it could on the one hand be argued that the education provided by Vi Agroforestry as well as the increased possibilities of saving and borrowing money through membership in VS&LA had given farmers who were members of groups collaboration with the organisation enhanced possibilities to attain desired physical items. However, on the other hand the access to physical capital did not seem to become automatically increased or decreased depending on membership in groups collaborating with the organisation. It was hard to detect clear differences in this respect between members and non-members. What could be concluded from this is either that Vi Agroforestry’s impacts on farmers’ access to the physical capital had been rather limited or that the possibility to borrow money through VS&LA groups were important but as the loans were relatively small it could take time to make any great changes such as improving one’s house or water tank.
10. The Social Capital

The ability for a small-scale farmer to join local networks and groups in the villages, and the farmer’s influence on the village leadership, could be said to determine his/her access to the social capital. In this chapter the social construction, the village leadership and the availability of groups and associations in Kagera are outlined and discussed.

10.1. Social Construction

Throughout the study a somewhat clear gender division concerning household duties seemed possible to detect. The typical responsibilities of the husband consisted of fetching firewood, whereas the wife generally was assigned to do the cooking, cleaning and taking care of the children. However, the daily farming activities such as cultivating the land were commonly shared between the husband and the wife. He usually made the rougher job of preparing the land, while she focused on e.g. weeding (interview no. 1-37). Regarding the family’s finances a common understanding was that both the wife and husband sat down to discuss and plan together what to do with their income (interview no. 13, 21, 24, 25).

Furthermore, regarding business activities it seemed as if these too were more or less shared responsibilities within the household, even though some farmers expressed that it was the husband’s duty to provide income for the family. Since many families were occupied with more than one income generating activity, both the husband and wife seemed involved in various businesses besides their general work on the farm. The wife might e.g. be occupied with making an income by sewing or letting the family’s sewing machine, while the husband might have a business of producing and selling alcohol out of some their banana harvest (interview no. 2, 5, 7, 9, 16, 20, 26). An important change was further that women appeared to have become more involved in businesses over time. Several women interviewed seemed to be involved with own activities such as selling soap or bananas or running a small shop. Reasons for this change seemed to have been an increased level of education and governmental efforts to achieve gender equality in the society. The ability to join groups collaborating with Vi Agroforestry might also have made it possible for women to attain the ability to save and borrow money and receive information about entrepreneurship (for more information: 7.5.3. Focusing on Micro Financing) (interview no. 2, 19, 24, 26-28, 31, 33, 35, 36).
10.2. Village Leadership

The local leadership in Kagera was governed by village chairmen that were based in each village in the region. The village chairman had to be a village member and was elected through a multi-party political system on a mandate period of five years. In order for the villagers to breach their concerns about the development of the village and to take part of local political information, the chairman summoned the villagers for village meetings where decisions were taken jointly. If the Tanzanian government had requests or concerns about the villages’ local development, this was dealt with at the village meetings (interview no. 6, 10-12, 15, 16, 18, 20, 23, 25, 27, 30, 33, 34).

Concerning village meetings, a general feeling among the farmers was that they had the ability to influence the decisions taken, since everyone present at the meetings were said to have the right to speak. Despite this there were, however, also a few farmers that that mentioned that they did not see the benefits of the meetings and further expressed concerns that the villagers’ influence was limited due to their general low level of education (interview no. 25, 27). It was also expressed that even though it was generally felt that everyone could become elected the chairman, it was mentioned by a farmer that a woman had apparently never occupied this post in the village before and it seemed questionable whether one ever would, even though this was allowed in theory (interview no. 18). This could perhaps be interpreted as if there existed gender inequality to some degree in the villages, even though national law and regulations tried to make the community more gender equal.

It was additionally breached that there was a problem with corruption within the leadership in some of the villages. For example, the aid from varying organisations and the Tanzanian government was said to usually benefit the leaders and their families more than the ordinary villagers. Because of this, it was perceived as very hard to escape from poverty, in particular without connections among those at the top when corruption made a large stumbling block for the social development in the region. Furthermore, the chairman was not always perceived to be doing a good job and it was e.g. mentioned that the last chairman in a certain village had been biased, why not all villagers had been able to enjoy the same benefits under his leadership (interview no. 14, 16). It should, however, be mentioned that these concerns were breached by a minority of the farmers interviewed, why the discontent with the leadership might constitute an exception rather than a general feeling among the villagers.
10.3. Groups and Associations

In the region there were many groups that the farmers were engaged in to a varying degree. In general one could divide these groups into two larger classifications. The first constituted groups facilitated by an organisation, e.g. Vi Agroforestry (for more information: 10.4. Vi Agroforestry’s Impact on Farmers’ Access to the Social Capital) and SACCO, or the Lutheran church. The second type constituted local, village groups (interview no. 1-11, 13, 15, 16, 18-32, 35, 36).

When it came to the groups facilitated by organisations and churches, these were usually dealing with lending money to its members. The farmers who were part of groups under SACCO had used the groups for this, though it was mentioned that in general only few people borrowed money this way since it was a bit difficult to do so. Regarding groups facilitated by the Lutheran church, the members had initially been able to borrow money, though since a few members had problems paying back the loan the church did not lend them any more money (interview no. 6, 24, 27, 30).

Concerning the local village groups, there were several ones with similar though different purposes. Whereas some groups aimed at helping the members in difficult times, such as helping with funerals, other groups focused on farming, where the members helped each other to improve their cultivations to increase the harvests. In addition to this it was also mentioned that in some groups the members contributed with bananas, which they either used for making alcohol for selling or sold the bananas as they were. The money gained from this was then shared among the group members. It was also common that farmers were parts of groups where the members contributed with money for one member at the time, taking turns in being the monthly receiver. Overall, these group constellations only constituted examples of a few, since they arose from the driving force of the farmers based upon their needs, and were each individually designed to fit certain interests.

The farmers’ ability to take part of these village groups seemed very good, and no one stated a problem of finding a group that suited their needs. These groups were, however, not always very strong, in the sense that they did not necessarily last over a longer duration of time, but usually dissolved after a few years. Reasons for the disintegration were breached to be corruption and the lack of sufficient structure within the groups (interview no. 6, 7, 10, 11, 15, 16, 18-23, 25, 26, 29, 31-33, 35).
Overall, the farmers appeared to enjoy a rather positive access to the social capital, with a seemingly increased empowerment of women over the years, the opportunity to breach opinions during village meetings and through the possibility to be part of one or several groups. Simultaneously, there seemed, however, to exist some continuous problems in this context, such as a certain degree of gender inequality, corrupt and biased village leadership and the challenge of group disintegration.

10.4. Vi Agroforestry’s Impact on Farmers’ Access to the Social Capital

10.4.1. Advantages and Obstacles of Groups Collaborating with Vi Agroforestry

The possibility to be part of a group seemed to be something of great importance for the farmers interviewed and appeared to have been a common feature even before Vi Agroforestry’s presence in the area. Since establishing and working together in groups is one of Vi Agroforestry’s main strategies, it is also something that the organisation strongly encourages farmers to do to be able to more extensively support each other and work together to develop common interest (Nilsson, 2008: 36). A common opinion among the farmers interviewed was that being a member of a group collaborating with Vi Agroforestry had several advantages. Both members and non-members explained that except for being able to borrow money from their groups and receive different types of training from the organisation on how to develop their farming and small businesses, the groups also made it possible for farmers to unite and work together to be able to develop their lives (interview no. 1–37).

Despite the many positive outcomes of being a member in groups collaborating with Vi Agroforestry, a few farmers seemed to have experienced some obstacles in their groups. Such troubles included for example difficulties among members to repay their loans, and quarrels among the group members, especially concerning the division of money/shares at the end of the year, which in a few cases had led to that members thought of leaving the group (interview no. 5, 23, 25).

10.4.2. Focusing on Gender Equality

Regarding the somewhat uneven gender division in the Kagera region, it was said that by being able to join groups that were collaborating with Vi Agroforestry, women in the society had been able to receive education about entrepreneurship and been able to take loans from their groups. Such possibilities seemed in turn to have been a contributing factor to an
increased independency and empowerment of women in the area (interview no. 2, 24, 26, 27, 31). Furthermore, gender equality could be seen as an important crosscutting issue that Vi Agroforestry is focusing on and one of the organisation’s deliberate strategies was said to be to support female dominated VS&LA groups in order to empower women (interview – Thomas Ølholm, 2009).

10.4.3. Difficulties to Join Groups Collaborating with Vi Agroforestry due to:

- Lack of Information

Furthermore, being part of different groups, both those collaborating with Vi Agroforestry and other village groups, could be seen as an important engine for improving one’s access to the social capital and something the farmers desired in general. However, the difficulties for some farmers to join groups collaborating with Vi Agroforestry could thus in turn be said to limit these farmers’ further access to the social capital. Even though some farmers had never or only barely heard of the organisation, the most common cause to non-membership was that the farmers did not know how to become a member. Some explained that they were waiting for the organisation to approach them and offer the kind of training that they had heard other farmers receiving (interview no. 14-16, 18, 20, 21, 33). However, since the adaptation of RESAPP, to receive any kind of training, farmers had to establish a group and then request the organisation to provide them with such training (interview – Thomas Ølholm, 2009). Waiting for the organisation to approach them was therefore not effectual.

- An Inability to Accept More Members and Possible Nepotism

Some farmers also appeared to have had problems of joining groups collaborating with Vi Agroforestry either because groups were already full or because of possible nepotism among group members and Vi Agroforestry’s staff (interview no. 12, 16, 17, 37). The recommendation that a group is full with around thirty members, at least regarding VS&LA groups (interview - Thomas Ølholm, 2009), could create a dilemma. While some farmers might be left out of a group due to this preference, it might also be troublesome to keep large groups organised. A high number of members might result in that some of them will be overshadowed and that only a few people might dominate the process, causing the group unity and dynamics to disintegrate. Regarding nepotism, it was argued by a few non-members that some groups only prioritised family members and that it was easier for farmers to receive support and training if they were relatives or friends with Vi Agroforestry staff (interview no. 16, 17). Even though the organisation mentioned that this might occur, it had tried to
minimise such risk by implementing a policy prohibiting an employee to work in an area where he/she had grown up (interview - Thomas Ølholm, 2009).

- Limited Financial Assets
Some non-members also appeared to experience difficulties to join VS&LA groups due to limited financial assets, constraining them to contribute with shares and paying possible membership fees (interview no. 14, 21). A possible outcome of this might have been that farmers that already had some money could join more easily than those who were worse off, even though these farmers, most likely, would have benefited from a membership. Vi Agroforestry’s demand-driven strategy signifies that it is up to the farmer to find ways to join groups, though the least fortunate farmers might have difficulties to find the time and driving force needed for funding their membership.

10.4.4. Cases of Former Membership in Groups Collaborating with Vi Agroforestry
Additionally, an interesting finding was that two of the farmers interviewed had been members of groups collaborating with Vi Agroforestry before but were not members anymore. While one farmer left her group due to lack of time to go to group meetings (interview no. 32), the other farmer’s group was said to have collapsed when the Vi Agroforestry staff had left his village. A speculation among the group members was that due to internal quarrels within the organisation, the staff responsible for their village and ward left the organisation and thus stopped supporting the group (interview no. 19). Vi Agroforestry’s own view was that field officers were currently only present in three out of five wards in the zone in question, but that these three field officers also were responsible for providing support and training to the groups in the other two wards, that is, if these groups had requested some sort of training. It was also once again emphasised that since RESAPP, the organisation was only providing training to farmer groups if their members had requested such and that this specific group might have missed out on this recent change within the organisation (interview - Clement Tui, 2009). The exact reason to why some of the field officers had left became, however, difficult to determine.

10.4.5. Thoughts about Vi Agroforestry Phasing out of the Kagera Region
The experience and worry of disintegration of groups was further a challenge breached among some farmers. When asking the farmers how they would feel about Vi Agroforestry leaving their villages a common thought was that their group would either collapse or become weak
without the facilitation and education provided by the organisation. Thus, even though some
groups had been established a couple of years ago and the members had been taught new
helpful methods within their groups, they still seemed to fear that the unity and the organised
structure of their groups would not last without support from the organisation (interview no.
1-3, 10-12, 23, 25, 27, 30, 31). Nevertheless, there were also some farmers, although fewer in
number, that either thought that their groups were solid and could manage without Vi
Agroforestry’s presence, or that after receiving a bit more training from the organisation, the
group could gradually become independent (interview no. 4, 8, 25, 26, 28, 29, 35, 36). In
more recent years Vi Agroforestry had, however, applied a higher focus of only providing
training and assistance to the groups in one area for six years – three years intensive phase and
three years extensive phase. The aim of this has been to gradually build the groups’ capacities
by applying pressure on the farmers to adopt the different activities and thus in the end to
make them independent from the organisation (interview - Thomas Ølholm, 2009). The
desirable result of such a strategy could be for the groups to become strong enough to
minimise future disintegration.

It should also be highlighted that a common impression was that some farmers did not seem
to be aware, or perhaps did not fully understand, that Vi Agroforestry would leave their
villages in the next couple of years. One explanation for this could be that the strategy of not
staying in one area more than six years was something relatively new for both farmers and Vi
Agroforestry’s staff. When many of the staff started to work in Bugabo and Bugene they were
used to the fact that the organisation most often stayed in one area for a longer period than six
years, and the staff needed in other words to adopt the new strategy. Moreover, even though
the organisation did explain that it had worked very hard to make it clear for the staff that they
had an important role in preparing the farmers on the fact that the organisation will phase out
in a couple of years, there might still be a lack of spreading these news to the farmers.

Another explanation, or an additional cause, given by Vi Agroforestry was that the farmers in
general were used to NGOs assisting them for longer periods and instead of having a more
demand-driven approach, the farmers were used to more charity-based NGOs that handed out
things for free to the farmers. With such an approach the farmers could be said to become
more dependent on these NGOs and they might easily expect them to stay and continue to
hand out things for free. According to Vi Agroforestry’s staff, this was a big challenge and it
was one of the main explanations to why the organisation had started to focus more on a demand-driven approach (interview - Thomas Ølholm, 2009).

In sum, the overarching impression was that a membership in groups collaborating with Vi Agroforestry was perceived as valuable with many accompanying advantages, such as enjoying the strength and unity within a group and the possible empowerment of women. Thus, this membership seemed to have made it possible for farmers to further increase their access to the social capital. However, a few farmers seemed to have experienced difficulties joining groups collaborating with Vi Agroforestry and others appeared to have been having problems within these groups or were worried about their disintegration. These findings might therefore indicate that although Vi Agroforestry’s intervention of the groups ought to have strengthened the farmers socially, the situation within and around the groups did not seem to be completely trouble free, which in turn could signify an issue concerning a future stable development for their social capital. The general impression was thus altogether that the farmers enjoyed a relatively good access to the social capital, though the breached problem of corrupt leadership seemed to be out of reach for Vi Agroforestry to solve.
PART III – Concluding Discussion

In this third part, the study’s main findings are presented and discussed. Focus is put on answering the thesis’ research questions and to elaborate the findings further in a wider context as well as bring forward possible future aspects.

11. Conclusion and End Discussion

In this thesis the small-scale farmers’ socio-economic situation in the Kagera region in Tanzania has been studied. The farmers’ access to the five capitals, constituting the asset pentagon in the SRL framework, has further been analysed based on their own thoughts and opinions about the subject. In this conclusion the study’s main findings will be presented and discussed.

11.1. An Overall Improvement of the Five Capital Assets

Throughout the field study it became apparent that the farmers interviewed were faced with both positive and negative factors, trends and changes over time that had an impact on their access to the five capital assets and their livelihood situation. Even though e.g. soil infertility; deforestation; occasional health problems; difficulties of accessing water easily; challenges with an insufficient market; and a certain degree of gender inequality seemed to be common challenges for the farmers, the general conclusion was, nevertheless, that their livelihood situation and their access to all five capital assets appeared to have experienced a positive, though small-scale, development. A common understanding was for example that several farmers had expanded their cultivation of trees and various crops; experienced an improvement of health conditions; had become engaged in more than one income generating activity; gained greater opportunities to save and borrow money; experienced that the roads had been improved; attained greater possibilities to join new groups and to receive different types of trainings; as well as the fact that it appeared as if children nowadays had a somewhat higher education than their parents and that better houses were built (for more information: Table 1 – The Study’s Main Findings).
Table 1 - The Study’s Main Findings

<table>
<thead>
<tr>
<th>Challenges, problems and difficulties</th>
<th>Natural capital</th>
<th>Financial capital</th>
<th>Human capital</th>
<th>Physical capital</th>
<th>Social capital</th>
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<tr>
<td>- Soil infertility</td>
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<td>- Unsatisfactory amount of income</td>
<td></td>
<td>- Un satisfactory house</td>
<td>- Gender inequality to some degree</td>
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<td>- Lack of fertilizers</td>
<td></td>
<td>- Insufficient markets and few buyers</td>
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<td>- Lack of electricity</td>
<td>- Corrupt and biased village leadership to some degree</td>
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<td>- Insufficient land or inability to cultivate all land</td>
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<td>- Low crop-prices</td>
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<td>- Unsatisfactory access to transport</td>
<td>- Lack of strong groups and risk of group disintegration</td>
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<td>- Sick crops</td>
<td></td>
<td>- Difficulties to save and borrow money</td>
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<td>- Will of having more livestock</td>
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<td>- Hail/strong winds</td>
<td></td>
<td>- Decreased fishing possibilities</td>
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<td>- Unsatisfactory water tanks</td>
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<td>- Deforestation</td>
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<td>- Insufficient water access</td>
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<tr>
<th>Progress so far</th>
<th>Natural capital</th>
<th>Financial capital</th>
<th>Human capital</th>
<th>Physical capital</th>
<th>Social capital</th>
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<tr>
<td>Overall improvements</td>
<td></td>
<td>- Gradual increase of engagement in different income generating activities</td>
<td>- Gradual increase of level of education and access to schools</td>
<td>- A gradual improvement of houses</td>
<td>- Increased gender equality with e.g. more women involvement in different income generating activities</td>
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<tr>
<td>- Increased education and training about crop cultivation and farming activities creating possibilities to improve cultivation and sell more crops</td>
<td>- Increased possibilities to save and borrow money</td>
<td>- Increased possibilities to sell cash crops e.g. bananas and beans</td>
<td>- Health improvements with e.g. health seminars and higher focus on decreasing malaria</td>
<td>- Improved roads and an increase of minibuses</td>
<td>- Increased number of groups with different purposes</td>
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<td>- Gradual enhancement of tree planting</td>
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<tr>
<th>Vi Agroforestry’s interventions and areas of priority</th>
<th>Natural capital</th>
<th>Financial capital</th>
<th>Human capital</th>
<th>Physical capital</th>
<th>Social capital</th>
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<tbody>
<tr>
<td>- Providing education and trainings on e.g. different farming activities cultivation of trees and crops, improve soil quality, composting</td>
<td>- Providing education and trainings on e.g. growing garden crops and trees, enterprise development, which could increase the farmers’ income</td>
<td>- Focusing on improving the farmers’ knowledge and skills through training on e.g. enterprise development, agroforestry techniques, farming and cultivation</td>
<td>- Providing education and trainings on e.g. livestock keeping</td>
<td>- Introducing the farmers to the opportunity of establishing new types of groups</td>
<td>- Focusing on female empowerment</td>
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<td>- Has previously provided seeds</td>
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<th>The impacts of Vi Agroforestry’s interventions</th>
<th>Natural capital</th>
<th>Financial capital</th>
<th>Human capital</th>
<th>Physical capital</th>
<th>Social capital</th>
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<td>- Even though few differences could be detected between members and non-members and it was difficult to determine the outcomes of the training provided, it seemed as if the organisation’s presence had led to an increased</td>
<td>- Members appeared to have increased their ability to save and borrow money. But it was difficult to detect if this in turn had contributed to a higher income and a general improvement of living standards for members</td>
<td>- By attending trainings held by the organisation members seemed to have increased their knowledge and skills. Although no major differences were detected between members and non-members it still appeared as if the training had</td>
<td>- Although the members seemed to have received further knowledge on livestock keeping and while it could be argued that other types of trainings on e.g. saving and borrowing money, cultivation and</td>
<td>- The establishment of groups collaborating with the organisation appeared to have increased the members’ social capital.</td>
<td>- The groups seemed to have strengthened and united farmers</td>
</tr>
<tr>
<td>- Providing education and trainings on e.g. different farming activities cultivation of trees and crops, improve soil quality, composting</td>
<td>- Increasing the presence of the organisation training provided, outcomes of the training appeared to increase the organisation’s ability to save and borrow money and while it could be argued that other types of trainings on e.g. saving and borrowing money, cultivation and</td>
<td>- Providing education and trainings on e.g. livestock keeping</td>
<td>- Introducing the farmers to the opportunity of establishing new types of groups</td>
<td>- Focusing on female empowerment</td>
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</table>
The cultivation of trees and different crops in the area compared to non-members. The introduction of VS&LA groups seemed to have made female members more economically independent of their husbands. Increased e.g., the cultivation of trees and crops in the area and the ability to save and borrow money. Although this in turn could be seen as important to attain better health and greater possibilities to pay for school fees, no differences between members’ and non-members’ health conditions and education seemed possible to detect. Enterprise development could have given the farmers an increased access to income which in turn increased their ability to buy physical things, it seemed difficult to detect any differences between members’ and non-members’ access to the physical capital and appeared to have empowered female members.

11.2. The Impact of Vi Agroforestry’s Presence in the Kagera Region

Throughout the study, it became evident that Vi Agroforestry seemed to have applied working methods that addressed many of the current problem areas in the region and that focused on improving the farmers’ livelihood situation. The opportunity to receive education by the organisation about e.g., agroforestry techniques, livestock keeping, and how to improve crop cultivation and tree farming appeared to have for example contributed to an increased cultivation of trees and different crops in the area. A general understanding was also that those farmers who were members of groups collaborating with the organisation seemed to have been positively affected by Vi Agroforestry’s focus and training on enterprise development and its initiation of VS&LA groups, as it appeared to have created enhanced possibilities for the farmers to start up small businesses and to save and borrow money. The capability to access micro loans and savings further through VS&LA groups appeared to have increased the women’s possibilities as businesswomen, and had thus seemingly enhanced their development of becoming more economically independent, which was overall perceived as a very positive and important development. The initiation of new types of groups, such as VS&LA groups, also seemed to have strengthened the social relations between farmers and appeared to have opened up new possibilities for farmers to unite and work together to be able to develop their lives. Overall, through focusing on building the farmers’ capacities and skills, it became apparent that Vi Agroforestry had provided the farmers with increased knowledge and new opportunities in order to develop further (for more information: Table 1 – The Study’s Main Findings).
Whereas some problem areas such as deforestation, soil infertility and unsatisfying market possibilities still appeared to constitute overarching problems for the farmers, despite Vi Agroforestry’s focus on these areas, it also became evident that some problem areas had received limited direct attention by the organisation. This included for example the challenges of insufficient water access, corruption within the villages’ leadership, sick crops and different health problems as well as a general limited focus on the physical capital. Furthermore, as a central part of the SRL framework it is important to remember that the five capitals are highly interlinked. An increase or decrease in one of the assets will most likely affect one or several of the other four. It was for example mentioned by some of the farmers, which were part of groups collaborating with Vi Agroforestry, that the initiation of VS&LA groups had increased their possibilities to borrow money to pay for schools fees, which in turn made it possible for their children to receive a higher education. It was also explained that increased crop cultivation could contribute to more diverse and nutritious food, which was an important factor for improving the health situation.

With this said, it seems important to conclude that Vi Agroforestry appears to have had both direct and indirect implication on various problem areas and different parts of the five capitals. The fact that some of the problems and capitals appeared to only receive a limited focus by the organisation seems important to bring up to attention in order to facilitate the organisation’s future work and to be able to improve the farmers’ livelihood situation further.

11.3. No Clear Differences between Members and Non-members

An important part of the study was to try and detect any possible differences and similarities so far between those farmers who were members of groups collaborating with Vi Agroforestry and those who were non-members. As discussed above, it seems as if the organisation’s main impacts and the main difference detected was that members in general seemed to have received more training than non-members. Such training included e.g. how to adapt different agroforestry techniques and farming activities and how to develop small businesses. Important information received had also been on how to save and borrow money within a group, which was said to have given members greater possibilities to save money and take loans than non-members. It also seemed possible to detect that the initiation of new groups collaborating with Vi Agroforestry and the organisation’s focus on female empowerment appeared to have further strengthened and united farmers and made female members more independent.
Besides these diverse aspects, the general understanding was, however, that it appeared difficult to determine clear differences between members and non-members. It was for example difficult to verify what the training provided by Vi Agroforestry had contributed to in large or what the increased possibilities of saving and borrowing money had resulted in as no huge differences in the members’ and non-members’ way of living appeared difficult to detect so far. In general, no obvious differences were seen regarding e.g. type of house, health conditions, level of education, means of transport, quality of soil, numbers of livestock kept or crops grown.

One explanation for this could be the limited access to background information describing the farmers’ socio-economic situation in the Kagera region more in depth before the arrival of Vi Agroforestry in 2005 and about the farmers’ livelihood situation during the organisation’s initial phase. Without any greater knowledge of how the farmers’ situation was before Vi Agroforestry’s presence in the area, it has been difficult to compare and measure more thoroughly the possible impacts that the organisation might have had on the farmers’ situation. This in turn has made it difficult to detect and measure any huge differences between members and non-members. For example, although a member perhaps had been able to buy more livestock and develop further by taking a loan from his/her VS&LA group, a non-member might still have more livestock without ever being a member. Furthermore, even though a non-member might have had more livestock, a possibility could also be that his/her total number of livestock had decreased with time, whereas a member’s amount of livestock could have increased during the same period due to the enhanced possibility to take loans. However, with limited access to background information, such developments have been difficult to identify in this study. With this in mind, one could conclude that in order to gain a greater understanding about an organisation’s both negative and positive impacts and how to facilitate the work further, a relevant in depth baseline study is important.

An additional explanation could be that even though Vi Agroforestry’s presence appeared to lead to development, such development seemed to be mostly small-scale, since the small-scale farmers only had few means to develop. Since the organisation had become present in the area, a member might have had the possibility to buy one more cow or grow one new crop, which could have been a huge improvement for the individual farmer. However, comparing such development with other farmers might be difficult as their access to the capital assets differed between them. It also becomes more difficult to measure, as the farmers
have individual goals and priorities on what they want to develop. With only smaller means to develop, one farmer might take a loan from his/her VS&LA group to improve the house, while another might focus on cultivating more crops. Thus, with a small-scale development and a diverse focus on improving different capitals it can be difficult to compare the farmers’ individual development.

With this in mind, it is important to once again emphasise that this study has taken its point of departure from what the farmers themselves thought about their access to the five capital assets. A conclusion made during the interviews was that although it appeared difficult to detect multiple impacts so far as a result of the training and information provided by Vi Agroforestry, both farmers that were members of groups collaborating with the organisation and non-members argued that membership in such groups led to development. An interesting conclusion was also that farmers that were members of groups collaborating with Vi Agroforestry seemed to be more secure and positive about their future, as they thought that through their membership in groups collaborating and receiving support and information from Vi Agroforestry they had increased their means to develop further and seemed to have more activities to fall back upon during more difficult times.

11.4. The Importance of Communication and a Demand-Driven Approach

Based on the above discussions it could be argued that Vi Agroforestry’s presence and work, in general, seemed to address several of the current problem areas in the region and was perceived by the farmers as very important as it was seen to improve the farmers’ situation and lead to further development. With this said, it seems however, important to highlight that in order to increase the positive impacts of the organisation’s work further and to facilitate the involvement of more farmers in groups collaborating with the organisation, increased communication from the organisation as well as an enhanced strive among farmers themselves to be more demand- and self-driven, seem necessary.

During the study it became apparent that there on some occasions seemed to be a lack of information, limiting the farmers’ understanding and knowledge about Vi Agroforestry’s strategies and working methods. Among some of the farmers who were members of groups collaborating with the organisation, it for example seemed as if they were unaware of the new demand-driven approach applied since the introduction of RESAPP. As a result of this some farmers did not seem to understand that the organisation no longer provided the farmers with
seeds for free, did not know that the organisation would phase out of the area in the next couple of years, or that the organisation no longer provided individual guidance but that farmers needed to seek training and advice as a group. Even though an explanation for this could be that RESAPP had just been introduced the same year as this study was conducted, it seemed as if more information about this new approach was needed in order to avoid possible stumbling blocks for the organisation in the future that could prolong the farmers’ overall development and to avoid letting insufficient communication disturb the relationship between the farmers and the organisation. The lack of information also became apparent when interviewing those farmers that were not part of groups collaborating with Vi Agroforestry. The most common explanations to why they were non-members seemed to be that they had not heard about the organisation and its activities, or did not know how to become a member.

Furthermore, while a wider spread of information could be seen as an important aspect to consider, it also seems as if a greater knowledge and enhancement of the demand-driven approach could be important in order for the farmers to more extensively reflect upon how to develop their livelihoods further, and for development actors to a wider degree understand the farmers’ wishes and desires. During the study, it became apparent that some farmers were used to receive things for free, which could be the result of a possible widespread charity-approach among development actors in the area. The consequence of such an approach could be that farmers become more dependent and used to receiving free handouts, which might restrain the farmers’ confidence to develop their own capacities, plan ahead and to more in depth reflect on their future development. Although it appeared as if the demand-driven approach still needed to become consolidated in the region, the overall understanding was that the small-scale farmers had become more proactive in their own development and felt more in control of how to develop their living situation further.

11.5. Future Aspects for the Farmers Living in the Kagera Region
What possible impacts that Vi Agroforestry’s presence and its provision of training and support might have on members’ and non-members’ socio-economic situation in the future will be interesting to follow. Based on the study’s findings, a few aspects for the future development have come to mind. Concerning the prospects for the groups collaborating with Vi Agroforestry, the probability that the majority of them would last over a longer period of time could on the one hand be said to be worrisome. Since it became evident that some of the small-scale farmers interviewed were unaware of the organisation’s phasing out of Kagera in
a few years time, it might become difficult for these farmers to face the day when this happens. It is possible that the members of these groups could be relying on a constant presence and support from the organisation and thus have not consciously been preparing to manage independently. Another aspect in this circumstance is the insecurity felt by some of the interviewees of the need to attain more training still from Vi Agroforestry before they can acknowledge their groups’ stability as fully consolidated and be able to move on and develop independently. Since the organisation’s main work approach appears to be through group interaction, it deems crucial that the groups in question are strong enough in themselves before the organisation phases out or the training and knowledge provided run the risk of tapering off with time.

Though, on the other hand, simultaneously as some farmers might not have felt prepared to manage their groups yet without the organisation, other group members had begun to spread the knowledge and techniques learnt from Vi Agroforestry as well as initiating new similar groups. This could imply that the organisation’s efforts have had the effect of spurring a few of the farmers involved to pass on the newly attained knowledge, which they have found useful. Based on this, one could overall argue that there is a tendency in the region that the knowledge and information received by members might potentially spread over time to non-members as well and contribute to an overall positive development for all villagers in the area.

Concerning the aspect of an environmental and socio-economic sustainability in the region, it seems as if the farmers in groups collaborating with Vi Agroforestry in general applied the new working methods learnt from the organisation mainly with a personal gain motivation. These small-scale farmers appeared to take on new e.g. cultivation techniques and the planting of trees mainly because it served their own interests at the time, giving them chances of improved income and a more stable and diverse food supply for their families. It should however also be mentioned that some farmers interviewed, although a minority, seemed to fully understand the long-term efforts and goals of Vi Agroforestry and the significance for the environmental and socio-economic sustainability of applying certain cultivation techniques. Nevertheless, all in all the general impression was that the new techniques seemed to be applied among the farmers more because of personal gain than a concern for creating a solid foundation for future generations in the region, why it could be questioned how profoundly the organisation’s message had reached and affected the farmers. However, what
impacts this premise might have for the future development in Kagera will be interesting to follow. Although it could be seen as very positive that the farmers have started to adopt Vi Agroforestry’s various methods that seemingly have an important impact on the environment and their socio-economic situation, it could be argued that an important next step for a more deep-rooted development would be to expand their concern of personal gain to a broader development perspective.

To conclude, in general there seemed to be a state of positivism among the farmers interviewed concerning their development over the recent years and a general approval of the way in which Vi Agroforestry had been intervening in their community. Thus, from the farmers’ own perspective, there seem to be hopeful prospects for the future as long as their groups stay intact and the newly attained knowledge continues to spread.
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Online Books:


Documents:


SCC-Vi Eastern Africa (2009) Third Quarter Report Kagera Project, October 2009: Bukoba, the SCC-Vi Project Kagera’s regional office


Web Documents:


Web Sites:


**Web Articles:**


**Interviews/ Personal Communication:**

Clement Tui, *Zone Coordinator Bugabo Zone*, 23 November 2009, 9.00, SCC-VI Project Kagera, Bugabo zone.


Thomas Ølholm, *Former Project Manager SCC- Vi Eastern Africa in Kagera, Tanzania*, 27 November 2009, 15.00, SCC-VI Project Kagera’s regional office.

Vincent Murongo, *Zone Coordinator Bugene Zone*, 30 November 2009, 11.00, SCC-VI Project Kagera, Bugene zone.


**Personal Email Messages:**

Kipondya, W. (winfrida.kipondya@viafp.org) (3 May 2010) *Households figure Bgabo &Bugene 2009*. Personal e-mail to M. Karlsson (madeleineklsn@hotmail.com)
Masologo, D. (damas.masologo@viafp.org) (27 September 2010) Re: News and Questions from the Swedish Bachelor Students. Personal e-mail to M. Karlsson (madeleineklsn@hotmail.com)

Nyberg, Y. (ylva.nyberg@viafp.org) (12 January 2010) RE: Report of Poverty Perceptions? Personal e-mail to M. Karlsson (mkaiv07@student.lnu.se)

Photos/Maps:


Front page and Appendix 3 – Photos taken by Helena Fransson and Madeleine Karlsson from the Bugabo and Bugene zones, 12 November 2009 – 10 December 2009.
# Appendix 1 – List of Respondents

<table>
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* Former member of a group collaborating with Vi Agroforestry
Appendix 2 – Additional Information about Bugabo and Bugene Zones

Bugabo Zone

The Bugabo zone is situated in the north-eastern corner of Kagera, with its boundaries to a large extent along the shores of Lake Victoria. Therefore Bugabo has a bit longer rain period in the fall, September - December, compared to other parts of Kagera. The climate of Bugabo is quite varying with a mixture of hills, flat lands and rocky landscapes.

Concerning the agricultural sphere, farmers in Bugabo usually cultivate banana, coffee, cassava, yams, beans and maize. In this zone farmers have also more recently started with vanilla cultivation as a cash-generating crop (interview - Clement Tui, 2009). Cultivation and land preparation in Bugabo is mainly done by hand and the zone belongs to the district that has the largest planted area using fertilizers within Kagera. To irrigate croplands, the farmers of the area mainly turn to rivers using hand buckets to distribute the water, and the source for drinking water generally constitutes unprotected springs.

Map 4 - Bugabo Zone

From the 2003 statistics from the Tanzanian Agriculture Sample Census, the area’s number of members in the household was the lowest in Kagera with 4.4 members, and a relatively high number of households were female headed, 25 per cent. It was also estimated that the district, which Bugabo belongs to, was one of the areas in the region with the highest percentage of households having three meals per day. The area further had a very good access to secondary schools and also a very high literacy rate, which could be explained by a relatively high level of school attendance (National Bureau of Statistics, Ministry of Agriculture and Food Statistics, et. al., 2007: 102-104).
Bugene Zone
The Bugene zone is part of a large district, which covers both an inland part of Kagera and an area in the far north-western corner of the region that borders with Uganda and Rwanda. Bugene is situated in the inland part of the district and consists mainly of mountainous areas. Generally the zone further enjoys quite fertile soil and ample rainfalls, though a sparse amount of lakes and rivers (interview - Vincent Murongo, 2009; Tanzania Chamber of Commerce Industry and Agriculture, Kagera, (b) 2005).

According to the 2003 Tanzanian Agriculture Sample Census the number of household members is generally a bit over the regional average, with 5.1 members per household, though a lower rate of female-headed households, 15.6 per cent, compared to Bugabo. Both the level of school attendance and literacy rate in Bugene were further seen as moderate. The access to secondary schools and health clinics appeared to be the worst in Kagera. In 2003 the district which Bugene belongs to was the area in Kagera with the highest number of households having two meals per day, but most of them did however not suffer from a lack of food (National Bureau of Statistics, Ministry of Agriculture and Food Statistics, et. al., 2007: 101, 102).
Appendix 3 – Photos Taken in the Field

A house made of mud and poles with grass roof.

A house made of bricks with a roof of iron sheets.

A house made of bricks with cement scraping, painted outer walls, iron sheets and glass windows.
A public water tank constructed in connection to a river in Bugabo.

A self-made water tank built in connection to a farmer’s house.

Livestock being kept in a shed made of poles.
From un-ripe coffee beans to instant coffee.

Vi Agroforestry’s regional office in Kagera, Tanzania.