

Sustainable agriculture:

A meaningful concept?



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A field study from the Babati District in Tanzania

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1 Abstract

The aim with this paper is to study the concept of sustainable agriculture. One angle of approach has also been to investigate the role of NGOs, where the organisation FARM-Africa is mostly studied. A field study in the Babati District is the base of the paper.

Sustainable agriculture is a concept with various definitions and is expressed in different ways. Ecologically sound, economically viable, socially just and humane are some of the keywords within the concept of sustainable agriculture. Over the years, various technologies within the concept have been developed and have proven to be both environmentally friendly and productive, but few of these have been adopted by farmers. Scientists' experience of agriculture often differs from that of farmers. To get the best result a collaboration between all parts in the society are needed. Participation has a long history within agriculture development. Recent studies have shown that participation is one way to success. People's participation has therefore become one of the most common concepts within NGOs and also within government departments. Agriculture is important issue for Tanzania and this is one reason why I have chosen to write about sustainable agriculture.

My study will show the general opinion of sustainable agriculture among the interviewees and the general opinion of NGOs like FARM-Africa.

Keywords: sustainability, sustainable agriculture, FARM-Africa, participatory

2 Acronyms

Non Governmental Organisation (NGO)

Participatory Rural Appraisal (PRA)

The International Alliance for Sustainable Agriculture (IISA)

Friends in Development Trust Fund (FIDE)

The integrated Agricultural Training Center (IATC)

The Land Manage Programme (LAMP)

The Swedish International Development Cooperation Agency (SIDA)

Farmers research groups (FRG:S)

FPR (farmer participatory research)

Babati Agricultural & Environmental Education Project (BAEEP)

Nou Joint Forest Management Project (NJFMP)

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4 Author's comment

I just wanted to start my paper by saying that I'm glad I got the opportunity to go to Tanzania, to see the things that I have seen and meet the people that I have met. I have never had such an experience; it was an adventure from day one. When I was in Tanzania I had a shallow idea on what I wanted to write about. I felt that it was good to be flexible when it came to the subject of my paper and simply let time tell. In the end it was the field study in the Babati District that went above all my expectations.

An objective perspective is something that in my opinion is hard to achieve, you always seem put your own point of view into the things that you write. The field study from Babati is the base of my paper. During some of my interviews I had an interpreter with me, because my Swahili is non-existent. The interviewees' answers have therefore been interpreted by at least three persons. Even though I could not verbally communicate with many of the people directly, hopefully my empirical results are based on the true answers given by the interviewees.

5 Introduction

Over the past two decades a new movement has started to grow, the sustainable agriculture movement. Nicanor Perlas and his colleagues first coined the concept of sustainable agriculture in 1983. This new concept became a spearhead in the global discussion on a widened view of sustainability. Many people talked about sustainable agriculture as an alternative to “green revolution” agriculture. The concept of sustainable agriculture has however quickly become an empty phrase, which includes everything from “safe pesticides” to “environmentally friendly” biotechnology (http://www.cadi.ph/sustainable_agriculture.htm, 2006-02-16, p.1). Over the years many different technologies have been developed within sustainable agriculture and have proved to be both productive and environmental friendly, but few farmers have adopted these technologies (Pretty, 1995, p.1249).

Organic farming is the agricultural system that has manage to get the attention of the public and policy makers as it can provide a combination of environmental, social and economic benefit. The result has been a widespread agreement that organic farming displays many elements that are characterised within a sustainable agriculture system (Milestad, 2003, p. 11-12).

We were around 45 students from Södertörns University College that at the end of February 2006 went on a three week trip to the town of Babati in Tanzania. During the trip we had a field study for eight days. During these eight days I interviewed farmers from the village of Haraa, employees from the organisation FARM-Africa and an employee from the District Council in Babati.

Agriculture is a very important issue for Tanzania. It's the foundation for the country's economy, accounting for around half of the countries Gross National Income, three quarters of merchandise exports and provides employments opportunities for about 80 % of the population, and is also the most important food source. It's the smallholder farmers that dominate the agriculture in Tanzania. Small farms play a multiple key function in rural economies,

cultures and ecosystems all over the world (<http://www.tanzania.go.tz/agriculture.html>, 2006-04-17, p.1). This is one reason why I have chosen to write about sustainable agriculture. I'm interested in observing how important concepts like this effect real life. Another perspective that I have chosen to study is the work of NGOs. I decided to take a closer look on the organisation "FARM-Africa", who is one of the NGOs that are currently working in the Babati District.

I have decided to commence my results by attempting to explain the concepts of sustainability and sustainable agriculture. I also felt that a definition of a Non Governmental Organisation (NGO) and the work they do throughout the world, focusing on Africa and Tanzania, but mainly the work of NGOs based in Babati. I have also introduced the organisation FARM-Africa, discussing the work they do in general, and again focusing on their work in Tanzania.

After these initial discussions, my primary result is represented; this represents a more personal perspective into the issues explained prior. Following on from the primary results is presented a summary of the answers obtained from the interviewees', analysed according to the data. To conclude, I have written a discussion in which I share my own views and thoughts on sustainable agriculture and the work of NGOs.

6 Objective

The objective of my paper is to study the concept of sustainable agriculture. My aim is to find answers to the following questions:

- What is the meaning of sustainable agriculture?
- How important are concepts like sustainable agriculture?
- Is sustainable agriculture something that is possible to achieve?
- How does FARM-Africa define sustainable agriculture?
- How do farmers, in my case the farmers that I interviewed in Haraa, define sustainable agriculture?

- How important are the work of NGOs like FARM-Africa?
- Has the work of NGOs, like FARM-Africa improved the situation for the people, in my case my interviewees?
- What are these people general opinion of organisations like FARM-Africa?
- Which people are invited to participate in FARM-Africa's different projects?

My field study in the Babati District represents the base of my study, which means that the answers to these questions will be based mostly on the answers of my interviewees. I have also used secondary data sources to help expand the arguments and answer the questions.

7 Method and material

Within the study I have used a qualitative method approach, partly because of the time limit of the study, but also because this has allowed me to fit all the relevant material within the paper. A short explanation of the concept qualitative research is given below:

7.1 Qualitative research

There is no single way of successfully performing qualitative research. There are many factors that can affect the outcome of the qualitative research, these include: Individual views on the nature of the social world and what can be known about it, the nature of knowledge and how it can be acquired, the purpose of the research, the characteristics of the research participants, the audience for the research, the founders of the research and the position and environment of the researchers themselves are factors that affect the outcome of the qualitative research. There is no correct and accepted way of performing qualitative research. The term is used as an overarching category, covering a wide range of approaches and methods that are found within different research disciplines. Despite the diversity of the meaning of qualitative

research a number of writers have tried to form a definition. There is a fairly wide consensus that qualitative research is a naturalistic, interpretative approach concerned with understanding the meanings which people attach to phenomena within their social world (Ritchie etc., 2003, p.1-4). Qualitative research uses data in the form of pictures and words, not in numbers. It describes natural data by observations and unstructured interviews. The research method also puts meaning above action, where the perspective of the participant is central. Inductive research is preferred above a hypothetical test. Qualitative research has been subject to much criticism over the years (Ryen, 2003, p.16). The interview is one of many qualitative methods, but probably the most used one within the field. The qualitative interview distinguishes itself unstructured character. The interview within qualitative methods is often used as the base for the collection of data. The reason for this is that the qualitative interview is used in many different disciplines, for example by anthropology and sociology (Ryen, 2003, p.16, 43). My field study and the different interviews from the Babati District has, as I have mention previously, been the base for my paper. During the field study my subject became much clearer to me, reading and starting to write about the concept of sustainable agriculture also helped make the aim of my paper more evident.

7.2 Semi-structured interview

The interview method that I used during my field study in Babati was a semi-structured interview. The methods characteristic is a fairly open framework, which allows for focused, conversational and two-way communication. A semi-structured interview starts with a more general line of questions or topics. It means that not all questions are designed before the interview. The majority of the questions asked are generally created during the interview (<http://www.sadl.uleth.ca/nz/collect/faodocs/import/www.fao.org/docrep/x5307e/x5307e08.htm>, 2006-05-10). Semi-structured interviews are often associated with farms, field or village visits, where the interviewees are individual farmers or households, village leader, local development officials etc. (McCracken etc., 1988, p.20 &23). As previously mentioned, I interviewed farmers, employees from FARM-Africa and an employee from the District Council in Babati. Nelly and Natasja and I were the three students who conducted the interviews in

Haraa. Two of the farmers that I interviewed in Haraa were members of the Mlimani rural cooperative society. The main aim of the interview with these particular farmers was understand more about how the relationship between FARM-Africa and the cooperative society functioned. The interviews with the Haraa farmers (who spoke only in Swahili) had to be conducted with an interpreter present. Although all of our answers were translated, this language barrier did present some problems. This was due to the fact that the answers given to us by the interviewees via the interpreter could've been misinterpreted going through a third party. The interviews conducted with the employees from FARM-Africa and the employee from the District Council in Babati also presented some problems. During these particular interviews there was no interpreter present, partly because persons holding these positions spoke some level of English and the present of an interpreter may have offended someone, which I wanted to avoid. The verbal communication between myself and this set of interviewees could at times become difficult. With this difficulty in communication, misunderstandings between us did arise during the interviews, but in the end we did manage to resolve most of this and find a way to communicate. Other problems that can occur during interviews can for example be that the interviewees sometimes answers in a way that they believe they are expected to answer, this is something that is hard for to determine. The best approach however, is simply to be aware of it. Another problem with the primary results is that the interviewees' answers could be quite vague. There was simply not enough time to ask more in-depth questions and we had a restricted amount of time interviewing the farmers. I also didn't want to take up too long of the farmers and of course the other person's time. On the other hand the subjects of my paper also has a vague nature, so a concrete answer to the questions was never a possibility.

7.4 Secondary data

In my paper I also use secondary data sources, which consist of published and unpublished data that was acquired by different individuals at an earlier time point. These data sources include a variety of forms like project documents, research papers, computer data files etc. This type of data can be found in universities, government agencies, research centres and

other institutions (McCracken etc., 1988, p.18). I have used data from the Internet, libraries and strategy papers that I was handed from FARM-Africa in Babati. A lot of this material has been based around the issue of sustainable agriculture and the work of NGOs. This was both a good thing and a bad thing. Due to the time limit of this paper, I didn't have the time to look through all of the existing material. This also made it harder for me to present all of the relevant material within my paper. On the other hand I had no problems in finding enough valid material to write the paper.

8 Theoretical context

8.1 Positivist paradigm and the need for alternatives

Over the years, various technologies within sustainable agriculture have been developed and have proven to be both environmentally friendly and productive. However, these technologies have rarely been adopted by farmers. Scientists' experience of agriculture often differs a lot to that of farmers. It is also difficult for farmers to adopt a whole package of technologies without any kind of adjustments. When farmers have been able to take components from different systems, for example from alley cropping, there has been some success. Bunch and López say that "technologies are not sustainable: what needs to be made sustained is the process of innovation itself" (Pretty, 1995, p.1249). This means that as knowledge and conditions change, farmers and communities should be allowed to change and adapt these conditions too. Definitions of sustainability should therefore be time- and place specific. Sustainable agriculture is not simply a package, but a process of learning over time. The scientific investigation of the world, has since the early 17th century been dominated by the Cartesian paradigm, also known as positivism or rationalism. Science in the name of the Cartesian paradigm is often seen as the "true" knowledge and the "only proper way of thinking" (Pretty, 1995, p.1249). One thing that the paradigm of positivism doesn't clarify is that all data is constructed in a

particular professional and social context. Policy makers often use the measurements that suit their needs, for example the results from a case made by a utility company and an environmental group often differ. The challenge is to represent all the actors with their different agendas. Active participation and decision making that meets the public interest and the social movement is something that is required to meet this challenge. Other methodologies are often excluded by the positivist paradigm, it's also important to see that positivism is just one way to describe the world and a pluralistic method is something that we need to pursue. In recent years a large number of advances in a wide range of disciplines and fields of investigation have arisen. Alternative paradigms all state that "the truth is ultimately a kind of mirage that in principle cannot be achieved because the worlds we know are those crafted by us" (Pretty, 1995, p.1250). Although these alternatives come from different disciplines, there are five separate principles that part them from the positivist paradigm. First they all say that it's not possible to precisely define concepts like sustainability, it's a much-contested concept and there is no fixed set of technologies or model within the concept to see the world. Each individual has different values and this makes it hard to define what we want to achieve. The second principle is that different problems are open to interpretation. Thirdly, they all say that problems are endemic, which means that the resolution of one problem can lead to another problem. In a complex and a changing world, it's hard to foresee changes, there will always be uncertainties. The fourth principle is that key feature becomes actors' capacity to continually learn about changing condition, so that they quickly can adapt existing activities to the change. Finally, the fifth principle is the need of a multiple perspective of the systems of learning and action. A greater involvement between the different interested parties is asked for (Pretty, 1995, p.1249-1251).

8.2 The concept of participation learning

Participation in agriculture development has a long history, both national and internationally. Two schools of participation have developed; one of them views participation as a way to increase efficiency, if people are involved it's more possible that they support a new development. Participation is a fundamental right according to the other school. Recent compar-

tive studies of development projects have shown that participation is one way to success. People's participation has therefore become one of the most common concepts that are used by development agencies, e.g. NGOs and government departments. This popularity has created many paradoxes; participation has for example been used to justify control of state, to build local capacity and self-reliance. The dilemma for many authorities is that they often both fear and need people's participation. There are many ways in which the term participation can be used by development organizations; these can be divided into seven different types: manipulative participation, passive participation, participation by consultation, participation for material incentives, functional participation, interactive participation and self-mobilization. From a study of 121 rural water supply projects in 49 countries of Africa, Asia and Latin America it was discovered that participation was the most important factor for a project effectiveness and most effective when it was conducted with people being involved in the decision making during all stages of the project. In recent years many new participatory methods and approaches for learning in agriculture development have expanded, more than 30 different terms for these exist today. One example is Participatory Rural Appraisal (PRA), which is now practiced in 130 countries around the world. Even though the approaches differ there are principles that are common to most of them. Within these there are six elements in particular, which contains a defined methodology and a systematic learning process, these are: multiple perspectives, group learning process, context specific, facilitating experts and stakeholders, and leading to sustain action. These systems of learning can also be structured into four different classes: methods for group and team dynamics, for sampling, for interviewing and dialogue and for visualization and diagramming. Participation is calling for collective analysis. If you are working as a group you can approach a situation from different perspectives. Sustainable agriculture is, as I have stated before, a very uncertain and complex concept, so the alternative methodologies that I have described are important if we want to envisage the case of sustainable agriculture and in the process of learning a range of people will be needed (Pretty, 1995, p. 1251-1255).

8.3 The International Alliance for Sustainable Agriculture (IISA) and the seven dimensions

Since it was formed, the International Alliance for Sustainable Agriculture has been mainly focused on four goals in particular, these are;

- 1) A strong sustainable agriculture industry and movement through organisational support and network building.
- 2) Widespread understanding of and participation in sustainable agriculture through education and information sharing.
- 3) Universal adoption of governmental and institutional policies that implement sustainable agriculture.
- 4) Organisational sustainability of the International Alliance.

(<http://www.mtn.org/iasa/bckgrnd.htm>, 2006-04-26, p.2)

These four goals can be applied to every agricultural system. They should be seen as basic standards, because they do not say which methods can and cannot be used. The goals seek to take the best aspects from traditional wisdom and the latest advances in science. Nicanor Perlas has in recent years come up with seven dimensions of sustainability in agriculture, which handle sustainability from the farmer's perspective. The dimensions are; ecological sound, associative economics, socially just, culturally appropriate, holistic science, appropriate technology and last but not least development and human potential.

8.4 Farm resilience

Sustainable agriculture and of course sustainable development are undoubtedly related to the concept of resilience. The difference is however that not all definitions of sustainability capture the meaning of resilience. Definitions of sustainability often describe the desirable out-

come or process. Resilience on the other hand can also show that undesirable system can be highly resilient. The concept of resilience emerged from ecology and has mainly been used in discussions of ecosystems. Two different definitions have emerged within ecological resilience. Holling has named the first definition as engineering resilience. It concentrates on stability at presumed point of balance, resistance to a disturbance and the speed of the return to the point of balance. The second definition is called ecological resilience. It stresses farm conditions from any balanced state, where disturbances can change a systems behaviour or stability. Traditionally, ecosystem development has been related to the concepts exploitation and conservation.

Exploitation is the rapid colonization of recently disturbed areas – where fast consumption and reproduction is a winning strategy. Conservation is the slow accumulation and storage of energy and material – where efficiency is the winning strategy (Milestad, 2003, p.17) Ecosystem resilience on the other hand is based on a complementary understanding of ecosystem dynamics. According to Holling ecosystems are unpredictable, self-organizing, non-linear and multi-equilibrium. In order for people to handle change and uncertainty a management of resilience in the social-ecological system is necessary (Milestad, 2003, p. 16-17). Social-ecological resilience is a concept that has been applied to farming system in general, particularly to the farm level. Three defining characteristics can be seen within resilience, these are: the amount of change the system can undergo while maintaining its function and structures, the degree of self-organization, and the capacity for learning and adoption (Milestad etc., 2003, p.1). Farms can be seen as learning systems in constant contact with nature. Agroecosystems have been described by Conway to be self-organizing and self-regulating systems. Sustainability of farms, a measure of the persistence of individual farmers. A shift from a focusing on productivity to focusing on the persistence is necessary within agriculture. To really improve an agricultural system you need to be clear about what constitutes an improvement and exactly which system is to be improved. Participation of farmers in research that covers issues like this is useful. The farmers' knowledge is crucial for the management of agroecosystems. When farmers, researchers and decision makers are cooperating, a number of different opinions are raised and this allows for a more efficient strategy in the end. The involvement of local peoples in decision-making can make it easier to attain general acceptance and implementation of for example difficult questions on resource use (Milestad, 2003, p.19).

8.5 Theoretical attachment

I have chosen to consider the positivistic paradigm and the need for alternatives because I believe it shows the difficulties to find a precise definition for concepts like sustainable agriculture. Participatory learning is a vital part of sustainable agriculture; I therefore thought that it was important to consider this in the theoretical context. The fact that I'm writing about FARM-Africa, which is a organisation that is working to develop a close participation with farmers also make participatory learning central to my paper. The goals of The International Alliance for Sustainable Agriculture and the Perlas seven dimension also seemed important to discuss, because after all they have coined the concept of sustainable agriculture. Farm resilience is, as I have previously stated, related to the sustainable agriculture, but it also considers an additional, which is that undesirable systems can be highly resilient. I believe that it's important to show the different perspectives within the wide concept of sustainable agriculture.

9 Results

9.1 The concept of sustainability

Sustainability is a very complex concept, a precise definition is therefore hard to form. But a great deal of effort has been gone into trying to find a definition for sustainability in a precise way. Brundtland Commission's definition of sustainability from 1987 is the most common one, which states: "development that meets the needs of the present without compromising the ability of future generation to meet their own needs" (http://en.wikipedia.org/wiki/Sustainable_development, 2006-05-07). Since then, more than 70 different definitions have been constructed, every one of them with different values, priorities and goals. The various authors probably regard his or her definition as the best. Some

people think that sustainability implies persistence and the capacity of something to continue for a long time and some see it as a concept that implies not damaging natural resources. It is important to clarify, when you talk about sustainability, what is being sustained, for whose benefit and whose cost, for how long a time, over what area and from what criteria. These are difficult questions to answer; it means for example that we never can be certain about the concept of sustainability. (Pretty, 1995, p.1247-1248)

9.2 The concept of sustainable agriculture

Since the early 1980s there have been many discussions concerning the subject of sustainable agriculture. Many people talk about sustainable agriculture as an alternative to “green revolution” agriculture (http://www.cadi.ph/sustainable_agriculture.htm, 2006-02-16, p.1). The green revolution was a planned international effort developed by the Rockefeller foundation, Ford Foundation and many developing countries in the late 1960s. Its main purpose was to eliminate hunger by improving crop performance. A key person involved in the green revolution was Norman Borlaug (<http://www.arches.uga.edu/~wparks/ppt/green/sld004.htm>, 2006-05-01).

Today there exists a wide range of more sustainable forms of agriculture, these forms include: organic, sustainable, alternative, regenerative, low-external input, balanced-input, precision farming, “wise-use” of input, resource-conserving, eco-agriculture, biological, natural, biodynamic, permaculture and many more. Some have precisely-defined and broadly agreed standards and others have none. Are all these forms beneficial to achieve a good level of sustainable agriculture? Several lobbies often believe that “their” type is the only form of sustainable agriculture (<http://www.panuk.org/pestnews/Pn32/pn32/pn32p6.htm>, 2006-04-17). This shows that sustainable agriculture is a concept with various definitions and is expressed in different ways. Wendell Berry for example has been quoted as saying, “A sustainable agriculture does not deplete soils or people”. The Alliance has over the years developed a definition of the concept of sustainable agriculture: “A sustainable agriculture is ecologically sound, economically viable, socially just and humane” (<http://www.mtn.org/iasa/susagdef.htm>, 2006-

04-26, p.1). Aldo Leopold has described the concept of ecological soundness; he says “A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It’s wrong when it tends to be otherwise. ” (<http://www.mtn.org/iasa/susagdef.htm>, 2006-04-26, p.1). A better use of physical and human resources is one of the basic challenge for sustainable agriculture. To achieve self-regulation and resultant stability the species diversity is essential. An agriculture that wants to be ecologically sound also needs to be resource efficient. Economic viability, another important issue within a sustainable agriculture, means for example that there needs to be a positive net return, a balance in terms of resources expended and returned. To be sustained a market needs to consider issues like relative risk and qualitative factors such as beauty, security and satisfactions and not just to rely on factors such as supply and demand. These other factors are often ignored by economics. Social justice means within a system of sustainable agriculture the resources and power are distributed are to be equitably, so that basic needs of all are met and their rights are assured. If the majority of the people in the world are able to escape poverty and grow the food that is needed, then access to land is becomes a very important issue. Respect for life and the protection of diverse cultures are the main issues within the concept of humanity (<http://www.mtn.org/iasa/susagdef.htm>, 2006-04-26, p.1-3).

9.3 What is a Non governmental organisation (NGO)?

In 1994, the United Nations document describes an NGO as a: “non-profit entity whose members are citizens of one or more countries and whose activities are determined by the collective will of its members in response to the needs of the members of one or more communities with which the NGO cooperates” (Simmons, 1998, p.83). This formulation includes almost every group that exists today, except groups for private businesses, revolutionary or terrorist groups and political parties. Popular substitutes for the term NGO are private voluntary organizations, civil society organizations and the independent sector (Simmons, 1998, p.83).

9.4 The work of NGOs in the world, with a focus on Africa and Tanzania

Today there exists ten of thousands of different NGOs that are international, national and local organisations. Many NGOs get their funding from members of the public, but also from their governments, the influence that NGOs have has grown, both inside countries and on the international agenda (<http://www.newint.org/easier-english/Africa/ngo.html>, 2006-04-10). NGOs, in general terms, affect different sectors in four ways and these are: setting agendas, negotiating outcomes, conferring legitimacy and implementing solutions. They have played a key role in forcing leaders and policymakers to pay attention. For example NGOs have since the 1960s and 1970s effectively raised the profile of global environmental issues. Today hundreds of NGOs are operating in many African countries. They are working with many different goals, everything from providing relief services, to conserving the environment, contributing to development projects or simply battling with governments over human rights issues (<http://news.bbc.co.uk/2/hi/africa/3502733.stm>, 2006-05-05). Tanzania is a country that has engaged NGOs all over the world. For example NGOs from Belgium, Sweden and The United Kingdom are working in the area with a number of different subjects within rural development (<http://www.tanzania.go.tz/foreignaffairs.html>, 2006-04-17)

9.5 The work of NGOs in the Babati District

In recent years the work of NGOs in Babati District has risen, two NGOs are FARM-Africa (see p.16-19) and Friends in Development Trust Fund (FIDE). FIDE is a local NGO and was established in 1991 by people from the Babati District. Their vision is “a poverty free society where human rights are observed, everyone has access to the basic needs in life and that resources are enjoyed by all and are used in a sustainable way” (Löfstrand, 2001, p.36).

The integrated Agricultural Training Center (IATC) is another organisation in the area, which is a bit hard to classify when it comes to the definition of a NGO. The IATC was formed in 1993 funded by a German organisation named Bread for the World. Their aim was, in the beginning was to reduce poverty for small-scale farmers. Today they are working with many different issues within environmental conservation (Löfstrand, 2001, p.35-38). The IATC started as an NGO, but their work today differs from some of the work of an NGO. This shows the problems in attempting to form a definition of an NGO. As I have previously written, many organisations can be included in the definition of an NGO.

One department that is working with agricultural issues in the Babati District, which is worth mentioning even though it's not an NGO, is the Land Manage Programme (LAMP). LAMP was formed in 1989/1990 and is funded by SIDA. The programme is a joint initiative between Tanzanian and Swedish governments. It's aimed to be a programme for funding more than a conventional development project where the donor is directly involved in implementation. This means that their work is aimed at supporting development projects that citizens and their organisation in the Babati District have planned and implemented (Löfstrand, 2001, p.35-38).

9.6 The organisation FARM-Africa

FARM-Africa is a British development agency that was established in 1985 by Sir Michael Wood. The organisation has been working with poverty and starvation questions in Africa since it was set-up. Long-term development is the main focus within the organization and has formed a numbers of projects within Ethiopia, Kenya Tanzania, South Africa, Uganda, and more recently Southern Sudan. Their work concentrates on three key themes: Pastoral Development, community Forest Management and Smallholder Development & Land Reform. FARM-Africa is planning to work in other countries as well through its specialist outreach programmes, mainly through by other organisations. Countries such as Somalia, Malawi, Mozambique, Rwanda, and Burundi are some of the other candidates who will hopefully benefit from the work of FARM-Africa. The work of the organisation is funded by donations from individual supporters, aid from the UK government and European Union, project funding

from international organisations like Ethiopiaid, Gatsby Charitable Foundation, the Rockefeller Foundation and Cordaid and grants from the Community Fund and Comic Relief as well as various trusts and foundations. FARM-Africa's vision is that it's possible to achieve "a prosperous rural Africa", where sustainable use of existing resources is central and benefits of development are shared equitable between all people. The fundamental belief that small farmers and headers can improve their own well being is something that permeates the work of the organisation. To help poor rural communities produce more food without the dependence of aid is therefore the aim (Gillam etc., 2006, p.1-4). The goal of FARM-Africa, according to Strategy: Towards 2015, "is to reduce poverty by enabling marginal African farmers and headers to make sustainable improvements to their well-being through more effective management of their renewable natural resources". To achieve its mission the organisations will work in following manner: "innovative, challenging and risk taking, specialized, practical and operational, catalytic rather than merely providing services, independent, acting as bridge between researchers and farmers, building the capacity of people and local institutions in Africa rather than developing parallel structures, disseminating practical experience, advocacy to improve policy and practice and conducting research, when required, that is relevant to practical problems confronting communities" (FARM-Africa, Strategy : Towards 2015, p. 2). FARM-Africa works alongside local farmers, which makes it easier to identify the problems that limit agricultural production and appropriate solutions. A lot of people in rural areas has been given help by the organisation. They also focus on spreading their experiences to other organisations, so approaches can be adopted that have proven to be successful. FARM-Africa is one of the pioneers of using the participatory approach to development where communities are directly involved in the projects. The opinions of local people form the base for the various projects. Planning and implementation of these projects are something that the local people are involved with. (Gilliam etc., 2006, p.5-6). The best practice for the improvement of agricultural productivity and natural resource management in Africa is something that FARM-Africa intends to become an internationally recognised source for. They are also working to decrease their dependence on support from institutional donors and increase their income from voluntary donors by investment in public fundraising. The organisation is trying to link farmers and allied industries in the north more effectively with local farmers and communities in Africa, trying to achieve this by increasing the understanding between them.

9.7 FARM-Africa in Tanzania

In my paper I have focused on the work of FARM-Africa in Tanzania, mainly because of the time limit, but also to focus more on the aspects within the paper rather than just presenting a more general overview. The work of FARM-Africa in Tanzania has been especially focused in the Babati and Mbulu Districts, where their activities covers smallholder agriculture and agricultural & environmental education in primary schools, community forest management and livestock development. FARM-Africa has been working in Tanzania since 1990. FARM-Africa in Tanzania cooperates with the Government of Tanzania, within the Ministry of Agriculture and Food Security, the Ministry of Livestock and Water Development and the Ministry of Natural Resources through the Forestry and Beekeeping Departments. Cooperation with the Government is however concentrated through local District Councils. They also work together with implementing organisations in the agricultural sector like government institutions, local and international organisations. FARM-Africa in Tanzania is viewed as a field-based organisation and has a good reputation within the country. Other organisations have for example made field visits to the various projects to learn from its activities. The organisation initially became a well known commodity through the issue of goat development. Participatory work plays an important role in the organisations approach. The village development planning, which has been implemented to empower communities in Babati to plan their own development is a project that shows the cooperation between FARM-Africa in Tanzania and rural communities and local governments. The organisation is working with teachers, parents and children to develop new approaches to agriculture and environmental learning. They have developed pioneering work in schools and forest conservation. FARM-Africa in Tanzania is seen as a district-focused organisation, which makes it hard for them to compete at the same level with organisations that are seen as zonal or national. The organisation has therefore a limited collaboration with NGOs in Tanzania (Tanzania Country Strategy 2004-2008, p.6-8). Current activities for FARM-Africa in Tanzania include the Babati Rural Development Project, which today is the farmers participatory, where the main goal is "to contribute to preventing poverty in Tanzania and the purpose is through effective local partnerships, and developing replicable community-based approaches for improving agricultural productivity and sustainable land use in the Babati District and promote these approaches and models to Government, Districts and other organisations" (Tanzania Country Strategy 2004-2008, p.9) Five integrated outputs have been put together to achieve this goal: village development planning,

Community animal health, Farmers research groups (FRG:S), Dairy goat improvement and Dissemination of best practices. Babati Agricultural & Environmental Education Project (BAEEP) is another current activity, where the main goal is to reduce poverty in the poorest communities in the Babati District by increasing agricultural production and the use of sustainable natural resource management. Four key outputs to achieve this are: “A new approach of practically based discovery learning delivered in 13 pilot primary schools, Increased active participation of poor parents in 13 pilot rural communities in the education system and management of their community schools, Strengthening the capacity of 13 school communities and key staff to better manage their schools for the benefit of their pupils and the local community, and Recording and disseminations of findings and sharing lessons with educational stakeholders and key policy makers” (Tanzania Country Strategy 2004-2008, p.10). Nou Joint Forest Management Project (NJFMP) is another activity within the organisation, but to narrow my work I choose not to describe this project goal and outputs.

10 Primary results

10.1 Interviews with farmers in the village Haraa

Thomas Mpumy

Mr. Mpumy has been a farmer for 30 years, since 1976. He owns 4 acre of land, where he cultivates maize, pigeon peas, beans and coffee. Mr. Mpumy has been a member of the Mlimani rural cooperative society in Haraa, as long as he has been a farmer (30 years). Mlimani rural cooperative society is a cooperative that handles coffee. He told us (Nelly, Natasja and I) that he became a member of the cooperative because of the benefit, in that you get the same voice, good pressure when you are a group and it's easier to borrow money from the society if you are a member of the cooperative. Mr. Mpumy says that the cooperative has made the life of the farmers more just.

Mr. Mpumy has heard about the organisation FARM-Africa. According to Mr. Mpumy the organisation has had and still has some cooperation with the Mlimani rural cooperative society. They have held some seminars and workshops, where they have taught the farmers how to store their coffee and how to be friendlier towards the environment. Mr. Mpumy thinks that FARM-Africa is a good organisation, because they teach people to be more concerned about environmental protection. He believes that environmental degradation is the main reason for poverty. Mr. Mpumy thinks that the organisation should work more with water related problems. He also thinks that they should continue with their educational projects. I didn't ask Mr. Mpumy about the concept sustainable agriculture, by this time we had detained him long enough with our questions.

Ulriki Shayo

Mr. Shayo used to be a teacher, but he is now a farmer. Mr. Shayo is also the chairman of the Mlimani rural cooperative society in Haraa. He has been a member of the cooperative since 1995 and he believes that he makes a big impact through his work, for example the price of coffee has improved during this time. There are now 250 members in the cooperative, he believes that the cooperative helps to unite the farmers, and that they have more power and strength working together in this way. Mr. Shayo says that the cooperative don't have any kind of collaboration with FARM-Africa and that the organisation did promise to come and help but this has not happened yet. He also says that the organisation doesn't handle issues like coffee, and that they work mainly with issues that treat goat breeding etc. Mr. Shayo thinks that FARM-Africa is a good organisation and he would like to form a collaboration with them in the future. According to Mr. Shayo, the organisation is now only working with food crops and he would like to see them work with cash crops too, so that they could help coffee farmers. He believes that the organisation should provide waters supplies. Mr. Shayo thinks that sustainable agriculture means that people are environmentally friendly and that they teach their children to take care of the environment. It is important to keep the environment in a good shape for the next generation. According to Mr. Shayo, a good life is to be independent and not to rely on all kinds of loans from various sources.

Mohamed R. Kombi

Mr. R. Kombi has been a farmer for 16 years, since 1990. He owns 1,5 acres, where he cultivates maize, pigeon peas, beans, coffee, bananas and other fruits. Mr. R. Kombi is the sub village chairman for Haraa. He has heard about the organisation FARM-Africa, but he hasn't had a chance to cooperate with the organisation himself. That is something he would like do though, mostly to the benefit from education of modern agriculture. Mr. R. Kombi believes that organisations like FARM-Africa are helpful, when it comes to changing the life of poor people. He thinks that people in the future will still need FARM-Africa and similar organisations. Mr. R. Kombi thinks that it is important that we make a good foundation for the next generation. Sustainable agriculture is therefore important. He thinks that a good life is when a person gets all his/her basic needs fulfilled. Mr. R. Kombi has quite a positive view of the future. But he says, "that you can't tell the future".

Ali Shaushi

Mr. Shaushi has been a farmer for 28 years, since 1978. He was born in Haraa in 1952. Mr. Shaushi owns 11 acres, where he cultivates maize, pigeon peas, beans, banana trees and sunflower. He has heard about the organisation FARM-Africa and he has relations with them. He attended a seminary/workshop about SAKO, last December. Mr. Shaushi learnt from the seminary how to get a SACO-loan. He feels that he can help other people by education. Mr. Shaushi thinks that FARM-Africa should expand their work. Many poor people depend on the organisation. Mr. Shaushi believes that FARM-Africa is a good organisation and that it is an open organisation, more open than other organisations. He believes that FARM-Africa should give more focus to water related issues and improve the living condition for the people. Mr. Shaushi believes that it is hard to achieve sustainable agriculture, because of the changing of the weather conditions. Sustainable agriculture can only be properly achieved at a very high cost, where many supplies are necessary. This is a hard thing to carry out in Tanzania, because many people have suffered economical losses. Mr. Shaushi thinks that a good life is when you are able to get a good education, healthy care, to live in a good environmental condition and have peace.

Florence Kanza

Mrs. Kanza has been a farmer for 30 years, since 1976. She owns 6 acres, where she cultivates maize, pigeon peas, beans, bananas, finger millet and fruit trees. She started to keep

livestock in 1996. Mrs. Kanza has heard about the organisation FARM-Africa and she has been cooperating with them since 1996. She was one of the farmers that FARM-Africa selected in their Dairy goat-project. The collaboration has given Mrs. Kanza goats and education about breeding etc. She had goats before she was involved with the project, but they were only for meat. Through the cooperation with FARM-Africa she now has goats that produce milk. Mrs. Kanza thinks that she can help others by giving them the same information that she was given, and that she has already taught others what she has learnt. She believes that FARM-Africa could do much more than what they are currently doing, like making more effort towards education and giving more people the change to benefit with them. Mrs. Kanza thinks that organisations like FARM-Africa are good, because they help a lot of farmers. She doesn't think that cooperation between NGOs is necessary. They should continue as they are. Mrs. Kanza would like to work with FARM-Africa in the future too, maybe in another project. She believes that it is very hard to answer what sustainable agriculture means. One thing could be to use composting manure. She doesn't think that it is hard to achieve sustainable agriculture, because it is every day life. Mrs. Kanza says that a good life is when you get all your basic needs are fulfilled.

10.2 Interviews with employees from FARM-Africa

Kassinde Massawe

Mr. Massawe has been working for FARM-Africa for 13 years, since 1993. He used to work as a district assistant and this is also how he got in contact with the organisation. He is mainly working with the project Farmers participatory, which is a new version of the Babati rural development project that ended in 2005. The project is approximately working with 11 villages within the Babati District. The village of Haraa is one of the cooperating villages. The working process within the project is characterised by a planned meeting in the actual village, where representatives from FARM-Africa, the District Council and village officers sits down together and discuss the problems within the actual village. During the meeting a problem-list is put together, where the participants together decides which problems are most critical

and which problems that they'll be able to solve. Pests, erosion, storage difficulties, poor soil fertility and plant deceases (mainly on coffee) are some of the problems that, according to Mr. Massawe affect the village of Haraa. Mr. Massawe is also involved with the organisations other projects, he believes that the different projects within FARM-Africa works well. The people who cooperate with FARM-Africa have, according to Mr. Massawe, to fulfil certain criteria:

- The person has to be a permanent resident in his or her village
- The person has to be accepted by his/her village community.
- The person has to own land
- The person has to be hard working

The organisation is mostly cooperates with women. Mr. Massawe says that it's hard to select individuals to work with. FARM-Africa's aim is, according to Mr. Massawe, to work with marginalized people. He says that they often however end up working with farmers from the middle-class anyhow. This is something that he wants to change. The aim of the organisation is according to Mr. Massawe to ensure sustainability. He says that the main problem for the organisation is its financial situation. Mr. Massawe believes that the future for FARM-Africa is bright. The organisation has been growing a lot in recent years. FARM-Africa in Tanzania collaborates according to, MR. Massawe, with the District Council, Agricultural research institute and with NGOs like FIDE, FIDA and Tecnosafe. He says that the cooperation between them is good. Mr. Massawe says that FARM-Africa contribute to the achievement of sustainable agriculture. He says that renewable resources are a way to achieve sustainable agriculture. An other way is to conserve your land. If you don't conserve your land and water agriculture will come to an end, says Mr. Massawe. He says that it's going to be hard to achieve sustainable agriculture, but it's possible, to do so there will have to be a lot effort needed from key persons.

Lillian Lyimo

Mrs. Lyimo is involved in FARM-Africa's Dairy goat-project and has been for 4 years. Mrs. Lyimo used to work in the District Council and that is how she came into contact with the

organisation, she mainly works with farmers. The project helps 25 villages in the Babati district. Mrs. Lyimo feels that she has been able to improve the life for some farmers. For example she says that the project has improved food intake and nourishment for families as well as income. The farmers that the Dairy goat-project selects have to fulfil some certain criteria. For example, they have to be breeders, be committed to goats and be willing to receive training. Florence Kanza, one of the farmers that I interviewed in Haraa, was one of the 12 first farmers who were selected for the project in 1996.

Mrs. Lyimo thinks that the different project within FARM-Africa work well. She says that the employers within the organisation are all working together and are able to share their experience. Every Monday they have a meeting, where they discuss their work during the week and if someone has a problem they solve it together. FARM-Africa collaborates with a series of different NGOs and district. The organisation cannot afford to have all the meetings they would like to and should have. She says that a lot of NGOs are working with the dairy goat-project and they all have different policies, this is something that also needs to be changed. The NGOs should come together and create a common policy for this issue. Mrs. Lyimo believes that the future for FARM-Africa is going to be bright and that the organisations work is going to expand. She also would like to see the dairy goat-project to expanding to other districts. Mrs. Lyimo would like to work with people from different countries, so that she can learn more and gain more experience. She enjoys her work at FARM-Africa and she say that she has learnt a lot about keeping goats. She has got goats herself and she says that her work at FARM-Africa has changed her life. Sustainable agriculture is according to Mrs. Lyimo something that is possible to achieve. Sustainable agriculture is a part of the dairy goat-project. She says to achieve sustainable agriculture you have to use different crops for different seasons, for example crops that are suitable for drought. When it comes to goat keeping she says that it is important to have a local variety. Mrs. Lyimo also says the use of manure is one way to achieve sustainable agriculture.

Damien Tluway

Mr. Tluway was our interpreter during the interviews in Haraa and I discovered during talking to him that he had worked for FARM-Africa for 3 month, so I took the chance and interviewed him too. He came in contact with the organisation via his brother in law. Mr. Tluway can speak good English, which is one requirement if you want to work for FARM-Africa. He

had been working with two different projects during his time in the organization: Agriculture and livelihood and FPR (farmer participatory research). He thinks that the projects are good in general. One problem with the projects in the organisation is, according to Mr. Tluway, that they are designed by English measurements. It doesn't always work in Tanzania. He thinks that the work of FARM-Africa will continue to grow in the region. He believes that the organisation should widen their work area. Today they work a lot with agricultural issues. Mr. Tluway also thinks that FARM-Africa should start to cooperate more with other NGOs, because he believes that there are many NGOs in the area and they all work with the same issues. Mr. Tluway says that FARM-Africa decides to work with farmers after a random selection from village lists. Sustainable agriculture means according to Mr. Tluway agriculture with benefit. He also says that a good market is necessary so that the farmers are able to sell their crops for a good price.

10.3 Interview with an employee of the District Council

Mr. K. I. Sullu

Mr. Sullu is a district subject matter specialist in cash crops and an agriculture field officer. He has been working for the District Council for 14 years. He likes his work and would wish to continue to work there in the future too. Mr. Sullu thinks that FARM-Africa is a good organisation and he believes that the future of the organisation is going to be bright. Mr. Sullu says that the District Council has a good cooperation with FARM-Africa. The organisation can for example use the District Councils agriculture extension staff to educate farmers in the villages. Mr. Sullu also says that they share experience and knowledge in a handbook that they write together. He has personally been involved with FARM-Africa's project FPR (farmer participatory research), where he educated farmers how to cultivate their farms. He thinks that FPR is a good program. Mr. Sullu thinks that the District Council is going to collaborate with FARM-Africa in the future as well. He would like to see that together they help farmers to increase their income and productivity, because then the national income would increase. The District Council also has close relations with the very well established LAMP. Mr. Sullu believes that LAMP is a very strong program, for example they finance some of the training for farmers. They collaborate with FIDE (Friends In Development Trust Fund) too. FIDE, just

like FARM-Africa, use staff from the District Council to educate farmers. Mr. Sullu believes that it is possible to achieve sustainable agriculture. He thinks that you should advise farmers to use manure and not let cattle enter the field during sowing. He also puts forward proposals such as; contouring, intercropping, conservation farming and planting of trees on contours. Mr. Sullu however doesn't give a direct definition on the conception of sustainable agriculture. He believes that the District Council has through their work made a change, for example the farmers income has been increased.

11 Analyses

All of the farmers that I interviewed had heard about FARM-Africa and some were collaborating with the organisation. All of the farmers however would like to be involved with them, but hadn't had the chance. The general opinion about the organisation among the farmers was positive. They believed that the future for FARM-Africa is going to be bright. The general opinion among them was that organisations like FARM-Africa are important for people, especially poor people. Something that most of the farmers said was that FARM-Africa should expand their work. One issue that was mentioned was water supply. Some farmers also believed that the organisation should let more people have the chance to cooperate with them. Some of the answers from the farmers contradicted each other (Mr. Mpumy and Mr. Shayo). Mr. Mpumy said that the cooperative has got and still has some cooperation with FARM-Africa, while Mr. Shayo says that they don't cooperate with the organisation. How can this be? Many different factors could have affected the answers. Perhaps they interpreted my question differently (Has it been or still is some cooperation between the cooperative and FARM-Africa?). Another answer could be that they have different views on what a cooperation means. My interpreter could also have asked the question differently, which can explain the different answers. The answers about the concept sustainable agriculture from the farmers were vague, which shows the vague nature of the concept. The general opinion was that it's hard to answer what it means. Most of the farmers thought however that it was possible to achieve sustainable agriculture. To teach our children to take care of the environment is one

way: to use manure is another way. One farmer (Mrs. Kanza) told me that sustainable agriculture is every day life. Another answer was that to achieve sustainable agriculture a large supply will be needed, which only can be achieved through at a very high cost.

The employers that I interviewed from FARM-Africa all had different experience from their work with the organisation and they had been working there from a range of 3 month to 13 years. This will hopefully give my paper a wider perspective. The general opinion between them was that they liked their work and that the different projects were on the whole working well. One problem with the projects was according to one ex-employer (Mr. Tluway) that they were based on English measurements; which will not always work out in Tanzania. How do you decide which farmers to work with? This was the question that produced the most varied answers. Mr. Massawe's answer was that FARM-Africa is trying to work with marginalised people, but this is a difficult thing to do and that they often end up working with middle-class farmers. This is something that has to be changed according to him. He also said that the farmers that FARM-Africa cooperates with have to fulfil a certain criteria (see p.23) Mrs. Lyimo also said that the cooperating farmers have to fulfil a certain criteria (see p.24). Due to the fact that the farmers are working with different projects within the organisation, this criteria can somewhat differ. Mr. Tluway on the other hand stated that the organisation decides which farmers to work with after a random selection from village lists. How can this be? Perhaps FARM-Africa is working in different ways on different projects. Maybe Mr. Tluway misunderstood my question, because Mr. Massawe and Mrs. Lyimo were very decisive with their answers. Or maybe because during the three months of project that Mr. Tluway took part in, the selection was made from the village lists. I may have been able to answer this questions if I had stayed longer in Babati. Due to this time limit, my primary results were more confined than I originally hoped for. The general opinion about the future for FARM-Africa was bright between the employees that I interviewed. The organisation has for example been rapidly growing a lot in recent years. The employees that I interviewed all believed that the work of FARM-Africa will keep expanding. They all mentioned that FARM-Africa is cooperating with different organisations and districts. The organisation collaborates for example with the District Council, Agricultural research institute and with NGOs like FIDE. Most of the answers I had from the employees said that all the collaborations were on whole working well. However, they all wanted FARM-Africa to collaborate with more organisations and districts. One problem that makes the organisations collaborations with others more difficult

is FARM-Africa's financial situation. The organisation cannot afford to hold as many meetings as it would like and should do. Mr. Tluway stated that he wanted more NGOs to collaborate, because many NGOs are working with the same issues.

I have not located a written definition of the concept of sustainable agriculture by FARM-Africa, but sustainability is something that is important for the organisation. A precise definition of what sustainability means is another thing that I cannot locate within FARM-Africa's strategy. However, according to Mr. Massawe and Mrs. Lyimo sustainable agriculture is something that is part of the organisations various projects. Mr. Massawe for example says that FARM-Africa contributes to the achievement of sustainable agriculture. Renewable resources, conservation of ones land, the use of different crops for different seasons and the use of manure are some of the alternatives to achieve sustainable agriculture. Mr. Tluway stated that sustainable agriculture to him is agriculture with benefit. These different views display the variety of beliefs in concepts like this. There is no single answer; all of the employees that I interviewed believed that it's possible to achieve sustainable agriculture, but that it is not going to be easy. As Mr. Massawe said: To achieve sustainable agriculture a lot of effort is going to be needed from key persons.

According to the employee from the District Council, Mr Sullu, FARM-Africa is a good organisation and the collaboration between them is working well. He wants to see an even a closer collaboration so that together they can help farmers achieve better income and productivity, because then the national income would increase. Mr. Sullu also stated that the future for FARM-Africa is going to be bright, and that their work will probably expand. He also believed that it's possible to achieve sustainable agriculture. He gave ideas like the use of manure, contouring, intercropping and conservation farming. However he didn't give me a precise definition from him either.

The answers between the interviewees in my field study were quite alike. As I stated previously, a number of factors could have affected the answers of the interviewees, for example the verbal communication between the interviewees and me, the fact that I used a interpreter under the interviews with the farmers so that the interviewees' answers were interpreted at least by three persons and the fact that people sometime answers in a way they think they are suppose to answer. I don't have any earlier experiences of field studies like the one in Babati, which makes it hard for me to know the exact factors that can have affected the interviewees'

answers. Another thing is the short time of my field study. It's hard to get all the answers that you want and need in just eight days. However the field study in Babati went above my expectations.

12 Discussion

“Agriculture is maybe the most challenging issue for sustainability”, according to Martin Kohar (<http://www.i-sis.org.uk/SACI.php>, 2006-04-28, p.2). A precise definition of sustainable agriculture is, as I said before, impossible. A precise definition would only reduce the options for farmers to alter their agricultural practice as the natural conditions change. Social and natural systems are both dynamic and complex and are all dependent of each other. It's important to understand this dynamism and complexity if humans want to manage ecosystem for their own ends to produce for example food (Milestad, 2003, p. 10). As I said before sustainable agriculture is a process of learning and not a precise model. Another thing that is important to mention is also that it's hard for farmers to adopt a whole technology. Most farmers are able to make small changes in his or her agricultural methods over time. As I said previously, it's primarily countries in the South that are dependent of agriculture, which often means poor farmers, this also shows the difficulties for a farmer with few resources to adopt a whole package.

The word sustainability often raises a bit suspiciousness amongst farmers, especially farmers that practicing conventional agriculture. A polarization between those who have coined the concept of sustainable agriculture and the people that feels slightly suspicious is clear. Some farmers see the discussion of sustainable agriculture as a personal criticism. Some of these people feel like they are blamed for example pollution. A lot of people within conventional agriculture feel that people who are practising some of the agricultural methods that come under the name sustainable agriculture don't understand real commercial farming. They also believe that sustainable agriculture is representing an imposition on farmers from environ-

mentalists, ignorant consumers and other zealots that don't appreciate real farming. Most of all this statement shows the initial opinions of conventional farmers on the subject of sustainable agriculture. Today most farmers are more sympathetic towards the concept, but the conflict between conventional farmers and for example organic farmers still exists. This is something that needs to change if we are concerned about the future for agriculture. A dialogue between all persons with different perspectives are needed (Green, 1993, p.21-22). During my visit to Babati I didn't feel that the farmers I interviewed were sceptical towards sustainable agriculture, they thought however that it was a quite vague concept. I don't blame them for this view and I find it hard to believe that anyone else could disagree. As I have stated all the way through the paper, sustainable agriculture is a concept with many different definitions and meanings. Sustainable, alternative, low input, ecological and regenerative agriculture are terms that all are all related and used to describe the concept, and these terms have all different literal meanings. The terms have however the same goals: "reduced use of purchased inputs, especially toxic or non-renewable ones: less damage to the environment; and better production of water, soil and wildlife" (Lockeretz, 1988, p.24). An individual's own values can affect the meaning. Today these terms have become almost brand names, they may mean one thing when used in agriculture, but these terms especially sustainability have also come to be used in so many ways by different groups that their meaning are dangerously close to losing their true meaning. The question: how important are concepts like sustainable agriculture? becomes useful here. Have concepts like this opened people's eyes? In some ways I believe they have, but I also believe that the main things that these concept stands for were already in people's mind. For example techniques with some similarities like integrated pest management, improved methods for storing and the use of livestock manures were in people's minds long before the concept sustainable agriculture come into use (Lockeretz, 1988, p. 30). Does calling a system sustainable guarantee that it really is sustainable? The answer I believe is no. Sustainability has all around the world become a word on everyone's lips. It's a concept of today. For example short-term factors that have been handled within especially low-input agriculture have been helping sustainability to gain acceptance. People that previously could escape from his or her actions, for example practicing environmentally dangerous agriculture, may not so easily get away with it today. Another thing is that along the way many concepts like sustainable agriculture have lost their meaning and have been exchanged for another concept, perhaps with the same meaning but with a different name. This means that more and more concepts are coined, but few concrete changes in the real

world are made. Within sustainable agriculture concrete changes have been made, but is it enough? Concepts like this raise many questions that are hard to answer. Peoples own values and thoughts affect the answers to these questions.

Most supporters of sustainable agriculture believe that the most appropriate scale for this kind of agriculture is small to moderate sized family farms. One cause for this is that historically, large farms have been associated with specialisation, while sustainable agriculture is working for the gain of diversification. A farmer that practice sustainable agriculture may need to give more attention to each field or animal, which is possible if the farm is not too large. Another way to look at the issue is that larger farms can afford to hire expertise, and that they have better facilities and equipment. Another issue within sustainable agriculture is that if the farmer needs to have special or personal values and motivations to adopt sustainable methods. Some believe that these factors have a little connection, while others believe they connect. I can agree on that these factors are connected. I don't believe that if the farmer just has short-term profit in mind, his or her farm won't be sustainable for long. Factors like the well-being of future generations, the condition of the rural communities that they live in, the environment and the resource consumption should be in the back of these peoples' minds too. Of course short-term profit can't be ignored, because economic viability is an important factor within sustainable agriculture. If the agricultural system doesn't bring enough income so that the farmer can't continue with his or her farm, the system isn't sustainable (Lockeretz, 1988, p.23-25, 27-28)

I felt that was vital to discuss if agricultural systems that comes under the concept of sustainable agriculture, for example ecological farming or organic farming are able to feed the world. This is like the issues within my paper a very broad issue. Because of it's wide nature I'll just be able to mention it. Ecological farming has under investigations shown to be the best method for the environment and also for gain in productivity and the income of the farmers. It has just not been given the chance to prove itself. Few sources today are available on community-based farming practices and systems. Traditionally, agriculture in Southern countries has often been underestimated. The Green Revolution model is often seen as the original model, this model is not the most suitable model to compare with traditional agricultures value and production. Studies to understand the low-input farming methods, traditional as well as modern, should instead be sponsored. The present belief, according to the concept of sustainable agriculture, is that it may be good for the environment, but it cannot be relied on in the case of

feeding the increasing world population. This statement according to Mr. Kohr is a prejudice; because there is evidence that shows that ecological farming can produce higher yields than the Green Revolution method. The agricultural sector has a multiple role in poor countries, for example to help ensure food security, anchor rural development, provide resources for the livelihood and bring satisfactory incomes for the majority of the people in the world, without destroying the environment (<http://www.i-sis.org.uk/SACI.php>, 2006-04-28, p.2, 5,10). Ecological farms are often the size of a small-scale farm. Mr. M. Rosset points out that small-scale farms efficient, and make better use of resources, conserving the biodiversity and the society and contributes to economical development, which goes against the general opinion that small-scale farms are unproductive and inefficient. The multiple functions of farms in the South are perhaps just what we need to achieve a sustainable agriculture. For example have farmers in the South a remarkable ability to prevent and also reverse land degradation (M. Rosset, 1999, p. 1-2,4,14). It's also worth mentioning that factors like poverty have made the land protection for small-scale farmers a bit hard to handle. Some people are forced to cultivate land, that shouldn't be cultivated, because they have to produce food for their families; this is something that I could see in Babati. Tanzania is a country where, like many there is a big erosion problem. The source and the solution to the problem is a highly debated issue. The question is; can small-scale farms feed the world? According to Mr. M. Rosset, smaller farms produce more per unit area than larger farms. Small farms often use intercropping, which means that they can cultivate more than one crops. Large farms on the other hand often use monoculture, which means that they cultivate just one crop. A monoculture may be efficient in a way, but it produces nothing else that can be useful to the farmer. Intercropping systems produce more per unit of area than a monoculture. A fair comparison between the different systems is when you are talking about total output. If you were talking about yield, the answer would be different. Another factor that affects the outcome is how you define efficiency. Small-scale farms have a more efficient use of land, while large-scale farms have more efficient labour use. How important is efficiency in real life? Small farms recourses are used in improving the condition for families and therefore also the condition of the communities, where common improvements are the building of better houses, better education, health services and transportation etc. Where do the resources of large farms go? In farming communities that are dominated by large farms the common scenario is that nearby towns have died off, the explanation could be that fewer local people were employed and the income from the farm didn't reach the locals (M. Rosset, 1999, p.5, 9-10). N. Pretty argues that "sustain-

able intensification” is the way to feed the world (<http://www.ourplanet.com/imgversn/84/pretty.html>, 2006-04-17, p.1). This expression means that growth is possible if natural resources are protected or renewed in unimproved or degraded areas. Low-input agriculture can be highly productive and provides participation of farmers in all stages of technology development. The expression also says that agricultural productivity is a function of human capacity and creativity as it is a function of biological and physical process (<http://www.ourplanet.com/imgversn/84/pretty.html>, 2006-04-17, p.2). As I wrote previously 80% of Africa’s people are farmers, and they are all dependent on the food they grow. These farmers want to be able to produce food to feed themselves and their families and not be dependent on aid to do so. Africa has the resources and the ability to feed its people. FARM-Africa believes its vision of a “prosperous rural Africa” is achievable. I also believe that this can be achieved. I believe that one of the most important issue is that the farmers self-confidence should increase.

How important are the work of NGOs like FARM-Africa? To narrow my discussion I will focus on Africa in general and on my experience of FARM-Africa in the Babati District. Abdul-Raheem and his opinion on foreign NGOs is one factor that I have chosen to write about. He believes that foreign NGOs are not the way forward to help solve Africa’s problem. He believes instead that African unity is the right answer for the continent. He also thinks that it almost has become impossible to criticise Western NGOs. If you see a negative reaction by people involved, the observer’s opinion is that you are ungrateful and rude. He also writes about brain drain, which means that well qualified and educated people leave their own country and go and work in other countries where the salaries are higher. Few skilled Africans stay and work in Africa. He also writes that if NGOs do employ skilled local people, it means that they are taken away from public institutions that need them too (<http://newint.org/easier-english/Africa/africango.html>, 2006-04-10). Maybe it’s a bit harsh to say that NGOs take people away from the work in public institutions. These people have their own minds; they are not forced to work for an NGO. One factor can be that a work in an NGO gives more money, than work in a public institution, and that’s why it’s more attractive to work there. The case of NGOs in Africa is a complicated issue, I believe that there is no single answer to the question if the work of NGOs is important or not. There is almost no place in Africa that doesn’t have some kind of contact with NGOs, this means that we can’t ignore their influence, but instead we should make the most of it. One thing that I think is important is the coopera-

tion between different NGOs. A cooperation between NGOs does exist today of course, but is it enough? You can still feel some kind of competition between them, which opposes their aims; that is to help the people they are working with. Interviewing the employees and reading about FARM-Africa I could see that the organisation does cooperate with other organisations' cooperation activities, and the strategies that I was handed from FARM-Africa just gave me a shallow description of the cooperation. Mr. Tluway the ex-employee from FARM-Africa said that he thought that the organisation and organisations in the area in general have to cooperate more. So maybe the cooperation is still shallow between FARM-Africa and other organisations. I did manage to get answers to why the organisation didn't collaborate more with organisations, namely the financial situation of the organisation. They don't have enough money to allow them to hold as many meetings as a cooperation like this would need. The other explanation is the distance. FARM-Africa is, as I wrote before a district-focused organisation, which makes it harder for them to collaborate with organisations that are seen as zonal or national. To do so financial resources will be needed. My experience of FARM-Africa is that it is a good organisation, because of their aim to work side by side with farmers particularly. FARM-Africa is, as I wrote previously, one of the pioneers in using the participatory approach to development where communities are involved in the projects. Local peoples' opinions are the base of the different projects. Due to the organisation working alongside local farmers, it's easier to identify the problems that limit agricultural production and find appropriate solutions. The project Farmers participatory is one example of this kind of working process. Participation has shown to increase efficiency, if people are involved there's more possibility that they will support a new development. I believe that participation is a fundamental right for everyone. To achieve a sustainable agriculture the participation of farmers is vital, because in the end they are the ones to accept and practice the system on their farms. The use of participatory methods often raises questions like; how do you compare it with real data? Participatory methods are often seen as undisciplined and that they only involve subjective observation (Pretty, 1995, p.1255). It's important to remember that all data is value-bound, therefore we can't really be certain about the true picture within the results. This is something that is only possible in the spirit of the positivist paradigm. The systems of participatory learning will not be sufficient to make a great change in institutions but to generate information that already has been agreed and negotiated by different groups. The central concept of sustainable agriculture is that it must develop new ways of learning about the world. Learning should not be thought of as the same thing as teaching. For agricultural development

institutions a movement from teaching to learning has created profound suggestions. The focus lies on how we learn and with whom. Their approach has to be more multidisciplinary and work closely with other disciplines and non-scientific people (Pretty, 1995, p. 1255-1258). As I have said throughout my paper it's necessary that scientists, decision makers and farmers works together, so that all sides are represented and this wide concept of sustainable agriculture is approached from different perspectives. Maybe then the system will be accomplished in farms all around the world.

13 Concluding

Sustainable agriculture is a very wide concept with a lot of different definitions. How important are concepts like sustainable agriculture then? This is not an easy question to answer. One thing could however be that concepts like this helps to open peoples eyes, and after a time the aim of the concept gains a much greater acceptance. But do we focus too much on the definitions of concept like this instead of doing something concrete? Maybe it's our way to escape the real problems that are facing use. The definitions I received from my interviewees were vague, which doesn't surprise me. Both FARM-Africa and the District Council did not have a precise definition of the concept sustainable agriculture. I'm not sure this is completely necessary, just as long as they are working for a good cause. However all of the interviewees believed that it's possible to achieve sustainable agriculture, but that it's not going to be easy. My general opinion of FARM-Africa is that they seem to be a good organisation that is working for a good cause. My interviewees shared the same view. How important are the work of NGOs like FARM-Africa then? If there were no NGOs in Africa would the farmers still be able to live there and continue with their agriculture? I believe that the answer to the question is yes, but I don't know how important this question is in real life. As I wrote previously, there is almost no place in Africa that doesn't have some kind of contact with an NGO. I have chosen two very large issues to discuss in my paper. I have only literally discussed the tip of the iceberg.

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15 Appendix

During my interviews in Babati district I asked questions from the key areas: the organisation FARM-Africa and the concept of sustainable agriculture. My question differed however if I were talking to the farmers in Haraa, the employees from FARM-Africa and the employee from the District Council.

Key questions to the farmers of Haraa

- Have you heard about the organisation FARM-Africa?
- Have you cooperated with the organisation?
- What do you think about organisations like FARM-Africa?
- What do you think about the future for FARM-Africa?
- How do you think we can achieve sustainable agriculture?
- Is it possible to achieve sustainable agriculture?

Key questions to the employees from FARM-Africa

- How long have you been working with the organisation FARM-Africa?
- What do you think about the different projects?
- What do you think about your work?

- How do you decide which farmers to work with?
- What do you think about the future for FARM-Africa?
- Do you cooperate with other organisations and districts?
- What do you think about the cooperation?
- How do you define sustainable agriculture?
- How do you think we can achieve sustainable agriculture?
- Is it possible to achieve sustainable agriculture?

Key questions to the employee from the District Council

- How long have you been working for the District Council?
- What is your occupation?
- What co-operation is there between the District Council and FARM-Africa?
- What do you think about organisations like FARM-Africa?
- What do you think about the future for FARM-Africa?
- How do you define sustainable agriculture?
- How do you think we can achieve sustainable agriculture?
- Is it possible to achieve sustainable agriculture?