

FROM DEGRADATION TO INNOVATION

The effect of support and funding on promoting local innovation
in Kikandwa Environmental Association, Uganda



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LIST OF ABBREVIATIONS

CBO	Community Based Organisation
CIS-VU	Centrum voor Internationale Samenwerking, Vrije Universiteit Amsterdam
CDE	Centre for Development and Environment
CP	Country Programme
CTA	Technical Centre for Agricultural and Rural Development
CWSSE	Conserve Water to Save Soil and Environment
EA	Environmental Alert
FAIR	Farmer Access to Innovation Resources
FAO	Food and Agriculture Organisation
IVM	Instituut voor Milieuvraagstukken
IST	International Support Team
ISWC II	Indigenous Soil and Water Conservation II
KEA	Kikandwa Environmental Association
LISF	Local Innovation Support Fund
MDLG	Mityana District Local Government
NAADS	National Agricultural Advisory Services
NGO	Non Governmental Organisation
NSC	National Steering Committee
PFI	Promoting Farmer Innovation
PID	Participatory Innovation Development
POG	PROLINNOVA Oversight Group
PRA	Participatory Rural Appraisal
PROLINNOVA	PROMoting Local INNOVAtion
PTD	Participatory Technology Development
R&D	Research and Development
RECPA	Rwoho Environmental Protection and Conservation Association
SACCO	Savings And Credit Cooperation
SCI-SLM	Stimulating Community Initiatives in Sustainable Land Management
UBOS	Uganda Bureau Of Statistics
USh	Uganda Shillings
UNEP	United Nations Development Programme
VU	Vrije Universiteit Amsterdam

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FOREWORD

The following thesis is the final work of the research placement that is part of the master 'Environment and Resource Management' at the Vrije Universiteit Amsterdam. For the completion of this research placement fieldwork was carried out in Mityana and Ntungamo district in Uganda, between April 13th 2008 and July 12th 2008. The fieldwork was carried out in collaboration with the Centre for International Cooperation (CIS-VU) and PROLINNOVA-UGANDA. The project was carried out under primary supervision of Dr. William Critchley, and secondary supervision of Drs. Mieke Tromp Meesters.

This thesis assists in identifying the effects of support and funding given to promote local innovation in rural communities in, in this case, Uganda. It serves as an input to PROLINNOVA's evaluation of the aid given in the form of a farmer-to-farmer exchange and LISF (Local Innovation Support Fund) by PROLINNOVA-UGANDA to Kikandwa Environmental Association. This research sheds light on some issues that remain unknown in the absence of fieldwork, hence it gives a more holistic view of what funding and support mean to people in rural communities.

The points of view expressed in this thesis are those of the author, and do not represent the views of other individuals or organisations. Photographs are taken by Angela Tejada or Kim Hagen unless otherwise stated.

ABSTRACT

Since the 1990s the interest in farmers' local innovation in land management has increased. This process is marked by the evolution of various programmes that try to stimulate local innovation. PROLINNOVA is one of those programmes. Uganda is amongst the countries in which PROLINNOVA operates to stimulate local innovation in ecologically oriented agriculture and natural resource management. In this country KEA (Kikandwa Environmental Association) is one of the organisations that has received funding and support from the programme. This thesis analyses the effects of this assistance on the up-scaling of and/or improvement in local innovation in KEA.

KEA has received US\$ 2,000,000 (Euro 800) of funding in the form of a LISF (Local Innovation Support Fund), to stimulate local innovation by aiming to achieve more participation by the farmers in research and development processes, and to give farmers the lead in defining and implementing activities. The funding is distributed among nine women, eight men, and two organisations that are innovating and that are members of KEA. Up-scaling of local innovation is present in different ways. There is quantitative up-scaling in the sense of an expansion in the number of innovators and the membership base of KEA. Functional up-scaling has been stimulated as well; a new group activity is now running, and with the higher number of innovators, the type and number of individual innovations has increased. Information about these innovations has been spread by 95% of the nineteen innovators, stimulating the adoption of these practices. However, in general this has not resulted in new practices or innovations. The people that are most active in daily life, that try to improve their livelihood themselves and that experiment and educate themselves, are the ones that spread the knowledge needed to actually copy the innovation, and they did this to a large number of people. Regarding improving local innovation, most people, 95%, have used LISF to buy better equipment for their innovation in order to get quick and visible benefits of the money.

On top of that KEA has received support from PROLINNOVA in the form of a farmer-to-farmer exchange to Lukwanga, in the neighbouring district of Wakiso. Sixteen people were interviewed about the exchange. Together they named 22 practices they had seen in Lukwanga. 68% of the people interviewed have scaled-up one or more of these practices, mainly the ones that require little additional input in terms of money, labour or time. However, with group effort a more costly practice was taken up, which is income-generating and hence stimulates organisational up-scaling for part of KEA. Fourteen out of sixteen people

interviewed have shared the knowledge with others. This functional up-scaling affects the community as a whole, not just KEA members. Improving local innovation as a result of the farmer-to-farmer exchange is not done on a great scale.

In general, this thesis demonstrates that funding is a stimulant for innovation, and that it is mainly used to make improvements in local innovation through purchasing better equipment. It shows that innovators are willing to up-scale information to others; on their own innovation as well as on knowledge acquired through the farmer-to-farmer exchange. Innovative farmers gain inspiration and motivation from what they have seen, and are eager to copy the low input practices. Practices are mainly adopted or copied, but to a lesser extent adapted. However, there are a few innovators that use knowledge creatively, and work on new innovations as a result. Challenging and facilitating factors for the up-scaling of and improvement in local innovation are identified, which help to explain the effect of the PROLINNOVA programme so far. They serve as a learning tool for projects to come.

1. INTRODUCTION

"I used the knowledge from my grandparents, the indigenous knowledge that was almost disappearing. I modified it, and now I am so proud of my innovation! It has created a new job for me, and though I never went to school, I am now educating educated people."

- Salongo Kakembo, innovator, June 3rd 2008

1.1 Introduction to the research project

Indigenous knowledge has long been absent from agricultural research and rural development projects. A great part of the twentieth century has been marked by a focus on research institutions and scientific knowledge. The role indigenous knowledge played in this was small. Creative ways of using indigenous knowledge to improve ones livelihood were seen as simple and unimportant practices and acknowledging those practices did not fit in the line of thought at the time.

A top-down approach, passed down from research, through extension, and on to farmers, reduced active participation by farmers, and discouraged innovative ways of thinking. Through passive participation people were told what was going to happen in an unilateral way, without being consulted or listened to. (Pretty, 1995). More and more farmer innovation was masked by the structured, scientific approach, involving researchers and extension agents, but not the people concerned (Critchley, 2000). This lead to a superficial and not-lasting impact of rural development projects.

Until the late 1980s there was little research on indigenous knowledge. However, in the early 1990s the realisation that transferring technologies in one direction only was largely inefficient, began to sink in. It was realised that farmers' perspectives should be understood, and that actions in the field of rural development and land or animal husbandry should be build on local knowledge, along with more active participation. Successful land degradation prevention and control require scientifically-sound and cross-sectoral approaches to sustainable land management, integrating ecological, economic and social dimensions in the program design (GEF, 2003). Since the 1990's indigenous knowledge has been a fertile ground for research (Grenier, 1998), but it was not until the beginning of the 21st century that indigenous knowledge became a central focal point in research (Critchley, Negi and Brommer, in press).

Box 1: Typology and Characteristics of each type of participation
(source: Pretty, 1995)

1 Passive participation: People participate by being told what is going to happen or has already happened. It is a unilateral announcement by an administration or project management without listening to people's responses. The information being shared belongs only to external professionals.

2 Participation in information giving: People participate by answering questions posed by extractive researchers using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings are neither shared nor checked for accuracy.

3 Participation by consultation: People participate by being consulted and external agents listen to views. These external agents define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process does not concede any share in decision making and professionals are under no obligation to take on board people's views.

4 Participation for material incentives: People participate by providing resources, for example labour, in return for food, cash, or other material incentives. Much on-farm research falls in this category, as farmers provide the fields but are not involved in experimentation or the process of learning. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentive ends.

5 Functional participation: People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organisation. Such involvement does not tend to be at early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external initiators and facilitators, but many become self-dependent.

6 Interactive participation: People participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic and structural learning processes. These groups take control over local decisions and so people have a stake in maintaining structures or practices.

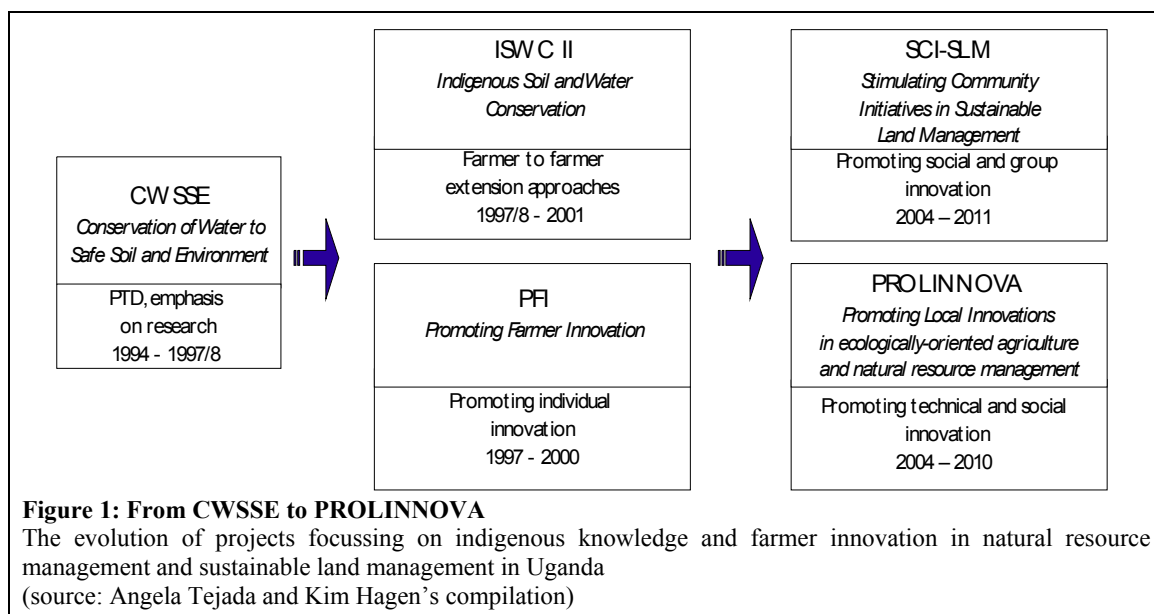
7 Self-mobilisation: People participate by taking initiatives independent of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Self-initiated mobilization and collective action may or may not challenge existing inequitable distributions of wealth and power.

1.2 Local innovation

It is indigenous knowledge that is often the basis for local innovation. As the era of top-down approach began to show its weaknesses, it became clear that farmers continued to apply practices based on indigenous knowledge. Looking for ways to improve their livelihood, farmers, especially resource-poor farmers, continued to experiment creatively with local knowledge to develop and innovate practices related to land husbandry, production and conservation (Critchley, 2000).

The interest in local ways of innovating, often based on indigenous knowledge, increased. In 1994 the project CWSSE (Conserve Water to Save Soil and Environment) started in Uganda. Its intention was to recover local traditions that were related to soil and water conservation. In 1997 the project ended. The ISWC II (Indigenous Soil and Water Conservation II) project took over to continue on the same path until 2001. It placed more emphasis on farmer-to-farmer extension approaches than on research. In late 1999 PFI (Promoting Farmer

Innovation), a programme in East Africa, identified a several categories of innovation, and looked at the characteristics of innovators and their motivation to innovate (Critchley, 2000).



The project was followed in 2003 by the SCI-SLM (Stimulating Community Initiatives in Sustainable Land Management) project, which is currently operating in South Africa, Morocco, Ghana and Uganda. The project tries to identify local innovations in sustainable land management. In a similar line of thought as these two programmes, the PROLINNOVA (PROMoting Local INNOVation in ecologically oriented agriculture and natural resource management) programme originated in 2003.

1.3 Problem statement

Uganda is one of the fourteen countries where PROLINNOVA is active. PROLINNOVA-UGANDA is an NGO-led initiative to build a global learning network on promoting local innovation in ecologically-orientated agriculture and natural resource management (www.prolinnova.net). The objective of this thesis is to provide information of use to PROLINNOVA-UGANDA about the effects of support and funding in relation to stimulation of improvements in and/or up-scaling of local innovation. One of the areas in which PROLINNOVA is operating in Uganda is Kikandwa sub-county. In this area PROLINNOVA has provided support and funding to local innovators of KEA (Kikandwa Environmental Association). Members of KEA have received money from LISF (Local Innovation Support Fund).

Box 2: Local Innovation Support Fund

LISF stands for Local Innovation Support Fund. The concept of locally controlled 'Innovation Support Funds' was developed by the PROLINNOVA partners in 2004 (Waters-Bayer, van Veldhuizen, Wongtschowski and Killough, 2005). A LISF makes funds available to farmers for innovation related activities. The aim of LISF is to achieve more participation by the farmers in research and development processes, and to give farmers the lead in defining and implementing activities. Its immediate objective is to stimulate local innovation. In general, the spectrum of experimentation and innovation in the present LISF pilots embraces efforts in livestock range management, and crop development, pest and disease control, development of the natural resource base, development of farmer-based institutions (brochure FAIR).

In addition to the funding, KEA members have received support from PROLINNOVA in improving and/or up-scaling of local innovation. It is the first time KEA receives money and support for local innovation. Both the funding and the support have been received relatively recent; the support started in 2006, while the funding was received in the fall of 2007.

It is interesting to look at what has been done with the support and funding in a short period of time, and what the first effects are. Since thorough monitoring and

evaluation in the field have not yet been done, this research has focussed on studying the effects of support and funding on local innovation by carrying out fieldwork in Kikandwa sub-county. The goal of the fieldwork was to gain insight in the relation between support and funding received and the improvement in and/or up-scaling of local innovation. The central research question addressed in the fieldwork and answered in this thesis is the following:

What is the effect of support and funding in relation to stimulation of improvements in and/or up-scaling of local innovation in Kikandwa Environmental Association within the Kikandwa sub-county, Mityana district, Uganda?

The research question can be divided in different sub-questions. The most important ones are:

- a. What is the starting situation of local innovation?
- b. What support and funding has KEA received for promoting local innovation?
- c. What precisely were funding and support meant for?
- d. In what way is the funding spent?
- e. How do funding and support affect the spread of local innovation?
- f. How do funding and support influence the improvement in local innovation?
- g. How do support and funding affect the community as a whole?

The data presented in the next chapters, provides answers to the research question and sub-questions. Since KEA has received both support and funding with the intention of promoting local innovation, the hypothesis of the research project is formulated as:

The support and funding given to KEA by PROLINNOVA to promote local innovation, has a positive effect on the up-scaling of, and improvement in, local innovation.

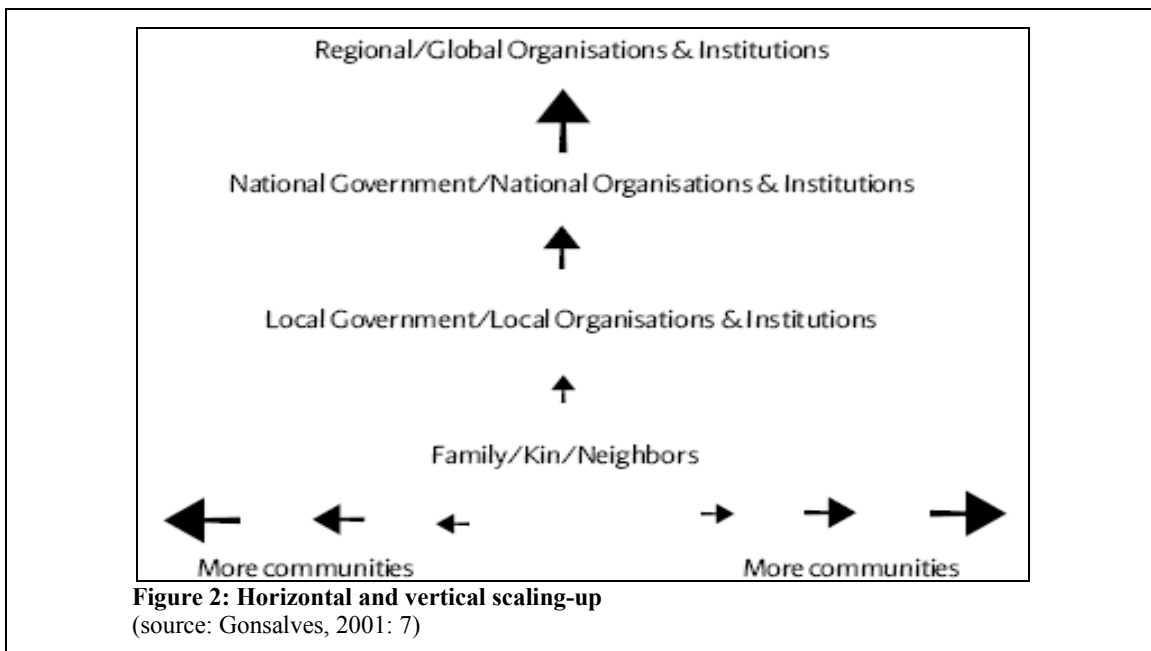
1.4 Use of terms

'Indigenous knowledge' and 'local innovation' are two central terms in this thesis. Often they are related, and one cannot be fully understood without understanding the other. Both terms can be interpreted in many different ways, hence a clear definition of how the terms are used in this thesis is important to avoid misunderstanding. Here the term 'indigenous knowledge' is used as it is described by Grenier (1998: 1): "Indigenous knowledge refers to the unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area." The definition used by the World Bank adds that it is knowledge that 'develops over generations' (Waters-Bayer and van Veldhuizen, 2004).

For describing 'local innovation' the definition of 'farmer innovation' as used by Critchley (2007) is used, since the KEA's innovators are farmers or have innovations related to farming practices. The definition is as follows: "Farmer innovation means the development of systems that are new- in local terms- by farmers using their own creativity" (Critchley, 2007: 13).

'Funding', in this context, refers to the monetary aid given by donor-organisations to KEA. 'Support' covers all non-monetary assistance that KEA has received. Since funding and support for promoting local innovation have been received from PROLINNOVA only, the use of the terms 'funding' and 'support' refer to the aid given by PROLINNOVA.

To explain 'up-scaling' the description given Ellis-Jones, Miiro, Lwakuba and Critchley (2001: 4) is used: "Scaling-up is to bring more benefits to more people, more quickly." This can be further explained through the processes of 'vertical scaling-up', which involves "an institutional spread, involving other stakeholders in a process of expansion from grassroots organisations to policy makers, donors, development institutions and international investors", and 'horizontal scaling-up' or scaling-out; "the geographical spread to more people and more communities involving expansion within the same stakeholder group. Achieving geographical spread is also realized through increasing participation by decentralization of accountabilities and responsibilities (sometimes called scaling-down)". It is this last term, horizontal scaling-up, that is most important in the context of this thesis.



Four types of scaling-up can be identified (Uvin and Millar, in Gonsalves, 2001: 7):

- Quantitative: A programme or an organisation expands its size by increasing its membership base or constituency through increase in geographic area or budgets.
- Functional: A community-based programme or a grassroots organisation expands the number and the type of its activities e.g. from agricultural production to health, nutrition, credit, training, literacy etc.
- Political: The organisation moves beyond service delivery towards empowerment and change in structural causes of underdevelopment. This usually involves political involvement and the development of relations with the state.
- Organisational: Community-based programmes or organisations increase their organisational strength to improve the effectiveness, efficiency and sustainability of their activities. This is through diversifying fund sources, increasing level of self-financing/income generation, assuring the enactment of public legislation earmarking entitlements within the annual budgets for the programme, creating external links with other organisations, or improving internal management capacity of staff.

1.5 Social and scientific relevance

The social relevance of the thesis refers to the use of and learning from the results by the parties directly involved in the research. It is an ordering of information that can shed light on broad issues. Also relevant is that the people interviewed feel recognised, and that their innovations are appreciated and that they are something special which deserves attention.

The report given to them will be an extra way to learn about each other's innovation, which will be beneficial for improving their livelihoods and for environmental management. By creating more knowledge about the relation between local innovation and support and funding, PROLINNOVA and KEA can learn more about the assets and weaknesses of the programme, which can be beneficial for its final outcome. In addition this thesis serves as input to PROLINNOVA's evaluation of the support and funding given by them. Also indirect parties can learn from the results to benefit ongoing or future programmes. This is related to the scientific relevance of the thesis; it contributes to the growing field of literature about local innovation. It is a practical source of information on the relation between certain types of funding and support on the one hand and local innovation on the other. The thesis can serve as an advice to scientist, researchers and development workers. It shows the strong and weak effects of support and funding given for the up-scaling of and improvement in local innovation, and the factors that influence the size of these effects.

1.6 Outline of thesis

This first Chapter provides a introduction to the topic of this thesis. It briefly mentions the organisations involved in the research, and describes the problem statement, definitions and relevance of the thesis. Chapter two describes the methodology used to do the research. It describes what techniques were used to carry out the research. A background history of the research location and parties involved is given in Chapter three. The effect of *funding* on the scaling-up of and improvement in local innovation is given in Chapter four, whereas Chapter five deals with the effect of *support* on the up-scaling of and improvement in local innovation. Chapter six discusses the factors that limit and facilitate the effect of both support and funding. The final Chapter is the conclusion, where the impact of support and funding on local innovation is covered and linked to the research question.

2. METHODOLOGY

“My friend, that language (English) is a problem to me”

Vincent Lutalo, innovator, May 22nd 2008

2.1 Introduction

This chapter describes the methods and techniques used in the period preceding the research and throughout the fieldwork in Uganda, which took place between April 13, 2008 and July 12, 2008. Throughout these three months the research was performed together with Angela Tejada, a fellow student of the Environment and Resource Management master at the Vrije Universiteit Amsterdam. Fieldwork was done in two organisations; RECPA in Rwoho, Ntungamo district was visited from the 23rd April to the 9th May 2008, and KEA in Kasejjere, Mityana district was visited from the 21st May to the 8th June 2008. A return visit was made to KEA from June 24th until June 27th 2008. This thesis deals with the second organisation, KEA. In this chapter the steps taken to prepare for the fieldwork are first explained, then the research strategy of fieldwork is described, followed by the methods used within this strategy; semi structured interviews, observation and participation, and analysing field documents. The last section is about the writing of this thesis.

2.2 Preparation

The period preceding the research in Uganda is characterised by reading reports written about both research locations. In addition general information, scientific as well as non-scientific, about Uganda was collected to become familiar with the country of research, in order to reduce the time needed to adjust to a new culture. The website of PROLINNOVA, www.prolinnova.net, and several reports on that website were read to gather more information about the programme and its activities. Also, various sources of literature about methods of doing fieldwork were consulted to find the method that was most beneficial in generating data and most suitable for doing fieldwork in a new culture.

2.3 Fieldwork

The actual effect of support and funding is not the same as the intended effect of a project. Information about the effect of support and funding received on the improvements in and/or up-scaling of innovation within KEA is not readily available, since monitoring and evaluation has not been carried out fully. KEA itself has visited the people that have received LISF, but no records are kept of this. The evaluation visit of PROLINNOVA is yet to take place. Therefore conclusions on the effect cannot be made without visiting the field and analyzing

the real influence of the support and funding received. Fieldwork is often done when little information on the topic of research is readily available ('t Hart et al., 2001), and since this is the case, the method of fieldwork took a prominent place in the research. It has been *the* strategy of conducting this research.

The timeline of fieldwork activities carried out in Kikandwa sub-county is listed below.

21/05/2008	Welcome and meeting with members of KEA
22/05/2008	Executive meeting with Geoffrey Kizito and Dan Lukwago
23/05/2008	Interview with Margaret Nabatanzi- LISF
23/05/2008	Interview with John Musisi- LISF
23/05/2008	Visit to anonymous alcohol distiller
24/05/2008	Interview with Geoffrey Kizito- LISF
24/05/2008	Interview with Dan Lukwago- LISF
24/05/2008	Office work on received funding with Geoffrey Kizito
25/05/2008	Transect walk from Kasejjere to Nakwaya
25/05/2008	Interview with Oliver Nakyejwe- LISF
25/05/2008	Interview with Oliver Nakyejwe- PROLINNOVA workshop
26/05/2008	Interview with Leonard Kitaali- LISF
26/05/2008	Interview with Leonard Kitaali- Lukwanga
26/05/2008	Interview with Eleth Nakirembe- LISF
26/05/2008	Interview with Eleth Nakirembe- Lukwanga
27/05/2008	Interview with Vincent Lutalo, KEA Green Hill Education Centre- LISF
27/05/2008	Interview with Rose Kamalwa- LISF
28/05/2008	Fitness-session with Primary 1&2 of KEA Green Hill Education Centre
28/05/2008	Visiting the building of the poultry house
29/05/2008	Interview with John Kaganga- PROLINNOVA/LISF
29/05/2008	Interview with Executive Committee-SACCO/historical timeline events
30/05/2008	Interview with John Kaganga- PID training Ethiopia
30/05/2008	Interview with Joseph Bukya- LISF
30/05/2008	Interview with Jane Nakaai- innovation not receiving LISF
30/05/2008	Interview with Jane Nakaai- Lukwanga
30/05/2008	Interview with Agnes Musitwa- innovation not receiving LISF
30/05/2008	Interview with Agnes Musitwa- Lukwanga
31/05/2008	Attending special church service
01/06/2008	Interview with Betty Nanteza- LISF

01/06/2008 Interview with Joyce Nantongo- LISF
 01/06/2008 Visiting 'Twekembe Women's Group'
 02/06/2008 Interview with Mary Nasubuga- LISF
 02/06/2008 Interview with Steve Kiranda- PROLINNOVA workshop
 02/06/2008 Interview with Haruna Nsubuga- LISF
 03/06/2008 Visiting NAADS demonstration site of bananas and poultry
 03/06/2008 Interview with Stephen Burundugge, Kabongezo CBO- LISF
 03/06/2008 Visiting 'Basooka Kwavula Women's Group'
 03/06/2008 Interview with Teddy Nakalyango- LISF
 03/06/2008 Interview with Salongo Ziboyimu Kakembo- LISF
 04/06/2008 Fitness-session with Primary 1&2 of KEA Green Hill Education Centre
 04/06/2008 Transect walk with John Kaganga and Steve Kiranda
 04/06/2008 Interview with Kate Nakabugo- Lukwanga
 05/06/2008 Transect walk with Geoffrey Kizito
 05/06/2008 Attending budget meeting Kikandwa sub-county
 05/06/2008 Interview with Joseph Ssebuliba- support to CBO's
 06/06/2008 Transect walk with Dan Lukwago
 06/06/2008 Interview with Christopher Kiseke- LISF
 06/06/2008 Interview with Virisita Nasimbwa- LISF
 06/06/2008 Gardening activity with students of KEA Green Hill Education Centre
 06/06/2008 Visit to the Lukaga Forest Reserve
 07/06/2008 Farewell party and educational play by Angela Tejada and Kim Hagen



Figure 3: Educational play: the passive poor woman and the active innovator
 (see Annex 2 for more information)

Fieldwork encompasses several methods of data-collection. They can be identified as a) verbal methods; collecting opinions, beliefs and ideas of the people, b) methods of observation; observing behaviour, actions and interactions, and c) analyses of field

documents ('t Hart et al. 2001: 94). All methods have played a prominent role, and are discussed in the following subsections.

2.3.1 Semi-structured interviews

The most important approach of verbally gathering information were the semi-structured interviews¹. Thirty interviews were conducted with 25 people; twelve women and thirteen men. All of the nineteen innovators that received LISF were interviewed. The quote of Vincent Lutalo, “My friend, that language (English) is a problem to me”, puts the need for a translator in plain words; of the 25 people only five spoke enough



Figure 4: Author interviewing John Kaganga

English to be interviewed without a translator. The other twenty people were interviewed with the help of one of the five voluntary translators. The translators came in useful in another aspect than just translating; they provided information about cultural norms and values, which eased participation in the community. The use of different translators minimises the possibility of the answers to be biased by one's view. The translators were in most cases people of the executive committee of KEA, but the answers did not seem to be influenced by that. People were very open in their answers, and were in most cases honoured to be interviewed. Apart from the help of the translators, the interviews were conducted one-on-one, to reduce the chance of one person's opinion expressing different voices. In addition to the interviews, group discussions were held during two meetings with KEA's executive committee.

2.3.2 Methods of observation and participation

Regarding the methods of observation, participant observation played a prominent role. Participant observation is defined by 't Hart et al. as “the researcher is physically present in the field, participates in the research location and experiences and undergoes the events” (2001: 279). In addition to this PRA (Participatory Rural Appraisal) methods were taken into account. Robert Chambers (1992: 5) describes Participatory Rural Appraisal as “a family of approaches and methods to enable local people to share, enhance, and analyze their knowledge of life and conditions, to plan, and to act.” It is exchanging information with people, and using interactive methods. From the descriptions of both 't Hart et al. and

¹ See Annex 1 for the interview guides used to interview the innovators.

Chambers, it can be understood that fieldwork can not be done in a day. It requires time, a proper attitude and behaviour to do proper fieldwork. Jackson and Ingles (1998: 14) describe 'good behaviour and attitude' as characteristics that include seven aspects. Here the aspects are given, and commented on by a description of how each aspect was addressed in the field:

- a) "Building rapport with men and women, rich and poor, young and old and people in different ethnic or social groups." This was accomplished through staying and eating with the local people, interviewing both men and women, interacting and playing with the students of KEA Green Hill Education Centre and going to church with community members.
- b) "Being friendly, interested, culturally sensitive, relaxed, and open and avoiding placing people in situations in which they feel uncomfortable." Interviews were conducted in the homes of the person concerned; a comfortable setting for them. Cultural respect was shown by accepting the food offered. Looking at people's innovations did not only show interest, but was also a way of cross-referencing in the field. Speaking some words of Luganda was one of the greatest keys to being accepted and to having comfortable conversations.
- c) "Listening and probing and leaving space in conversations for additional comments." This was mainly achieved by giving the interviewee the opportunity to tell what he or she felt was not asked in the interview, or to expand on certain topics.
- d) "Engaging in conversations that have a two-way exchange of information". Besides looking at the local innovations we acted as agents of a fictional farmer-to-farmer exchange to Rwoho, passed on information and copied practices seen in Rwoho, which were 'innovations' in Kikandwa sub-county.
- e) "Seeking the views of the weaker, less powerful people or groups." Visits to women's groups and listening to what they have to say, were the most prominent ways to interact with the less powerful groups.
- f) "Asking questions that invite explanations or viewpoints rather than yes-or-no answers." Predominantly open-ended questions were asked. If this was not possible, follow-up questions were posed.
- g) "Scheduling according to the activities and routine of the local people." Great flexibility added to the ease with which all activities and interviews were planned and carried out.
- h) "Sharing information." The most successful activity through which this was done was the educative play performed by the researchers. The activity was commented on in the national newspaper 'New Vision' (June 11, 2008).²

² See Annex 2 for the article in the New Vision.



Figure 5: Building rapport
A. Tejada dancing with women's group



Figure 6: Exchange of information
Kato trying out Rwoho's 'step on' to promote hygiene

Additional methods of observation and participation used are those of 'transect walks' and 'participatory mapping' (Jackson and Ingles, 1998: 38). The people in Kikandwa sub-county that were interviewed are spread out across the area. Walks of several hours with the translators revealed information about the changes in land use, ecosystems and environment, and can therefore be labelled as 'transect walks'. Transect walks or semi-structured walks are a combination of semi-structured interviews and direct observations. They can generate useful information and discussion (Jackson and Ingles, 1998:38). Also the technique of 'participatory mapping' was used to some extent. 'Participatory mapping', is making a hand drawn map showing among others the village, resources, forests, facilities (Jackson and Ingles, 1998:29). In this case resources, forests and facilities were not sketched, but the locations of villages and of innovators that received LISF were identified.³

2.3.3 Field documents

The last method used is the one of making a 'historical timeline' using field documents. A historical timeline includes important events in the history of the region (Pretty, 1995). A historical timeline of the region was made, as well as one on the history of events and activities related to KEA. For both, analyzing field documents kept in the office of KEA was necessary.

³ See Annex 9 for a participatory map with all the innovators (identified as regular or true innovator by the author of this report).

The next box shows the general historical timeline of Kikandwa sub-county.

Box 3: General historical timeline of Kikandwa sub-county	
1903	Initial mango trees brought from Entebbe
1918	Big mango trees on KEA hill planted
1948	Big famine due to drought
1951	Heavy rain, hail and floods cause many animals to die, but also create additional water sources
1956	John Kaganga, director of KEA, born
1967	The Buganda Kingdom, that sensitized people on environment, ends
1968-1970	Forest planted by Ugandan government
1980s	Serious alcohol distilling in wetlands started
Early 1980s	Trees begin to replace scrubs
Late 1980s	Amount of grasshoppers, white ants, bush rats, rabbits, kadoma bees and mushroom starts to decline
1994	Nababirrye spring dries up
1994	Sebrwunye spring dries up
1995	Government starts clearing the forest planted in 1968-1970
1995	Caterpillars eat crops
1996	Population starts growing
1981	Measles epidemic
1981-1986	Kikandwa was a dangerous zone due to the war, resulting in no maintenance and the area became bushy
1997-1998	El Niño
1999	KEA started
1999-2000	Malaria epidemic
2000	Overgrazing of land starts
2000	Caterpillars eat crops
2000-2002	Heavy drought
2001	KEA commissioned officially
2005	Quarantine in the area due to mouth and claw disease
2005-2006	Serious drought

Next is the summary of the historical timeline on events and activities related to KEA. The full version of this can be found in Annex 3.

Box 4: Historical timeline on events and activities related to KEA

20/01/1999	KEA was found
12/09/2001	Seminar/workshop on the inauguration of KEA.
24/03/2002	Introduction of KEA to NEMA
12/01/2004	Registration as CBO at Mubende Local Government
February 2004	KEA Green Hill Educational Centre starts
07/05/2004	Registration as NGO at the Republic of Uganda
September 2005	Two KEA members were send to Baraka Agricultural College in Kenya for two years with a scholarship arranged by KEA
11/04/2007	Ronald Lutalo visits KEA to start the PROLINNOVA programme.
09/08/2007	USh 2,000,000 (Euro 800) received from PROLINNOVA for LISF ⁴
21/12/2007	Exchange visit to Lukwanga

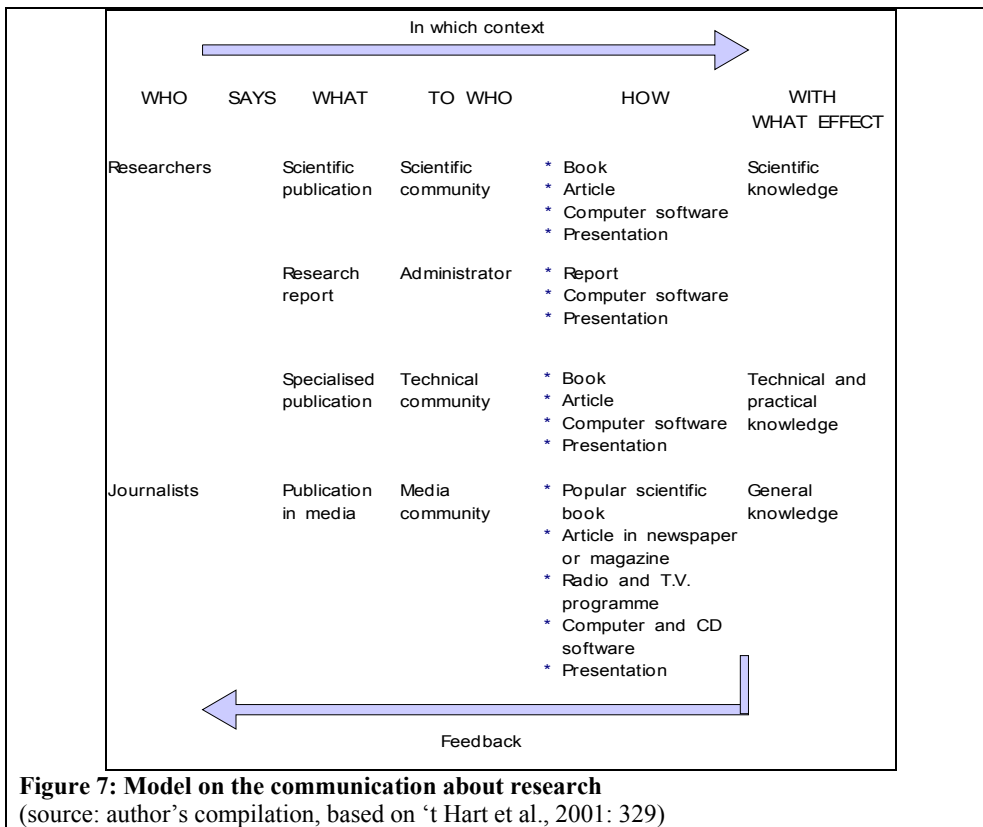
2.3.4 Constraints

Throughout the fieldwork there were not many factors constraining the gathering of proper data. Time availability and flexibility were important factors to make the fieldwork reach its fullest extent. People were cooperative, open, sharing and helpful. The only factors limiting the time efficiency of the fieldwork were the absence of electricity and literature resources.

2.4 Writing the thesis

The writing of the thesis was done from June 9th 2008 until July 7th 2008, plus an additional few days in August to make corrections. Putting the information down on paper is a type of 'communication' between the researcher and the ones that make use of the information, may it be for scientific or practical purposes. Scientific and, in this case especially, practical information, flows back to the researchers that are engaged in further evaluation and monitoring by PROLINNOVA; hence providing constructive knowledge. The following overview, based on the figure presented in 't Hart et al. (2001: 329) shows the flow of communication about scientific research.

⁴ USh stands for Uganda Shilling. 1 Euro = 2,502.77 USh, 1 US Dollar = 1,586.00 USh (source: www.oanda.com, July 1, 2008).



3. BACKGROUND INFORMATION STUDY AREA

“Degrading the environment were the alcohol distillers in the wetlands. They make sugarcane-wine and banana-wine. The waste products went directly into the wetlands, killing all living organisms. Also a lot of trees were cut down for firewood, rather than being pruned. Sensitizing the distillers on their actions was one of the first activities of KEA. And it was a successful one.”

Geoffrey Kizito, innovator, May 18th 2008

3.1 Introduction

For the reader to become familiar with the context of the research, this chapter provides background information related to the fieldwork and topic of this thesis. It starts with general background information of Uganda, and in particular Mityana District, where KEA is located. The description of KEA in the next section sheds some light on why PROLINNOVA has chosen to give funding and support to this organisation. Next is a section on the PROLINNOVA programme, that gives details about the programme; what it is, its activities, and how it operates in Uganda. Section 3.6 and 3.7 address sub-question b. (what support and funding has KEA received for promoting local innovation?), and elaborate on the funding and support given by PROLINNOVA to KEA to scale up and improve local innovation.

3.2 Uganda

The Republic of Uganda is a landlocked country located in the eastern part of Africa, characterised by a number of transboundary natural resources. It borders five countries: Sudan, Kenya, Rwanda, Tanzania and the Democratic Republic of Congo. The country has a total area of 236,040 square kilometres, of which the land covers 199,710 square kilometres. The remaining 36,330 square kilometres is covered by water. Most of the country's landscape can be described as 'plateau', though it also has a few mountains. Mount Stanley with its height of 5110 meters is the highest point in Uganda, while the lowest point is Lake Albert at 621 meters above sea level. Lake Albert is one of the many lakes and rivers the country has, which makes its land well-watered and fertile (CIA Factbook, 2008). Although 38% of the 31,368,000 inhabitants lives below the poverty line, this does not mean there is always a scarcity of food. For the rural people, natural resources constitute important 'gifts of nature' and social safety nets on which their livelihoods depend all the time or at certain critical periods such as droughts (NEMA, n.d.). This applies to the region in which KEA is situated as well. In addition, the fertile land is attractive to agricultural activities. 95% of the population is engaged in crop production (Ellis-Jones et al., 2001: 1), resulting in an abundance of food in many parts of the country. The northeast, however, is semi-arid, and

suffers more from drought than the rest of the country that generally experiences two dry seasons a year, one from December to February and one from June to August (UBOS, 2006).

Current environmental issues the country is dealing with are the draining of wetlands for agricultural use, soil erosion, deforestation, overgrazing, poaching and water hyacinth infestation in Lake Victoria. Land degradation, especially through soil erosion is the single largest contributor to the annual cost of environmental degradation. The poor are agents of environmental degradation because they have limited livelihood alternatives. At the same time they are also victims of environmental degradation because their coping abilities are limited (NEMA, n.d.). Both are the case in Kikandwa sub-county, and both KEA tries to address, the latter with the help of PROLINNOVA.

Uganda is party to ten international environmental agreements (CIA Factbook 2008). However, environment does not seem to be a priority for the ministry of Uganda. As figure 8 shows, the budget for the financial year of 2008/2009, starting in July, is not in favour of the 'Water and Environment' sector at all.

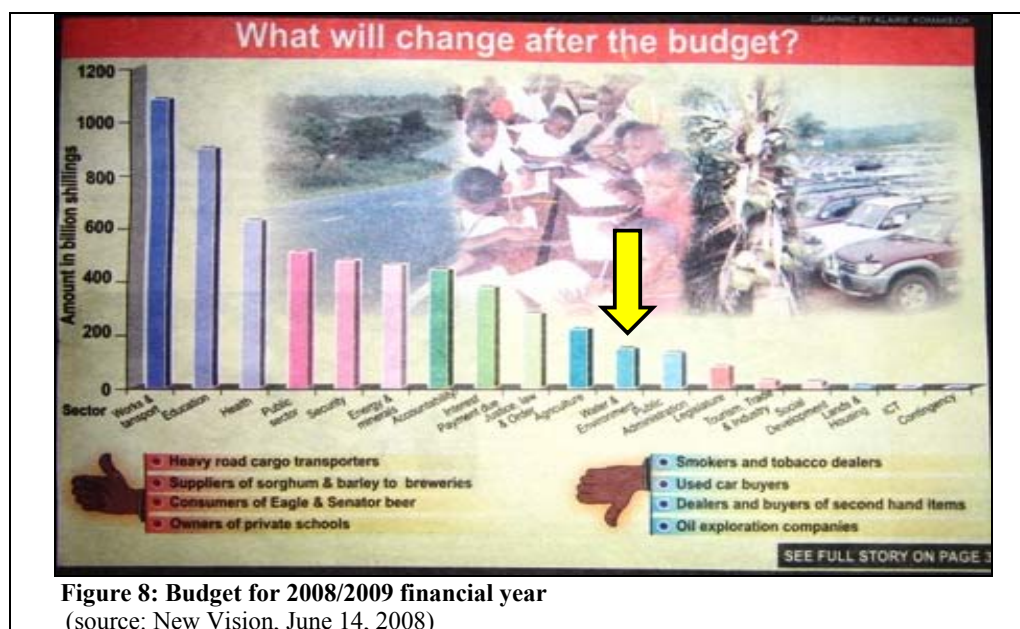
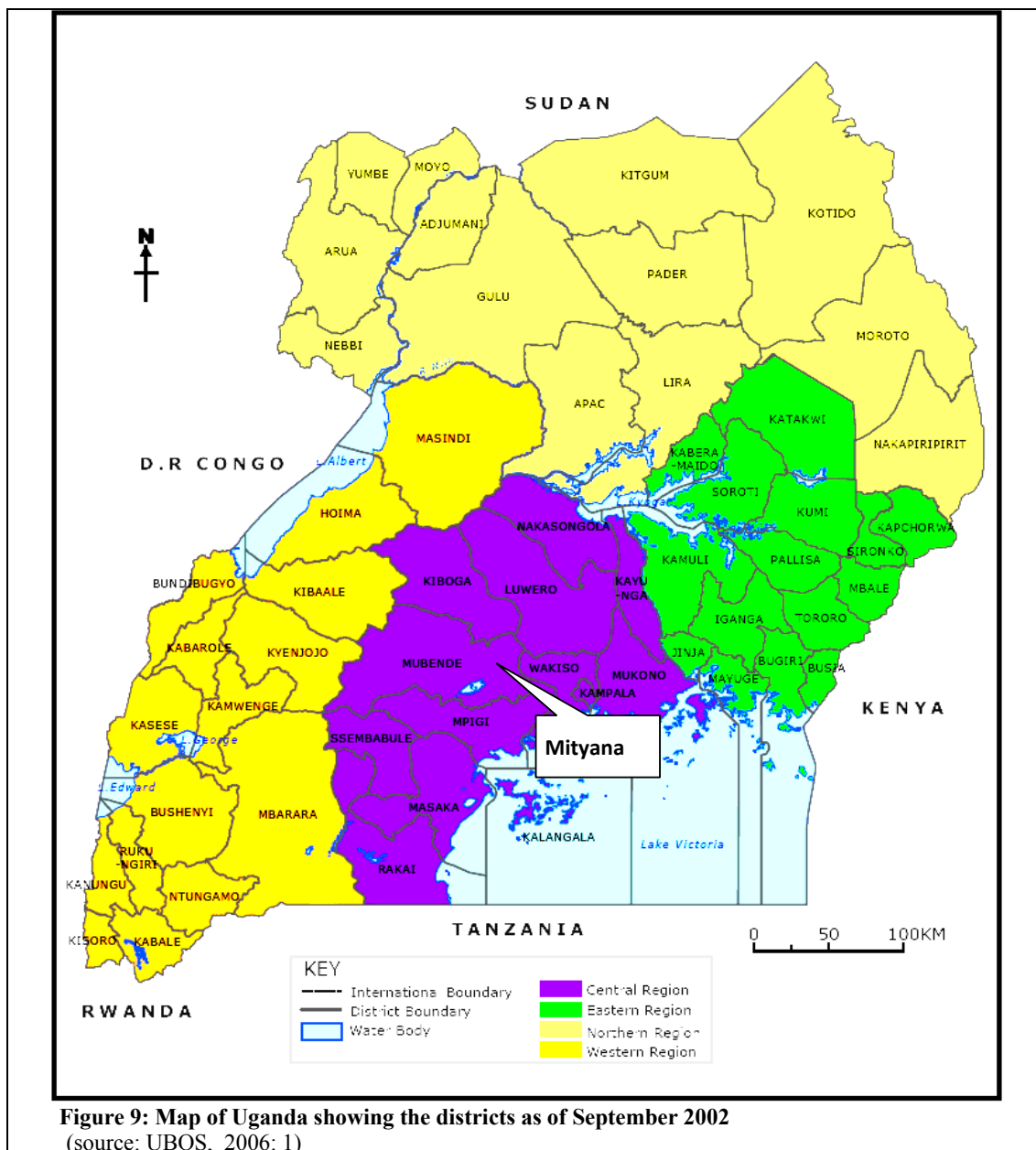


Figure 8: Budget for 2008/2009 financial year
(source: New Vision, June 14, 2008)

3.3 Mityana district

Kikandwa Environmental Association is located in Kasejere village, Bambula parish. The parish is one of the 64 parishes that Mityana district counts, and is situated in Kikandwa sub-

county, one of Mityana's nine sub-counties. Mityana district is located in central Uganda. It was part of Mubende district until it became a district on its own in July 2005 (MDLG, n.d.).⁵



The district has a surface of 1,459,785 hectares. In 2002 the district counted 265,994 people, of which 132,989 were male and 133,005 female. Kikandwa sub-county counted 21,414 people; 10,800 male and 10,614 female. The current population of Mityana district is estimated at 368,400 inhabitants. Compared to Uganda's average fertility rate of 3.4% per annum, the district has a high fertility rate of 7.7% (MDLG, 2007).

⁵ The most recent maps of Uganda are created in 2002. Mityana district was created in 2005, and is therefore not shown on maps. It is situated in the eastern part of Mubende district.

Only 13% of the population lives in the urban areas, which makes the population density approximately 135 per square kilometre. Over 70% of the population depends on subsistence farming as a source of income (MDLG, 2007). Since the greater part of Mityana's population lives in the rural areas, has a high fertility rate, and practices farming, the pressure on the environment and natural resources is growing with an increasing rate. This creates problems of environmental degradation as well as problems related to food and income security.⁶ KEA is situated in a rural area, and addresses these problems, as well as some environmental problems of national level that are present in the region, like land degradation, draining of wetlands, and deforestation.



Figure 10: Mityana District and its sub-counties



Figure 11: KEA's headquarters

3.4 Kikandwa Environmental Association

KEA is a developmental NGO/CBO founded in 1999 by ten people of the rural community in Kikandwa sub-county. It was born out of the need to address the alarming low rates of agricultural productivity, the high level of food insecurity, low income in the rural communities, and the rapidly increasing degradation of the environment and natural resources. It started as a small organisation, headed by its chairman John Kaganga. It was Kaganga who took the initiative to start KEA when the mango-trees planted by his grandfather on a hill were threatened to be cut down. On that very hill in Kasejjere village, with the mango-trees still present, KEA was found. It is the place where KEA's headquarters are now sited.

3.4.1 Mission, vision and objectives

According to the constitution of KEA (1999), the formulation of its mission statement in 1999 was 'to increase economic and environmental benefits through proper usage and

⁶ Mityana District Local Government has no official publications on environmental problems in its district, since the district is relatively young.

management of the environment by all stakeholders at all levels- local, national and international'. Its vision was 'enabling healthy and improved environment that provides sustainable benefits for the present and future generation'. With this in mind KEA started to sensitize people on the environment, food security and alcohol production in the wetlands, but it was not until January 2004 that KEA with 31 members was officially registered as a CBO under the Local Government of Mubende District. In May 2004 it was registered as an NGO at the Ministry of Justice and Internal Affairs. Being officially registered as an NGO/CBO opened the doors to support and funding, and KEA started to expand its activities and develop the organisation step by step. It was the fact that KEA is an established, fairly organised group, that caught the attention of PROLINNOVA (R. Lutalo, personal communication, June 19 2008).

The objectives of KEA are guidelines for their activities. The objectives as mentioned in the brochure of KEA are:

- To promote sustainable use and management of the environment and natural resources through sensitization seminars and workshops;
- Strengthen KEA's organizational structure with adequate capacity, knowledge and skills in the organization and project management;
- Increase the ability of the rural poor to raise their income and have enough food through practising sustainable agriculture;
- Establishing an education centre and demonstration farms;
- Lobby and advocate for wells, springs, streams and small rivers to be among the priorities in rural water development;
- Promoting and supporting local innovation, participatory innovation development, and local innovations development;
- Enhance the capacity of the rural communities to handle health and environmental health management through information dissemination, education, communication, and service delivery;
- Educate and sensitize the public on environment management issues through observing and commemorating World Days at local and national level, namely World Environment Days, Forest, Water, Wetland, Biodiversity, World Food, Meteorology, and Population Days (brochure KEA).

3.4.2 Activities

Activities performed by KEA to-date are many. The most noteworthy ones are:

- Distributing and planting tree-seedlings and sensitization on the benefits of trees;
- Waste management and the use of waste for mulching to combat soil degradation;
- Educating people on organic farming, irrigation and rainwater harvesting;
- Baseline survey situational analysis of all wetlands in Kikandwa sub-county;
- Sensitization of people on the use of alcohol and the effect of alcohol distilling effluents leaking directly into wetlands and/or rivers;



Figure 12: Alcohol distilling

Distilling in the wetlands (photo 1), and an improved distillery, leading the effluents into a trench lined with polythene (photo 2)

- Survey on the pollution and degradation of Lake Wamala;
- Stimulating local innovation;
- Celebrating World Days, especially World Environment Day. The leading up to such events is characterized by sensitization campaigns, with topics like road-construction, sustainable environmental management in relation to fighting poverty, and cleaning water sources.

The fact that KEA was already active in addressing environmental issues (see section 3.3) appealed to PROLINNOVA. Effects of support and funding are likely to be seen more in organisations that are already working their way out of poverty themselves, and that are trying to deal with obstacles that stand in their way, such as the poor condition of the roads. Perhaps the most outstanding activities KEA has achieved on its own so far, are those regarding education. KEA has lobbied for two scholarships for KEA members at Baraka Agricultural College in Kenya, after receiving a Baraka student for a field-placement. As a result two capable KEA members, Geoffrey Kizito and Oliver Nakyejwe, were sent to Kenya and have now completed a two year course in Sustainable Agriculture and Rural Development.

Another educational activity that deserves special attention is the KEA Green Hill Educational Centre, established in 2004, at the hill with the mango trees. Before the establishment of the school, the nearest primary school was at a distance of four kilometres. KEA's school reduced the distance for children to walk to school, which makes education more accessible. On top of that, the school is open for all children; including those who are orphans or from vulnerable families and cannot afford the school fees. The school now has 164 pupils, of which sixty are from vulnerable families and forty are orphans. Through the school the youth and the marginalised are involved in KEA, which attracted PROLINNOVA to work with KEA.

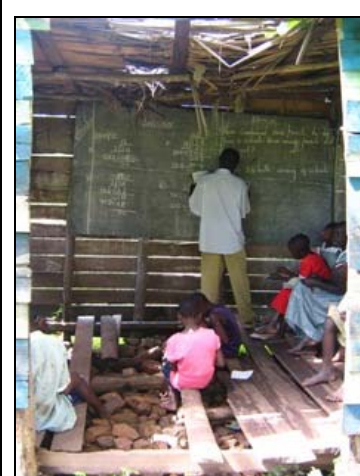


Figure 13: Teacher Racid and his pupils in their classroom

KEA Green Hill Educational Centre was originated with the mission to educate the people in the area on the importance and management of the environment and natural resources. The school has its own gardens and nursery beds.

Unfortunately the school's artificial wetland has dried up, but there are plans to create a fish



Figure 14: Pupils ready to start planting

pond. The pupils are educated on the environment through lectures, songs, and several activities like cleaning up the school ground, planting seedlings, taking care of the gardens to learn about food security, and the anthill project, through which the effects of LISF are spread to many people.⁷ Despite its good work, the school has not received any funding and it currently still lacks facilities such as an office,

classrooms, desks and blackboards. Also the devoted teachers are paid little, US\$ 30,000 (Euro 12) a month, though the school pays for their meals and provides hospitable accommodation in parents' homes. KEA Green Hill Educational Centre is a truly genuine and authentic school, struggling to make it.

The formation of an executive committee contributed to the expansion of activities.⁸ The chairman has been the same since the beginning, and although his personal relations with many people sometimes stand in the way of effective actions (see Chapter six), this has benefited the organisation a lot. The chairman is a hardworking man who makes a lot of personal sacrifices for KEA. Many people interviewed spoke out their gratitude for what the

⁷ See Annex 4 for a detailed description of KEA Green Hill Educational Centre's anthill project.

⁸ See Annex 5 for the current composition of KEA's executive committee, the SACCO committee and the PROLINNOVA committee.

'director' has done. Although KEA as an organisation is growing, the number of members has dropped over the years. There are currently 61 members, of which circa forty 'active members'. Active members are those who have paid the US\$ 10,000 (Euro 4) fee to join KEA, the annual US\$ 6000 (Euro 2.40), and are attending meetings and workshops (G. Kizito, personal communication, May 22, 2008). After the contact with PROLINNOVA started, the number of members has slightly increased.

3.5 PROLINNOVA

PROLINNOVA is a programme conceived in December 1999, that focuses on recognising the dynamics of indigenous knowledge and strengthening capacities of farmers to adjust to changing conditions. It builds on and scales up farmer-led approaches to development and looks at informal experiments, carried out by farmers, to develop and try out new ideas for better use of natural resources. Understanding the motivation behind local innovation stimulates joint action where indigenous knowledge and scientific knowledge can be integrated (www.prolinnova.net).

The mission of PROLINNOVA is to foster a culture of mutual learning and synergy in local innovation processes in agriculture and natural resource management. Its vision is a world in which farmers play decisive roles in agricultural research and development for sustainable livelihoods. The programme's goal is to develop and institutionalise partnerships and methodologies that stimulate processes of local innovation for environmentally-sound use of natural resources (Critchley, Verburg, and van Veldhuizen, 2006). To achieve this goal PROLINNOVA seeks to:

- demonstrate the effectiveness of user-led innovation for sustainable development;
- build strong farmer-extension-researcher partnerships;
- enhance capacities of farmers, researchers and extension agents in participatory approaches;
- pilot decentralised funding mechanisms to promote local innovation;
- stimulate national and regional policy dialogue to favour local innovation;
- set up platforms for reflection, analysis and learning about promoting local innovation;
- integrate participatory approaches to farmer-led innovation and experimentation into research, extension and education institutions.

In each country of operation a local NGO serves as a secretariat for a NSC (National Steering Committee), which defines the Country Programmes' activities, gives guidance and

helps to mobilise resources (www.prolinnova.net). In Uganda, Environmental Alert is the NGO that holds this position and is therefore directly involved with KEA.⁹

3.5.1 PROLINNOVA-UGANDA

Under the coordination of Environmental Alert, PROLINNOVA-UGANDA's objective is up-scaling, mainstreaming and institutionalisation of community-led approaches to agriculture and natural resource management. The programme has four components: a) Developing, piloting, new things and sharing results, b) Capacity building, c) Institutionalisation, d), Programme/network management (brochure PROLINNOVA). The support and funding given by PROLINNOVA to KEA is mostly present in the component A, though the components are related and feeding back to each other. Hence the focus of this thesis is mainly on component A, which encompass the following topics:

- PID (Participatory Innovation Development): study innovations, joint experimentation;
- Piloting and up-scaling LISF;
- Alternative policy dialogue methods;
- Documentation of innovations;
- Sharing of learning through meetings, farmer-to-farmer exchanges and exhibitions.

3.6 PROLINNOVA's funding to KEA

KEA has received funding in the form of LISF for the improvement in and up-scaling of local innovation. Under the FAIR (Farmer Access to Innovation Resources) project, the PROLINNOVA partners, together with Environmental Alert, the Ugandan Ministry of Agriculture Animal Industries and Fishery, PELUM Uganda, Africa 2000 Network, and Kulika Charitable Trust LISF, support the LISF in Uganda. LISF was set up in Uganda under Environmental Alert, that guides and manages the piloting of LISF. KEA was seen as an organised association that has innovations, and that has the capacity to manage fund. On top of that, marginalised people and youth are involved in KEA. Taking all this into account, KEA was selected as one the four communities to pilot LISF (R. Lutalo, personal communication, June 19 2008). On June 11th 2007, a contract was signed between Environmental Alert and KEA to pilot the LISF.

KEA has received US\$ 2,000,000 (Euro 800) for piloting LISF. As stated in the contract between PROLINNOVA and KEA, this funding is meant to provide financial awards required for the following points:

⁹ See Annex 10 for a more detailed description of PROLINNOVA's history and structure.

1. Costs directly related to experimentation (e.g. tools, equipment);
2. Costs involved in assessing technical support, mostly training costs, travel, accommodation and meals for technical expertise;
3. Costs involved in cross visits and exchanges;
4. Documentation and dissemination of funds;
5. Commercialization of innovations.

The money has been distributed to different innovators to stimulate innovation. It is stated under the terms of reference of the 'Local Innovation Support Fund Pilots for PROLINNOVA-UGANDA' that a certain percentage of the amount the innovators received, had to be paid back in order to sustain the fund after the donor funded phase ends. KEA has set this rate at 50%. The money will go to a saving mechanism. This so called SACCO (Savings And Credit Cooperation) is discussed in detail in the next chapter, which deals with the effect of funding.

3.7 PROLINNOVA's support to KEA

KEA has received support from PROLINNOVA through PID workshops and a farmer-to-farmer exchange, touching the first and last topics of component A of the PROLINNOVA/UGANDA programme. The main workshops were a three-day 'PID training' in Kampala for three members of KEA in October 2006, the nineteen day 'PID- a training of facilitators course' that took place in Ethiopia in July and August 2007 for the director of KEA, and a three day 'PID training for facilitators' in Kampala in August 2007, for the director of KEA. At the workshop in Ethiopia, Kakanga met Dr. W. Critchley, who was part of the training team. This contact indirectly lead to KEA being the research location where the fieldwork for this thesis was conducted.

Additional to the workshops, there was the farmer-to-farmer exchange organised, which took place on December 21st 2007. Twenty-eight members of KEA visited several innovators in Lukwanga. A farmer-to-farmer visit's aim is to learn about other innovations and to release creativity. The exchange to Lukwanga benefited the greatest number of people directly, and is therefore the subject of analysis in Chapter five.

4. EFFECT OF FUNDING ON LOCAL INNOVATION

"For my innovation I use animal urine. With the LISF I bought a goat. At night I put it in the kitchen. There it doesn't urinate. Then in the morning I get up early, take the goat outside, and place a basin under it and wait until it urinates. That's how I collect animal urine."

Teddy Nakalyango, innovator, June 3rd 2008

4.1 Introduction

The aim of this chapter is to answer one part of the research question, namely what the effect of funding is on the up-scaling of, or improvement in, local innovation. Section 4.2 and 4.3 provide information on the innovations, how they were selected, and how the funding was spent. The following two sections deal with the up-scaling of local innovation, whereas section 4.6 deals with the effect of funding on the improvement of local innovation.

4.2 Screening innovation

KEA heard that they were amongst the organisations selected to apply for LISF in March 2007. After that the sensitization of KEA members on PROLINNOVA and LISF began through workshops and meetings organised by KEA and PROLINNOVA. In May 2007 KEA received the good news that their organisation was selected to pilot LISF, and would receive US\$ 2,000,000 (Euro 800). In the months that followed Environmental Alert visited KEA three times to sensitize the people more and to tell them how they as individual innovators could apply for LISF.

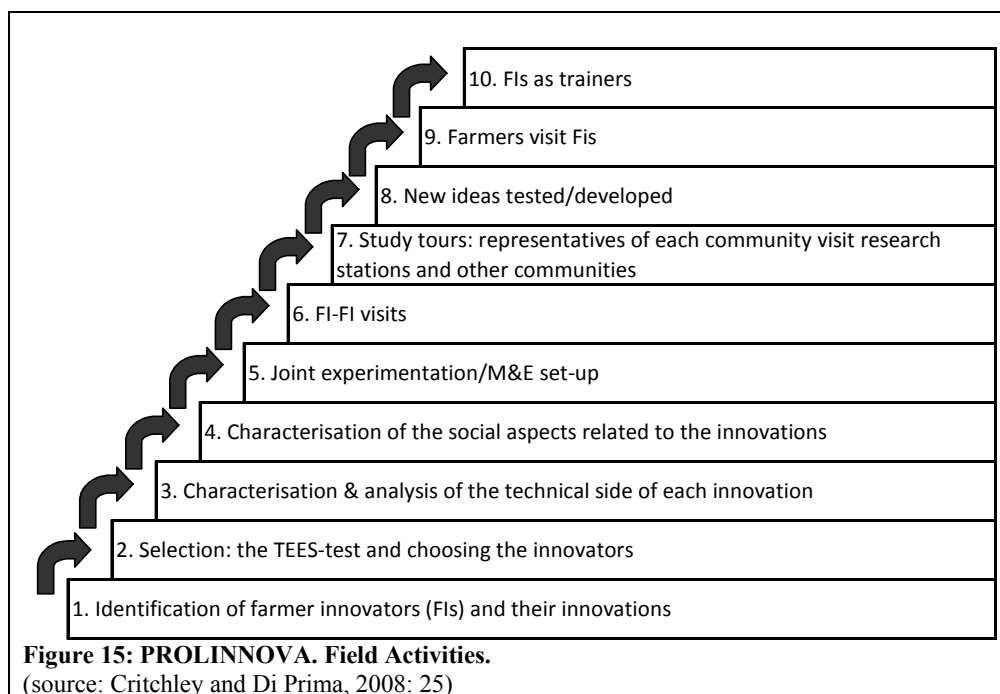
The applications of the 31 people that applied for LISF were screened by the five members of KEA's executive committee. From PROLINNOVA they had received a list with criteria to judge the applications, but had simplified this list with the consent of PROLINNOVA.¹⁰ Every innovation that scored above 50% on paper, in practice the innovations had not been seen yet, was chosen to receive funding. The criteria used to judge the innovation are based on the TEES-test. The TEES-test looks at the true merit of the technical innovation. TEES, as described by Critchley (2007: 23) stands for:

- Technical effectiveness: Does it work well? Is its performance good or better than current alternatives?
- Economic validity: Do the benefits outweigh the costs? Is it affordable to the target group?

¹⁰ See Annex 6 for KEA's 'Innovation scoring sheet'.

- Environmental friendliness: Are there any negative environmental impacts? Is off-site pollution or land degradation caused?
- Social acceptability: Is it anti-social? Has it good potential to spread to others?

In the first phase thirteen applicants were selected to benefit from the LISF. Their innovations had passed step one and two of the model that represents the stages leading up to 'sustained management of innovation'. Step three was partly done; innovators and their innovations were written down, but not all in great detail. It is important to note that not all steps have to be taken in subsequent order, and that some steps involve funding, like in this case LISF, whereas other steps involve support. The model is presented in the diagram below.



In general, the thirteen applications that were approved did not receive the full amount they requested; PROLINNOVA stated that applicants who receive funding should contribute 20% themselves. The budget of each approved application was screened in order to see what expenses were not quite necessary, and those were deducted from the money given. If there was nothing that could be deducted, 80% of the budget was given, with a maximum of US\$, US\$ 200,000 (Euro 80). The first round of money was disbursed on October 5th 2007. Seven women, five men and one organisation received a total amount of US\$ 973,000 (Euro 369). The expenditure on activities for implementing the LISF from April to June was US\$ 289,000 (Euro 115), leaving a remaining balance of US\$ 738,000 (Euro 295). In the second round, six innovations, two women, three men, and one organisation, were approved, and a total of

US\$ 378,000 (Euro 150) was given to them on October 29th 2007. US\$ 277,000 (Euro 110) was invested in the start-up of the SACCO, the executive committee's expenses were US\$ 65,000 (Euro 26) and the bank charges US\$ 18,000 (Euro 7). All added up equals exactly US\$ 2,000,000. Annex 7 and Annex 8 respectively show which of the nineteen innovators receiving funding in the first and second round of the distribution of LISF, and provide answers in detail to the sub-question how the money given to the innovators has been spent.

4.3 The innovations

All innovations that received LISF are unique. However many share some characteristics. All innovations are characterised by low external input. KEA is rather isolated, and the roads in the area are very poor, which makes buying external input in the city a costly matter. Therefore mainly local materials are used. This makes an innovation affordable to create and for others to copy. Another aspect that is seen in many innovations is that they are based on organic materials solely, which could offer a



Figure 16: Maria Rose Kamalwa

Innovating does not have to cost much; keeping chicks warm and safe near a pot with charcoal is something everyone can do

marketing opportunity. Of the innovations, 42% use indigenous knowledge at least partly. Most innovations are alleviating poverty in one way or another. Some innovations are directly generating income, while others are saving money from being spend on things like chemical pesticide. The innovations do not address greater environmental issues like deforestation or degraded wetlands, but in most cases they are environmentally friendly, and fit in the category of 'ecologically-orientated agriculture'.

4.4 Innovating local innovation?

One first effect of LISF is quantitative up-scaling in terms of an increasing number of members. When people heard about PROLINNOVA and the possibility of receiving funds through LISF, more innovators became apparent, the number of innovators increased, and KEA got ten more members (J. Kaganga, personal communication, May 29, 2008). In order to address sub question a. (what is the starting situation of local innovation?), as listed in Chapter one, the nineteen innovators that received LISF were asked questions regarding the starting situation of local innovation in KEA. Eight people said they were already practicing their innovation before hearing about PROLINNOVA and LISF. Of these people one said that he was practicing it before, but that LISF gave him the chance to improve it. One person said

his innovation was created before hearing about LISF, but that he starting practicing it again after hearing about the LISF. Eight people started to create an innovation due to the workshops from PROLINNOVA about local innovation and the funding. Two people did not start their innovation before they had received the money from LISF, which was possible since decisions for distributing the money were made when looking at application forms, and not at the innovations themselves. One of these two is practicing the innovation and is very innovative on other points. The other one has only once tried out his innovation, and has done no further work on it. A point of consideration for further LISF programs might be to require the innovation to be up and running before distributing the money, but after sensitization workshops. The latter is important, because people often do not know what an innovation is, and learning about it can stimulate local innovation.

It seems that receiving funds is a big stimulant for people to innovate. This raises the question whether all innovations are indeed true innovations, or that they are created for the purpose of getting money. The latter refers to 'innovations' that may, for example, be practices copied from somewhere else, which are developed on paper in order to get funding, but that are not being practiced and its knowledge not being spread. All innovators were able to demonstrate their innovations, but to what extent they are actually used is not clear. Eight out of nineteen innovations rely on indigenous knowledge from parents of grandparents. This is not a bad thing, it can be a good basis for innovations. Most people that used indigenous knowledge to build on, added ingredients which they know, and of which the characteristics are likely to improve the practice. However, it can be the case that this knowledge is used as an easy access to funds, because it passes the criteria of the TEES-test rather easily, since the indigenous practices often use organic and low cost input which makes them easy to duplicate. On the other hand, it is good that new life is blown into indigenous practices.

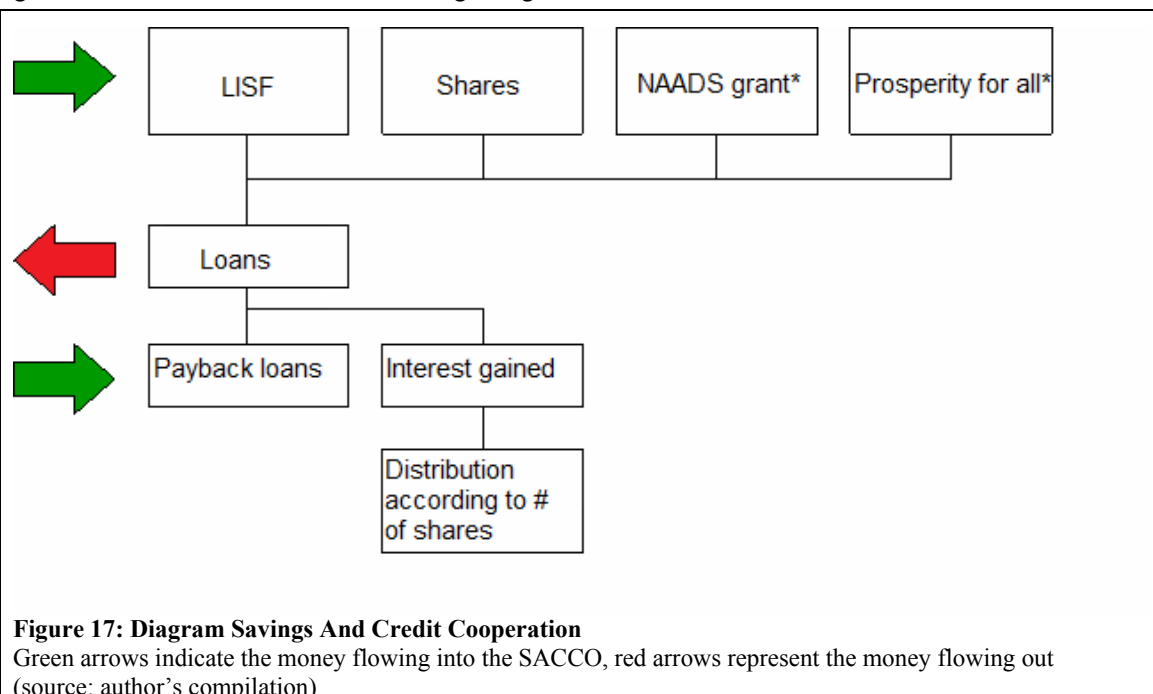
4.5 Functional up-scaling of local innovation

Besides quantitative up-scaling, LISF has stimulated the functional scaling-up of local innovation; the expansion of the number and type of its activities. A new type of group activity has originated, the SACCO, and with the expansion of innovators, the type and number of individual innovations increased. The following two sections will cover this.

4.5.1 Savings And Credit Cooperation

Having received the money, the KEA executive committee had to come up with a way to sustain the LISF. The idea originated to start a SACCO within the members of KEA, and the presence of a well-functioning SACCO in Lukwanga encouraged this. The SACCO is a kind of functional up-scaling, since KEA expands the type of its activities with this. The SACCO is

a programme that supports people to save money, rather than spending it. It can also generate funds to members without getting loans from the bank.



The SACCO's initial starting capital comes from the members that have received LIF, members that buy shares, the grant of NAADS (National Agricultural Advisory Services) and money from the Prosperity for all programme. The last two have been promised, but not yet given. Of this money loans are given to members of the SACCO, who have paid a SACCO registration fee. The interest of the loans is distributed over share-holders, according to the number of shares they hold. Besides this, SACCO is a safe where people can store their money. This money is not used for loans.

All the members that received LIF had to pay back 50% of the money to SACCO before the deadline. This was set at March 31, but has been extended to May 31. Though the full amount is not yet in, the payback has started. To date, eight people have paid back the full amount, and nine have paid part of the amount. There is basically no difference in gender; exactly the same number of men and women have paid all, and nine women have paid half, compared to eight men. The chairman has stimulated people to pay back by stating that people that do not reimburse, risk being prohibited to join the SACCO. Two people have not paid yet. The major constraint for partly paying or not paying, was said to be medical expenses for family.

The SACCO is now officially registered with the Ministry of Cooperatives and Marketing under the name 'KEA and PROLINNOVA Saving and Credit Cooperative Society' and is

ready to be launched. Thirty members have signed up to join. So far one member has bought shares. The fact that Kaganga is a relative or close friend to many people, aids the growth of SACCO; it makes the lack of trustworthiness above the family or kin level, which often poses a problem for establishing and expanding small businesses or projects in Africa (Kristiansen, 2004), basically absent in this case. Hence, the SACCO is also a form of organisational up-scaling; it improves the organisational strength of KEA, and increases the level of self-financing or income generation through shares. When the SACCO is up and running this could turn into quantitative up-scaling in time.

4.5.2 Spread of innovations

As stated earlier, eight innovations are 'new' innovations. They are a first functional effect of LISF. In the interviews the thirteen innovators were asked if they had told about their innovation to others, and if so, what exactly they had told, to how many people and if they knew whether those people had implemented it or not. This was to see to what extent the process of horizontal functional up-scaling has been



Figure 18: Up-scaling of local innovation

Maria Rose Kamalwa growing passion fruit supported by wires (photo 1) and the practice copied by Salongo Kakembo (photo 2)

achieved. The table on the next page lists the innovators, what they have told about their innovation, to how many people, and how many they know that have applied it. Here the 'innovators' are the ones who created the knowledge, and the people that have applied it are referred to as the 'first generation adopters' (Critchley, 2007: 51).

Table 1: Spread of LISF-innovations

Innovator	Gender	Information shared	To how many*	Number of first generation adopters
Mary	F	4 how to make it 6 the innovation	10 (4 KEA members, 6 non-members)	4
Salongo	M	The 1 st step of the innovation	40	15 are applying the first step
Christopher	M	How to make it	20	7
Oliver	F	How to make it	20	1
Joseph	M	1 how to make it, 2 the innovation	3	1 didn't* 2 don't know
Teddy	F	How to make it	2	0
Joyce	F	How to make it	2	2
Stephen (CBO)	M	Nothing	0	0
Haruna	M	How to make it	10	0
Geoffrey	M	How to make it	G	12
Virisita	F	How to make it	2	2
Maria Rose	F	How to make it	10	3**
John M.	M	The innovation	2	2
Vincent (school)	M	How to make it	5	5
Dan	M	How to make it	2	1
Margaret	F	How to make it	G	Don't know
Leonnard	M	How to make it	About 20	Don't know
Eleth	F	How to make it	3	Don't know
Betty	F	How to make it	3	They have started it

* = Dan Lukwago did not apply Joseph's innovation, but is thinking about extending/improving that innovation

** = Cross-referencing confirmed that these people implemented the innovation.

G = Groups. The knowledge has been spread at seminars, workshops, in churches and/or schools to large groups with an undefined number of people. One G means that one person spread the knowledge to a group.

Functional scaling-up is present in the sense of an increase in the number of the now existing innovations. Eighteen out of nineteen innovators, 94.74%, have been willing to spread knowledge. Most people have told others how to replicate the innovation. With that quantitative scaling up is present; the spread of information leads to the existence of first generation adopters. In one case it was cross-referenced whether the first generation adopters did indeed adopt the innovation, and they did. Yet they did not pass on the information to others.

Out of the people that did not always explain others how to make the innovation, four are men and one is a woman. It seems that women are more open to new ideas, and more eager to spread the information than men are. The study of Ellis-Jones et al. (2001) on promoting farmer in innovation in Kabale Uganda, comes up with similar conclusions. They mention the collaboration with women's groups in this. Many of the female members interviewed in Kikandwa sub-county are members of one of the several women's groups.

The existence of these groups, and the absence of men's groups, can be a factor that contributes to the fact that women have spread more knowledge about their innovation than men have done.

Some people did not tell others how to make the innovation because they were afraid to lose market, which is understandable. However, also the opposite is possible. Some people are spreading knowledge to create a market. Like Salongo Kakembo, who's innovation is to dry vegetable seeds and sell them for planting. He has given free seeds to people and taught them how to plant it. Now many people are growing tomatoes, due to which they have created a market; every week merchants from Kampala come to buy their tomatoes. Since Kakembo has stimulated people to grow tomatoes, he is now the agent between sellers in the district and buyers from Kampala. He created an income-creating activity for himself, and has contributed to the commercialisation of innovation, as stated in the contract between PROLINNOVA and KEA. With this activity he contributes to political up-scaling; he has empowered people and addressed the underdevelopment of the area.

People were also asked if they had come up with new innovations, after having received the LISF. Most people did not come up with new innovations. Also the people to whom they spread the knowledge, did not come up with new innovations. Nevertheless, two people are working on tangible new ideas, and Kakembo's new job can be seen as an innovation as well.

What cannot be seen in Table 1 is the nature of the innovators. Throughout the fieldwork it became clear that the people that are the most active in daily life, are the ones that spread the knowledge needed to adapt the innovation, to the greatest number of people. Amongst them are also Kakembo and the ones that are developing new ideas. Though not all of them are educated, the active people are the people that think about their lives and about improving their livelihoods themselves, rather than to sit and wait for aid to knock on their doors. In spite of the fact that also these people face challenges in life, they experiment, think, create market, educate themselves through attending meetings and workshops, and participate actively in KEA and in other organisations. They will from now on be referred to as 'true innovators'.

4.6 Improving local innovation

In what ways have innovators used the LISF to improve their innovation? In Chapter three a list was given of what the LISF was supposed to be used for. The table on the next page shows how the innovators feel LISF has improved their innovations.

Table 2: Improvement of LISF-innovations

Innovator	Gender	Improvement innovation	Financial benefit
Mary	F	Extra gardens	Generating income
Salongo	M	Better equipment Recognition	Generating income
Christopher	M	Better equipment Able to use it	Generating income
Oliver	F	Better equipment	Generating income
Joseph	M	Better equipment	No
Teddy	F	Better equipment	Saving costs
Joyce	F	Better equipment More organised	Generating income
Stephen (CBO)	M	Better equipment	No
Haruna	M	Better equipment	No
Geoffrey	M	Better equipment	No
Virisita	F	Better equipment	No
Maria Rose	F	Better equipment Recognition	Generating income
John M.	M	Better equipment	Saving costs
Vincent (school)	M	Better equipment	No
Dan	M	Gained knowledge	No
Margaret	F	Better equipment	Generating income
Leonard	M	Better equipment	No
Eleth	F	Better equipment	Saving costs
Betty	F	Better equipment	Generating income

Eighteen people, 94.74%, have improved their innovation by using the LISF at least partly to cover costs directly related to experimentation, meeting point one of KEA and PROLINNOVA's contract. According to them, better equipment contributes to carrying out the innovation in a better way. Also many innovations are mixtures of herbs, and better equipment, such as jerrycans, helps the innovators store it. Much of the equipment bought can be used in daily life as well, so it profits the innovator in more than one way. For two people, 10.53%, part of the materials bought were recordkeeping articles, hence touching the 4th point of the contract. For some the equipment was really necessary, either to create the innovation or to finalise it nicely so it can be sold. In the last case the innovation becomes an income generating activity. In eleven out of nineteen cases, 57.89%, the innovation improves the financial livelihood of the innovator, which is a stimulant to keep on practicing this innovation.

Only one person has solely spend the money in gaining knowledge by making cross-visits, touching upon points two and three in the contract between PROLINNOVA and KEA. Many others say they would like to gain more technical knowledge about their innovation. However they have not invested the money in that. It would be a costly matter to find the knowledge

that is needed, and what would one do with the knowledge but without money to invest in the innovation? For most people the innovations are seen as part of the project, as part of receiving funding. Often people do not really look beyond that, and seem to have forgotten that innovating can actually improve their livelihoods. Only Kakembo has improved his innovation to the extent that he created a new innovation, which is functional up-scaling as well as it is an improvement of the existing practice.

4.7 Conclusion

Quantitative up-scaling is present in the sense that KEA expanded its membership base with ten members, as well as the number of innovators has increased with eight people. As a result functional up-scaling has taken place; the number and type of the innovations have increased. Through the spread of knowledge this has led to the existence of first generation adopters, but not to new innovators.

Improving local innovation through LISF was mainly done through covering the costs directly related to experimentation. This is the first point that LISF is intended for, as listed the contract between PROLINNOVA and KEA. Few people bought materials for recordkeeping, though most did practice the recordkeeping. Although technical knowledge is something many people request, the money was generally not invested in this; only one person met this point of the contract. Preference was given to seeing quick benefits of the money in the form of better equipment. All of the five points stated in the contract between PROLINNOVA and KEA are covered at least by one person.

The aim of LISF to give farmers a lead in defining and implementing activities is certainly achieved and by doing so local innovation is stimulated. Participation by the farmers in R&D is mostly met to the extent of development; research by the farmers had not been done in most cases.

5. EFFECT OF NON-MONETARY SUPPORT ON LOCAL INNOVATION

“On a farmer-to-farmer visit you exchange knowledge and you learn practically because you can learn by looking. It stimulates me to copy practices because I can see how it works, whereas with trainings I don’t feel that stimulated.”

Agnes Musitwa, KEA member, May 30th 2008

5.1 Introduction

Aside from the funding, KEA has received support to promote local innovation through workshops and a farmer-to-farmer exchange to Lukwanga. The latter has involved many people directly. Therefore this chapter aims at answering what effect support in the form of a one day visit to Lukwanga has had on the scaling-up of and improvement in local innovation. It first addresses the practices learned in Lukwanga, then discusses the effect of the exchange visit on the spread of local innovation, followed by a section on its effect on improving local innovation.

5.2 The exchange

One way of trying to fulfil PROLINNOVA’s mission to foster a culture of mutual learning and synergy in local innovation processes in agriculture and natural resource management, is through facilitating a farmer-to-farmer exchange to Lukwanga. Lukwanga is located in Wakiso district; a one hour drive from the main road in Kikandwa sub-county. PROLINNOVA organised and arranged the exchange, and attending members paid 10%, US\$ 84,800 (Euro 34), of PROLINNOVA’s expenditures on the visit. The seventeen people and two organisations that received funding from PROLINNOVA two months earlier, were the ones entitled to receive this support for sure. Six of them could not make it, hence thirteen of them went to Lukwanga.¹¹ Fifteen other members of KEA attended the exchange, equalling 28 as the number of KEA members that received this support directly. In addition two journalists, a cameraman and an agricultural officer of the sub-county went, making the total number of people 32.

By making an exchange visit to Lukwanga, another step in the model of field activities, as presented in figure 15 in Chapter four, is taken. Step six, “Farmer Innovator to Farmer Innovator visits” (Critchley, 2008: 25) has started off, but is yet to be completed with a return visit from Lukwanga to KEA.

¹¹Innovators receiving LISF that did not go to Lukwanga are: Oliver Nakyejwe, Joseph Bukya, Mary Nasubuga, Stephen Burundugge, Christopher Kiseke, Virisita Nasimbwa.

The thirteen innovators that went to Lukwanga were asked what they have learned from the exchange, what parts of the knowledge gained they have applied, and if they have spread the information to others. Afterwards two of these innovators were interviewed in depth, as well as three KEA members that did not receive LISF but did go on the exchange. In total sixteen people were interviewed about Lukwanga.

5.3 Practices learned in Lukwanga

Following is a list of all the topics the sixteen interviewees mentioned when being asked what they have learned from the Lukwanga exchange. A brief explanation of each topic describes what this topic means to the people interviewed. It is a summary of the descriptions given by them. With each topic the number of people that mentioned it is listed. This says something about the importance and attractiveness of the topic to the innovators.

Table 3: Knowledge gained in Lukwanga	
Knowledge learned	Number of people
Pig rearing We learned how to make a pig sty. The pigsties they have are very nice. They are build on poles. Under the sty there is a trench where the urine of the pigs is collected so it can later be used as fertilizer along with other waste products. There were a great number of pigs of different ages and different breeds, including exotic ones, to improve breeding. The male pig was used only for that farm to prevent the spread of diseases. The piglets were kept in a separate room from the adults.	15
Use of chicken droppings Chicken droppings are used to fertilize the soil, to increase the yields of the crops. We could see it in a demonstration; one side was with fertilizer, and another side without. The side with fertilizer did much better. When you want to apply the droppings to the banana plantations, you mix them with soil, then you dig holes around the banana plant and fill the holes with the mixed soil.	15
Using animal urine Animal urine, in particular from pigs, was used to fertilize banana-plantations. The urine falls down in the trench, which leads it to a hole with a jerry can. There it is collected and it is put in a bucket for one to three weeks. After that time it is applied around a banana plant and then the banana pests die. It can also be used as a pesticide on crops	9
To work together There was the spirit of brotherhood. People are working together, as a team.	8
Maize storage The place to store maize was build on poles, to prevent animals from eating it. Because it is build high, the air passes through the maize easier, and that prevents pests. It keeps the food good for a longer time.	6
Resource centre The office was a learning centre. There were photos and trophies of environmental awards. Their new knowledge is put in the computer. Everything should be backed up.	6
Quick growing crops To plant crops that grow fast, so they can quickly generate income from them.	5

There were kales and greens, but also kinds that were new to us.	
Poultry shelter Constructing a special house for the chicken. The chicken can go outside, but only in the fenced area. In the house there are different rooms, for separating chicken that are breeding or that have chicks. The house makes it easier to collect the chicken droppings.	4
Solar cooker It is a box with cotton on the inside. The box has one opening through which you can put the saucepan with rice. You add hot water, put it in the sun and the rice will make itself ready.	4
Thermal cooker A small paper box in which they put dried grass, then a piece of cloth/blanket on the dried grass. Then you put a dish with food that is half prepared in the box. You cover the box with a blanket and then the food will get ready as if it were on fire. The box is put indoors.	4
Improved banana plantation Their banana plantation was very well looked after. Besides adding chicken droppings and urine, there was a big hole to store water for use in the dry days.	4
Improved farming through spacing We were told to plant one maize grain per hole, not to put many in one hole. There was a demonstration. There were two gardens, one with the seeds spaced out, and one where many seeds were put in one place. The first one was better.	3
Zero grazing cattle Keeping cattle indoor and feeding them things like leaves.	2
Making piggy feed The pigs were fed a mixture of anthill soil, maize flower, grinded sardines, salt, ash and seeds of cotton. The pigs grew fat!	2
Mulching banana plantation Cover the soil with waste material like banana peels and potato peels.	2
Saving through SACCO Having a mechanism where people can save money and ask for loans.	1
Woman can also work Men should uplift women and women's groups, because they are shy. Every woman can work, they also have skills, and can also do things like driving a tractor.	1
Mulongo Kato To have one cow very well taken care of. It will give more litres of milk than average. People collect its urine and use it as a fertilizer or pesticide. The cow was given tree leaves as a supplement.	1
Feeding the animals on time If animals are fed like people, on time, they are taken care of much better and look healthier.	1
Income generating activities as an association	1
To love your garden first	1
Ways to approach people	1

Most of these practices were new to the members of KEA. In that sense they could be characterised as 'innovations'. People in Kikandwa sub-county did not see the need of improving agricultural practices, because in general the land has always been in abundance. However, they were impressed by what was done to conserve and enrich the soil fertility in Lukwanga.

5.4 First generation adopters

What is of real importance is not just what was learned from Lukwanga, but whether there has been functional scaling-up. In other words, have the number and type of innovations increased? In order for this to happen people must not only adopt the practices, but must adapt them as well. Some practices are easier to implement than other due to a lack of material and funding. In total eleven out of sixteen people said to have applied one or more practices learned in Lukwanga, which comes down to 68%. Next is an overview of what has been copied in the six months after the visit, and by how many people. The people that adopted these practices directly from Lukwanga are referred to as 'first generation adopters'.

Table 4: Practices adopted from Lukwanga

Practices adopted	Number of first generation adopters
Poultry house as a group project	2 groups (ca. 16 people)
Chicken droppings Eight people have said that they are using chicken droppings on their gardens. Kakembo: "Chicken droppings are like gold now, when you see one you try to get it."	8
Quick growing crops	2
Poultry house individual One woman is constructing a poultry house.	1
Up-scaling women	1
Collecting data and doing research	1
Bought pigs For the pig shelter she wants to build.	1
Mulching banana plantation	1
Prepared land To grow bananas applying Lukwanga's practices.	1
Feeding pigs on time	1
Amount of times the practices are copied	Total: 33

The 'innovations' mentioned by the sixteen interviewees are now practiced seventeen times by individuals. It can be said that on average one individual that goes on the exchange adopts at least one practice. Two groups are practicing an innovation, which makes those practices being applied 16 times. The total amount of times a practice is applied 33. The SACCO mentioned in Table 3 is applied but not listed in this table because the idea for the SACCO originated before going to Lukwanga.

The practice most successfully up-scaled was 'applying chicken droppings'. This practice is appealing because it requires no extra input in the form of resources, labour or planning, because all people keep chicken. Practices that are considered costly, like building a pig sty

or a maize granary, were not up-scaled by the individuals. Even the practice of applying animal urine as a pesticide, that was mentioned by many people, was not implemented. Very likely this is due to the fact that animals are not kept indoors, with zero-grazing practices. Besides that, building a shelter is costly; it takes time, and money is needed to buy materials and hire labour. However, with group effort the more costly practices were taken up. The group projects are combinations of innovations learned from Lukwanga, making a poultry house and working together, and therefore deserve special attention.



Figure 19: The poultry project
30-05-2008: building the second poultry house. The first poultry house is seen on the right



Figure 20: Progress on the poultry project
The second poultry house on 25-06-2008

5.4.1 The poultry project

At the time of writing KEA's second poultry house is under construction. Every Wednesday is 'poultry house day'. Both poultry houses are group projects of various KEA members, men and women together. The average groups size is eight people. Haruna Nsubuga: "We copied the behaviour of brotherhood by doing the poultry project, by constructing the shelter as a group. It's a way to work together as a team." Besides combining the practice of the poultry house with group work, it is also an income-generating activity, which creates organisational scaling-up for part of KEA.

5.5 Second generation adopters

Besides being up-scaled by the first generation adopters, there is also functional up-scaling of local innovation by the second generation adopters; those that have received the knowledge from the first generation adopters, and that have implemented it as a result. The table on the next page shows the spread of knowledge as revealed by the interviews.

Table 5: Second generation adopters

Spread of knowledge	To how many?	Number of second generation adopters
All topics	78*	
Working together	G	
Chicken droppings	17 and GG	22
Making piggery feed	G	
Bookkeeping	G	
Poultry house	11	2
Piggery project		3
Amount of times the practices are copied		Total: 27**

* = all topics being told to 78 people. The amount can therefore be added to each of the other seven topics, explaining the presence of a number in the category of 'second generation adopters' when there is no accompanying or relevant number in the category 'to how many?'.

** = these are only the practices of which the farmers know for sure that they are implemented.

G = Groups. The knowledge has been spread at seminars, workshops, in churches and/or schools to large groups with an undefined number of people. One G means that one person spread the knowledge to a group. Hence 17 and GG means the knowledge has been spread to 17 individuals, plus to two big groups.

In the absence of a presentation for KEA members on what was learned, fourteen of the sixteen first generation adopters interviewed, spread the knowledge to others on their own. The knowledge was mainly spread to people who are friends or customers. They are KEA members as well as non-KEA members; hence the support affects the community as a whole. The second generation adopters also primarily implemented the knowledge that was free of input-costs. However it must be taken into account that it was mainly that knowledge that they were told about. The knowledge about the poultry house was also spread rather much; it is that house that makes it easier to collect the chicken droppings.

5.6 Improvement of local innovation

Apart from adopting the practices learned in Lukwanga, it is also important to see if people have improved those practices, or if the practices have improved local innovation in Kikandwa sub-county. Jane Nakaai is a woman who altered one practice that she saw in Lukwanga. She already had a poultry house, though it was not built with the intention of collecting chicken droppings. In Lukwanga she saw the chicken droppings were collected by using a net. She did not have the money to buy such net but did want to collect the chicken droppings. Now she uses sticks of elephant-grass instead. Poverty did not allow her to copy the practice as seen in Lukwanga identically, but she was innovative in creating another option. Jackson Kamyia did not go to Lukwanga, but he did learn about the practices from other people. He altered the practice of applying animal urine to banana plants by applying human urine. According to Jackson human urine works just as well as animal urine.

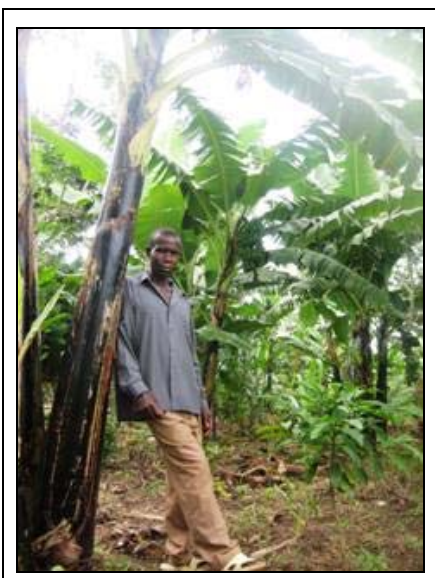


Figure 21: Jackson Kamyia and his banana plantation

Margaret Nabatanzi is using the knowledge from Lukwanga to make another innovation. She is an innovator that processes Amaranthus' seeds and sells them. Lukwanga gave her the knowledge to also use these Amaranthus' seeds to make piggery feed. She is still developing the idea and has not yet put it into practice.

Unfortunately these three people are exceptions. The other respondents did not improve or adjust innovations seen, nor did they come up with new innovations. Also the people they have told about the practices have not come up with new innovations.

5.7 Conclusion

More than two-thirds of the people interviewed about the farmer-to-farmer exchange have applied one or more practices seen in Lukwanga. Most popular are practices that cost little in terms of money, resources, labour or planning. It was mentioned by many that working together can be beneficial. The idea to start a group project appealed to some members, and two group projects have now started. The poultry projects were initiatives from KEA members, inspired by what they had seen in Lukwanga.

Fourteen out of sixteen people interviewed, said to have spread knowledge gained from Lukwanga. In most cases this was done through informal channels. Like the first generation adopters, the second generation adopters also applied mostly those practices that require little additional input.

Up-scaling new knowledge is quite successful, but creating new knowledge or improving local innovation as a result of the exchange visit is not done on a great scale. The majority of people has not improved their innovation, has not modified the Lukwanga 'innovation', and has not created new ones. Developing new innovations by using creativity is not stimulated to a great extent by an exchange visit.

6. LIMITING AND FACILITATING ISSUES

“What I find difficult is to tell other executive members that they must do better monitoring and evaluation, though they, like me, are doing all this on a voluntary basis.”

John Kaganga, director KEA, June 25th 2008.

6.1 Introduction

In the previous two chapters the data as gathered through fieldwork was presented. Looking at the number of innovations and the number of innovators, it became clear that support and funding have a positive effect on the horizontal up-scaling of local innovation and to a lesser extent on the improvement of local innovation. However, results are almost never all positive or all negative. There are external constraining and facilitating factors that influence the effect that support and funding have on the up-scaling of and improvement in local innovation. They are important to bear in mind for the impact of this PROLINNOVA programme and for similar future programmes; factors that limit promoting local innovation should receive extra attention in these programmes. This chapter first discusses the constraints and then the factors that facilitate up-scaling of and improvement in local innovation. The factors are external to the funding and support given, hence not taking into account the actual support and funding itself.

6.2 Limiting factors

The constraints for up-scaling and/or improving local innovation, identified throughout the fieldwork, are listed below. Some constraints come from the members of KEA, others are related to cultural values, while others are due to external influences.

6.2.1 Quick benefits

Money plays a big role in innovating in various ways. It is true that the money has stimulated innovation. However, innovation is mostly scaled-up, and not so much improved. Overall the money is invested in equipment, which shows benefits quickly and directly. Technical and scientific knowledge can possibly improve innovation in a better way, and be beneficial for income-generating activities *and* the up-scaling of the innovation. Yet, investing in knowledge to make innovation better in the future is not very common. Also absent is adopting high initial input projects from Lukwanga that could pay off in the end. Money is valued less in the future than in the present, which is characterising for developing countries (Kahn, 2004).

6.2.2 Participation for incentives

Another thing that must be kept in mind is the danger that people participate in LISF in return for the cash they receive. The higher the degree of outside subsidy or support, the lower the level of genuine land user participation (Liniger and Critchley, 2007: 40) This is characteristic for the fourth typology of participation, 'participation for material incentives' that Pretty (1995) mentions. It cannot be expected that all people are already innovating before hearing about the LISF, but it can be kept in mind that there are always true innovators and innovators that innovate for the money. The last ones are likely to curtail the activity when the incentive ends, resulting in a non-sustainable use of the funding.

6.2.3 Identifying true innovators

The true innovators are likely to prolong the activity, spread the information on a larger scale, and think of new innovations. True innovators in Kikandwa sub-county can be identified by openness, active participation in events, (women's)groups, meetings, workshops and daily activities. Their gardens are full of 'innovations' like growing cassava in polythene-bags with soil to recreate swamp-conditions or applying manure with termites to enhance soil-fertility. Some have visited places on their own, with the purpose of learning and adapting new practices like building energy-saving stoves out of Lumbugo grass and clay. These are the innovators that see patterns of resource utilisation over and over again. If thorough preliminary research would be done before distributing the money, these innovators would be identified. Distributing funds and support at least to all these innovators is the key to improving local innovation and up-scaling local innovation on large scale.

6.2.4 Creative thinking

Creative thinking refers to the true innovators mentioned in the previous section. Apart from these innovators, it was found that in many cases the creative ability of people to come up with improvements or new innovations, needs stimulation. There seems to be a gap between what people learned at KEA's and PROLINNOVA's workshops, and how to put this into practice. In a few cases people simply used handed down indigenous knowledge (e.g. to make organic pesticide) and added one ingredient to make it an 'innovation', which is actually not innovating, but mainly copying an existing practice. The dynamics of indigenous knowledge are being recognised, but they do not equal 'innovating'. People thinking in that way, are the ones that lack real creative thinking, who ask repeatedly for more funding, and who's innovations are least developed.

6.2.5 One man does not make an organisation

Based on observations and interviews it can be said that Kaganga is the drive behind the organisation. He is a truly good man, who makes many sacrifices for KEA. Although there is

an executive committee, many tasks come down to him as a director. This limits the growth of KEA as an organisation. The surrounding milieu should be supportive; people should be active in gaining and spreading knowledge, and in their activities as executive members. Social capital should be enhanced to increase the value of activities (Coleman, 1988). It is a resource for collective action that should be used more.

6.2.6 Friend or foe?

Kaganga has lived in Kasejere all his life, and many people are relatives or friends of him. Kaganga is part of the KEA LISF executive committee, and is one of the three people that conducted visits to monitor the innovations. Although interview-visits have shown that except for one, all innovations have been implemented, it is a difficult thing to act as a friend and a superior at the same time. Relationships are delicate in the region, and not greeting someone is already taken as an insult. “If you give people advice they think you are their enemy”, Kaganga said. It is complicated to urge someone to improve his innovation, or payback to SACCO, while being a friend at the same time. These cultural values place a restriction on the authority Kaganga has as a director.

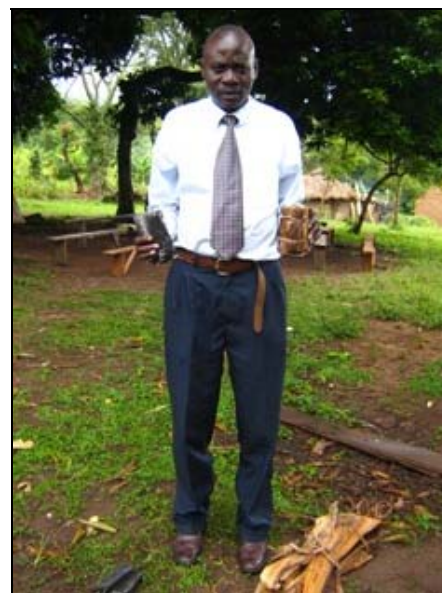


Figure 22: John Kaganga

Kakanga showing plastic nursery bag for planting seeds and his innovation: a eco-friendly bag made of banana leaves

6.2.7 Infrastructure

Lack of proper maintenance of the roads limits the communication flow within the sub-county and the up-scaling of innovation. One true innovator missed the exchange to Lukwanga because he was not informed in time. Group projects are an effort because people are spread out. Old people and women that are at home with their children cannot cover the time-consuming distances to teach others about their innovation. Poor infrastructure also limits the market access, although Kakembo's case shows that never giving up pays off in the end. Most people in Kikandwa sub-county have cell phones, which is a big step forward. Nevertheless, telecommunication is a costly matter for most.

6.2.8 Indicators of success or failure

'Lack of adequate indicators of success or failure' is a factor mentioned by Ellis-Jones et al. (2001) that limits up-scaling of practices. It applies here as well. The contract on LISF between PROLINNOVA and KEA states that the innovator 'must undertake to share'. This has been done by almost all innovators. However, some only told about their innovation,

rather than the knowledge needed to upscale the innovation. Some told many people, others only two. The extent to which the scaling-up of local innovation has happened should not be taken into account when judging the successfulness of this programme, since it is not stated to what extent knowledge should be spread.

6.3 Facilitating factors

Besides the constraints there are also several factors that facilitated the scaling-up or improvement of local innovation in KEA.

6.3.1 Groups

Linking innovators to social organisations stimulates the scaling-up of local innovation. Several female innovators are linked to women's groups, one man to a farmers group, one innovation is under a CBO, and another one under the KEA Green Hill Education Centre. Innovations that are related to groups, have a greater chance of being up-scaled. Especially Vincent Lutalo's innovation on the name of KEA Green Hill Education Centre, has great potential for this, since it is a project involving primary school pupils from all levels.

Another activity related to groups and facilitating transport, hence making communication and up-scaling easier, is the community work that is done on roads. The day the drums are played early in the morning, is usually the day that road-construction by the local people is being carried out. The drums can be for any activity, but regarding the state of the roads, it is mainly used for this.



Figure 23: Local people working on roads on voluntary basis

6.3.2 Bookkeeping

Recordkeeping of expenses is increasingly practiced among KEA members. Although KEA does not have a permanent office building, resulting in rather unorganised recordkeeping, they have well-educated their members on this. The eighteen literate innovators practiced recordkeeping. Being able to present to others what it costs to make the innovation and what monetary benefits are gained, generates the scaling-up of local innovation.

6.3.3 Limited cash availability

Remarkably, having little money can stimulate local innovation. Poverty drives people to copy certain innovations. Many of the innovations are low in external input, which makes them

easy to copy. Farmers in need for pesticide can turn to their fellow KEA members for assistance rather than buying it on the market.

6.3.4 SACCO

The establishment of a SACCO stimulates people to save their money, or invest it to gain more out of it in the future. Here the fact that Kaganga is a friend of many members is positive; people trust him. If the SACCO turns out to be successful, the fear of investing money in something that generates income in the future is likely to be partly overcome. When that happens, the high-input knowledge from Lukwanga is there to be put into practice.

6.4 Conclusion

Although the constraints or limitations to promoting local innovation are greater than the factors that facilitate it, this does not mean that KEA has not succeeded in piloting LISF. KEA is an organisation with many challenges like the lack of a permanent office, of educated people, of skills to write proposals, of funds, of facilities like running water, electricity and internet, and of transport. Yet they have managed to achieve up-scaling of and improvement in local innovation.

7. CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This thesis has aimed at answering the research question ‘What is the effect of support and funding in relation to stimulation of improvements in and/or up-scaling of local innovation in Kikandwa Environmental Association within the Kikandwa sub-county, Mityana district, Uganda?’. Especially the chapters four and five have addressed this question and its sub-questions. The derived conclusions are brought together in this chapter, followed by recommendations for PROLINNOVA, KEA and for future research.

7.2 Conclusions

First the conclusions that can be draw from the chapter on the effect of funding will be given, followed by what can be concluded regarding the effect of support on local innovation. Taken together, and linked back to PROLINNOVA, general conclusions are presented in section 7.2.3.

7.2.1 LISF

The LISF has stimulated the quantitative up-scaling in the sense of more KEA members and more innovators. More innovators naturally results in functional up-scaling through an increase in the number and type of local innovations, which are practiced by the innovators themselves as well as the first generation adopters. Of the LISF-receiving innovators 95%, has been willing to share knowledge to KEA members as well as non-members, hence benefiting the community as a whole. Most of them have done this through explaining the process of making the innovation. The first generation adopters have adopted indeed, but have not adapted the practices. With the exception of ‘true innovators’, the LISF has generally not stimulated innovators to make more innovations after having received the funding.

LISF’s aim to achieve more participation by the farmers in R&D processes is predominantly met through developments in innovations by improving them with LISF. Improvement in local innovation as a result of LISF is mainly seen in purchasing better equipment to make the innovation. These costs directly related to experimentation, cover the first point that LISF’s financial awards are intended for. For 58% of the innovators the innovation improves their financial livelihood, and better equipment has contributed to that. Since money has stimulated people to innovate, the improved financial livelihood due to innovating is likely to stimulate more innovating in turn. However, in order for this to work the innovators must be more confident of their innovation. Many innovators identified the need of technical knowledge to uplift their innovation from being an experiment to an established practice. Yet only one

person used LISF to do more research about his innovation with the purpose of gaining more knowledge. LISF has not really succeeded in achieving more participation in research, but it has achieved more participation in development processes. This was only present in the innovations that received LISF.

7.2.2 Exchange visit

The effect of non-monetary support has been evaluated by looking at the exchange to Lukwanga, which benefited many members directly. Out of the 22 practices seen in Lukwanga, ten were copied by the first generation adopters. Eleven of the sixteen innovators interviewed on Lukwanga, copied one or more practices. The amount of times practices are applied by individual first generation adopters is seventeen. On top of that two groups projects started, combining the practice of building a poultry shelter with the 'practice' of teamwork. Fourteen people facilitated further functional up-scaling by spreading the knowledge gained from Lukwanga to members and non-members of KEA, leading to at least 27 second generation adopters in the community as a whole. Practices most successfully up-scaled, by both first and second generation adopters, are those that require little input in the form of labour, materials, planning and money.

Two innovators have adopted and adapted practices from Lukwanga. One innovator has used the knowledge from Lukwanga to improve her own innovation. Apart from these people, first and second generation adopters have not improved practices due to the exchange visit.

7.2.3 General conclusions

The hypothesis as stated in Chapter one, predicting a positive effect of PROLINNOVA's support and funding on up-scaling and improving local innovation in KEA, comes true in most cases. PROLINNOVA's goal to stimulate processes of local innovation for environmentally-sound use of natural resources is achieved to a large extent through two of its objectives; piloting decentralised funding mechanisms and enhancing capacities of farmers in participatory approaches. By doing so, PROLINNOVA's aim to stimulate local innovation through 'development and institutionalisation of partnerships and methodologies' does not seem to be put into practice here; partnerships are still absent in KEA, and strategies to acquire partnerships do not seem to be present.

PROLINNOVA's mission to foster a culture of mutual learning and synergy in local innovation processes in agriculture and natural resource management, seems to be kept in mind more when providing support and funding. Mutual learning has been accomplished on farmer-to-farmer level, by the spread of knowledge gained from Lukwanga and by up-scaling

information on individual's innovations. However, more emphasis could be put on this by sharpening the requirements of the up-scaling of knowledge.

The vision of PROLINNOVA is a world in which farmers play decisive roles in agricultural research and development for sustainable livelihoods. It has been a guideline for the support and funding given to KEA by delegating power to representatives of KEA, and stating 'participant must undertake to share with other farmers' in the contract between PROLINNOVA and KEA, hence placing the power to up-scale knowledge horizontally in the hands of local innovators. Decentralising accountabilities and responsibilities slightly limits the up-scaling of and improvement in local innovation; cultural norms and values regarding the position and powers of a friend that is a superior at the same time stand in the way. This has limited the efficiency of monitoring and evaluation, and hence the urge for innovators to implement innovations. Also, it is the first time that KEA receives a task like this. Although the chairperson has attended workshops on this topic, in particular the one in Ethiopia, putting theory into practice and undertaking further steps to truly promote local innovation, proves not to be the easiest thing and thus limits the positive effect of support and funding. Aside from that there are external factors that constrain the positive effect from reaching its fullest extent. The focus on the present rather than the future, and the bad state of the infrastructure are two important ones.

In spite of the challenges that KEA faces, funding and support have had a fair effect on promoting local innovation. The effect on the up-scaling of local innovation is greater than on the creative thinking to improve local innovation. The, mainly functional, up-scaling has benefited the community as a whole, not just those who received support and funding. Besides the positive effect on up-scaling and improving local innovation, PROLINNOVA's programme has made the people and KEA feel recognised. New life has been blown into KEA's aim to protect the environment hand in hand with improving rural livelihoods. KEA is a true organisation without the slightest trace of corruption. This organisation deserves all the support they can get.

7.3 Recommendations for PROLINNOVA

Participation is a good thing, but the kind of participation must benefit the lasting effectiveness of the program. Taking cultural values in mind, as well as the fact that a person that strives for environmental protection is not necessarily a strict or capable superior, it would be good to take another look at the type and effect of participation.

Stricter requirements on up-scaling, along with a regulation-policy that exists at least partly outside the organisation, contribute to a more successful outcome of the PROLINNOVA

programme, and LISF in particular. Assistance from outside KEA can help to put theoretical knowledge acquired into practice.

Giving away money without proper monitoring and evaluation, stimulates the money to be used for purposes other than the intended ones. Though it has basically not happened in this case it can be seen in other organisations in Uganda, where unconditional grants given disappeared into 'general management and administration' (Francis and James, 2003). Setting clear indicators of success and failure, regarding the up-scaling of and improvement in local innovation as well as in the process of selecting innovations, and making sure that proper monitoring and evaluation techniques are in place, contributes to preventing this to happen.

Technical support is requested by many innovators, and should be given on a micro-level to stimulate the spread of local innovation. This stimulates the up-scaling of innovation, since innovators generally want to develop their innovations beyond the stage of experimentation, before sharing it with others.

Sharing of information needs to be more organised in order for local innovation to be truly scaled-up. Poor infrastructure stands in the way here. Making a presentation or workshop, where knowledge can be shared with many people at once, a compulsory part of the PROLINNOVA programme, facilitates this.

Exchange visits should be held more often. They reach more people than funding, and appeal to the people because they are more practical. Funding could be given after exchange visits for group-projects (e.g. by women's groups) that want to copy a practice seen on the visit, since groups can achieve more and spread knowledge to more people.

Thorough preliminary research of the location could identify limiting and facilitating factors. Important is to identify true innovators and true innovations, which can contribute a lot to horizontal up-scaling of and improvement in local innovation.

7.4 Recommendations for KEA

The smallest organisation may have the least money, but the best intentions. It is sad but true; donor agencies do look at the quality of proposals handed in. Having the proposals written by a person educated in proposal writing is necessary if KEA wants to be in the race for receiving funding.

Recordkeeping needs improvement. KEA should try to look for a donor through which they can receive a solar power installation for the computer that has been donated to them. The secretary needs a computer course so he can quickly and easily order the data.

The spread of local innovation and the knowledge learned in Lukwanga would have a greater impact if a presentation or workshop would be held on that. This allows people to come together once, rather than having to travel long distances to individuals.

7.5 Recommendations for research

The most important issue that needs more research is the establishment of an effective monitoring and evaluation system. Although the chairman has received training in this, there seems to be a link missing that allows this theory to be put into practice. If research could come up with a solution for this, the effect of support and funding on the up-scaling of and improvement in local innovation could possibly be much larger.

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ANNEXES

Annex 1: Interview guides

1 A. innovator that received LISF

Name

Age

Gender

Occupation

Village, parish

Introduction

1. Why did you join KEA?
2. How long have you been a member?
3. According to you, what is an innovation?
4. According to you, who is an innovator?

Innovation

5. Can you tell/show me what your innovation does?
6. (If the innovation is technical, ask indirectly if it is:
 - technically sound
 - environmentally valid to be useful
 - economically valid to be useful
 - socially valid to be usefulIf the innovation is social,:
 - sustainable
 - replicable
 - inclusive
7. How did you come up with the idea of your innovation?
- 7a. Why did you come up with the idea of your innovation?
8. How did you create it?
9. When did you start the innovation?
10. According to you, has your innovation contributed to better environmental management? If so, how?

LISF

11. How did you hear about LISF?
12. How much money did you receive from LISF?
13. For what exactly did you use the money? (bookkeeping of expenses)
- 13a. Is your innovation income generating? If not, have you invested a part in an income generating activity?
14. How has the LISF improved your innovation?
- 14a. Has it improved your livelihood?
- 14b. Has it improved your income security?
- 14c. Are there any other benefits of receiving LISF?
15. Are there any indirect benefits? (like jealous neighbours)

Farmer-to-farmer exchange to Lukwanga

16. What did you learn from the exchange to Lukwanga?
- 16a. What of all this do you apply yourself?

Spread of knowledge

17. Have you taught others about your innovation? Have you taught others about what you have learned in Lukwanga?
- 17a. To how many people?

- 17b. What exactly did you teach them? (regarding innovation> did you explain the process of making the innovation?)
- 18. Did they apply or copy your innovation?
- 18a. If so, how many?
- 19. Did they come up with other innovations as a result of you spreading your knowledge?
- 19a. If so, which ones?
- 20. Did you come up with new innovations after receiving the support and funding?
- 21. have you suggested/invited anyone to join KEA as a result of the support received?
- 22. Have you been able to pay back the 50% to the SACCO? If not, how come?

Future

- 23. How do you see KEA in the future?
- 23a. Do you think the number of innovations will increase?
- 24. What are the challenges of KEA?
- 25. What are the challenges for you to overcome in order to improve your innovation?
- 26. How do you see your community in the future as a result of KEA's activities?

Is there anything you would like to add that we did not ask you?

Webale nyo!

1 B. Exchange to Lukwanga- supplementary to A

1. How did KEA come up with the idea of visiting Lukwanga?
2. What was the purpose of the visit?
3. how many members went to Lukwanga?
4. Did you exchange information with the farmers in Lukwanga?
- 4a. If so, what kind of information?
5. Could you please mention some innovations you saw?
6. Besides the innovations, what else did you learn?
7. What do you think they can improve?
8. What do you think they learned from KEA?
9. Did you implement some of the things you saw in Lukwanga?
- 9a. If so, which ones?
10. Do you know other people that implemented ideas from Lukwanga?
11. Did you tell other people about what you have learned?
12. Do you think more people joined KEA as a result of the sharing of information about Lukwanga?
13. Did you or other people you know come up with new ideas or innovations as a result of the information you got from Lukwanga?
14. How useful do you find a farmer-to-farmer exchange when comparing it to other ways of information dissemination (like workshops)?
15. What kind of support/funding do you think is needed to improve the outcome of a farmer-to-farmer exchange?

Annex 2: Article 'New Vision' (June 11 2008), and educational play



On the farewell party organised by KEA on 07/06/2008 for Angela Tejada and myself, we have performed an educational play on taking improving your livelihood in your own hands, by actively innovating, rather than waiting for aid to fall from heaven. In the play Angela and I were poor women with three children each. Angela starting to innovate by digging a fishpond, then sold the fish, and eventually she was able to buy a better house and send her children to school. I sat around and started to ask the white people from developed countries for help. I got some money, but not enough to prevent my children from dying of Malaria.

We wanted to show that everyone can be an innovator, and yes, it takes some effort, but it does pay off in the future. People liked the play. To emphasize the message we wrote the message in English and Luganda and showed and explained this at the end of the play, as can be seen on the picture in the newspaper article above. After the play we gave an interactive speech (on which the article is mainly based), in which we emphasized that people are not only poor, but that they also have a lot that we don't have in our 'rich countries': land in abundance, enough fruits and vegetables, and a beautiful environment.

Annex 3: Historical timeline

Historical timeline events and activities related to KEA

20/01/1999	KEA was found
12/09/2001	Seminar/workshop on the inauguration of KEA. Topics discussed: environmental problems, poverty eradication, roads, forest management. Tree seedlings distributed
27/02-01/03/2002	Workshop 'Uganda's Forestry- a change for the future', by Consultative Conference on Uganda's Forests. Attended by John Kaganga
24/03/2002	Introduction of KEA to NEMA
06/10/2002	KEA workshop on water; the source of food security
06/10/2002	Certificate recognising KEA's work on food security, given by Mubende District Local Government
06/10/2002	KEA participates in World Food Day Celebration/Agricultural show
11/03/2003	Training at KEA headquarters in cooperation with Mubende District Farmers Association about coffee production, gender issues and beans and maize
17/03/2003	Request from Mubende District Farmers to give information on alcohol production in the area
22/04/2003	Letter of recommendation received from the ministry of justice and internal affairs to register as an NGO
28/04/2003	Start of celebration of World Environment, Water, Forest, Meteorology and Earth Day. Activities among others: constructing new road, planting trees, cleaning water sources, visiting Lukaga forest reserve.
29/04/2003	KEA visiting two schools and giving lectures on the environment
06/05/2003	KEA visiting three schools and giving lectures on the environment
13/05/2003	KEA visiting two schools and giving lectures on the environment
13/05/2003	KEA gives public lecture on environment to local leaders
16/05/2003	KEA celebrates World Environment Day. Visits are paid to: polluted or dried up water sources, roads newly constructed by villagers, and Lukaga forest reserve
05/06/2003	Celebration World Environment Day at Migera Primary school, Nakasongola district
06/08/2003	Request filed to register KEA as an association and to reserve the name 'Kikandwa Environmental Association'
12/01/2004	Registration as CBO at Mubende Local Government
14/01/2004	Etienne Lhopiteau arrives as a volunteer through UVP
24/01/2004	KEA meeting to discuss the start of the KEA Green Hill Educational Centre
February 2004	KEA Green Hill Educational Centre starts
18-19/04/2004	Participation in non-formal environment education training by the District Environmental Officer of Mubende District. Attended by John Kaganga
07/05/2004	Registration as NGO at the Republic of Uganda
14/05/2004	Etienne Lhopiteau leaves
05/06/2004	KEA workshop on waste management
05/06/2004	KEA exhibiting on World Environment Day, at Nakivubo Blue Primary school, Kampala district. Award for best exhibitor
09/08/2004	KEA workshop on food security
09/08/2004	Denis Kayira from Baraka Agricultural College, Kenya, arrives to do a field attachment

10/08/2004	KEA sensitizing people on food security in a school and a church
01/09/2004	KEA workshop on food security
07/10/2004	KEA organising World Food Day. Sensitizing people on food security, food storage, food value addition, and food feeding for the youth
	Five members attending
28/10/2004	KEA workshop on tree planting and the relation between poverty, income and hunger
November 2004	Denis Kayira leaves
02/12/2004	National UFWG members' workshop on Private Forest Management.
9-12/03/2005	General meeting of the Uganda Land Alliance. Attended by John Kaganga
27/05/2005	KEA hands in proposal to NEMA to control and restore degraded wetlands in Kikandwa sub-county
6-12/06/2005	Participation in the 13 th Source of the Nile national Agricultural and Trade Show
June-July 2005	Mobilisation of community members and local leaders on environment, leading up to World Environment Day. US\$ 240,000 (Euro 96) donated by NEMA
07/06/2005	Celebration World Environment Day at Boma grounds, Kapchorwa district
19/07/2005	Celebration of World Environment Day. Sensitization workshops on watersources, well clean-ups, and tree planting
19/07/2005	Award for best exhibitor on World Environment Day at Nakivubo Primary School, Kampala
19/07/2005	KEA receives US\$ 150,000 (Euro 60) in the form of seedlings from NEMA for the celebration of World Environment Day, Wetland Day and Forests Day
15/08/2005	Meeting USCD. Attended by John Kaganga
23/08/2005	UCSD launch. Attended by John Kaganga
September 2005	Geoffrey Kizito and Oliver Nakyejwe were sent to Baraka Agricultural College in Kenya for two years with a scholarship arranged by KEA
October 2005	Baseline survey situational analysis on all wetlands in Kikandwa sub-county carried out by KEA. Funded by NEMA. Report published
3-5/11/2005	Pre-Ramsar Convention (COP 9) Civil Society Forum- Wetlands and Water: supporting life, sustaining livelihoods. Attended by John Kaganga
17/12/2005	KEA workshop on how to come up with projects like the poultry project, piggery, beekeeping and agro forestry
	Nine members attending
2006	Sensitizing about the environment in three primary schools (no dates)
13/02/2006	Workshop about irrigation, organic farming and rainwater harvesting. Attended by John Kaganga
13-16/02/2006	Workshop by AICAD on rainwater harvesting, irrigation technologies and organic farming. Attended by several KEA members
15/02/2006	Workshop on organic farming by KEA and Rucid
	Ten members attending
20/04/2006	KEA workshop on water harvesting, irrigation, and organic farming
	Eight members attending
27/04/2006	KEA workshop on types of rainwater harvesting, sprinkler irrigation, irrigation scheduling, drip irrigation, and composite making
	Nine members attending
22/05/2006	KEA's CBO/NGO registration at Mityana District Local Government
31/05/2006	Consultative workshop on civil society involvement in the developments in the River Nile Basin. Attended by John Kaganga

05/06/2006	KEA exhibiting on World Environment Day at Boma Ground, Kuma District
22/06/2006	Lecture 'Monitoring Poverty and Gender Relations in Uganda', Makerere University Kampala. Attendedn by John Kaganga
24/07/2006	KEA receives USh 470,000 (Euro 188) from NEMA for the celebration of World Environment Day, World Biodiversity Day, and World Desertification Day
24/07/2006	KEA receives USh 120,000 (Euro 48) from A.M. Boogere Designers for two banners
24/07/2006	KEA receives USh 50,000 (Euro 20) from Transport and SDA for media coverage on World Environment Day, World Biodiversity Day, and World Desertification Day
26/07/2006	KEA celebrating World Environment Day, World Biodiversity Day, and World Desertification Day at Kabongeza Primary school, Kikandwa, Mityana
25-27/10/2006	PID training at Forest Cottages, Kampala. Attended by Steve Kiranda, Geoffrey Kizito and Oliver Nakyejwe
20/11/2006	Workshop on the effect of electicity crisis in Uganda. Attended by John Kaganga
24-25/11/2006	Sensitization workshop at KEA headquarters by NEMA and UCPC, targeting communities involved in ethanol brewing in wetlands and riverbanks
24-25/01/2007	Common Wealth Head of State meeting. Sensitization workshop on art and special exhibition sub-committee
13-15/03/2007	Kabale exchange visit for John Kaganga
20/03/2007	Launching of the report on decision-making process regarding dams and development in Uganda
27/03/2007	CDN Planning meeting. Attended by John Kaganga
10/04/2007	Awareness creating workshop on the alternative livelihood opportunities for users, farmers and other stakeholders, by IRDI. Mubende district. John Kaganga is one of the facilitators
11/04/2007	Ronald Lutalo visits KEA to start the PROLINNOVA programme. Frederick Kabuye from Africa 2000 Network and Alex Lwakuba from MAAIF also visit
29/04/2007	Presentation on soil degradation and climate change by John Kaganga at the Budget Conference
01/05/2007	KEA workshop to sensitize people on PROLINNOVA/LISF, and to sensitize on documentation and recordkeeping Five members attended Second (eight members attended) and third meeting (three members attended) on this topic (no dates)
08-09/05/2007	Climate Change planning workshop, by CDN
22/05/2007	Workshop on designing PID materials, involving PID with other farmer practices, sustainability of PID, and evolution of PID
29/05/2007	KEA meeting on PROLINNOVA and SACCO
05/06/2007	KEA exhibiting on World Environment Day at Nkaiga Primary school, Kasese district
11/07/2007	Celebration World Environment Day and World Population Day. KEA workshop to sensitize the people on sustainable environmental management
11/07/2007	USh 50,000 (Euro 20) received from Kikandwa sub-county for the celebration of World Environment Day
11/07/2007	34 pine seedlings received from Kiboga Forest Department for the celebration of World Environment Day
11/07/2007	One crate of soda and five kilogram of meat received from Bukomero sub-county for the celebration of World Environment Day

11/07/2007	Pine and eucalyptus trees received from NEMA (number unknown) for the celebration of World Environment Day
11/07/2007	US\$ 100,000 (Euro 40) from John Kaganga for preparation for the celebration of World Environment Day
16/07-03/08/2007	'Participatory Innovation Development- a training of facilitators course', by PROLINNOVA. Addis Ababa, Ethiopia. Attended by John Kaganga
06/08/2007	Official contract on LISF-pilot between PROLINNOVA and KEA starts
09/08/2007	US\$ 2,000,000 (Euro 800) received from PROLINNOVA for LISF
20-22/08//2007	PID-training of facilitators. Forest cottages, Kampala. Stephen Mwesige attended
23/08/2007	Exchange and dissemination workshop on farmer-led documentation. Attended by John Kaganga
13/09/2007	Updating registration as CBO/NGO/Development Group at Mityana District Local Government
22/09/2007	KEA workshop on PROLINNOVA
	28 participants
29/09/2007	KEA workshop about SACCO
	21 members attending
04/10/2007	KEA workshop about SACCO
05/10/2007	First phase applicants LISF disbursed
08/10/2007	KEA teaching people on LISF before handing out the money received from LISF
10/10/2007	Workshop on foodsecurity and its importance to development, by Environmental Alert
16/10/2007	Request from KEA to PROLINNOVA to visit Lukwanga through a farmer-to-farmer-exchange
26/10/2007	KEA meeting on innovations
	Fifteen members attending
29/10/2007	Second phase applicants LISF disbursed
30/11/2007	Official contract on LISF-pilot between PROLINNOVA and KEA ends
21/12/2007	Exchange visit to Lukwanga
02/01/2008	KEA meeting on PROLINNOVA and SACCO
29/01/2008	PROLINNOVA meeting with KEA executive committee
30/01/2008	Ronald Lutalo, William Critchley and Sabina di Prima visit KEA for PROLINNOVA assessment
	Twenty-three members attending
30/03/2008	PROLINNOVA meeting
02/05/2008	Seventh annual general meeting of NOGAMU
10/05/2008	PROLINNOVA and LISF meeting
	Eleven members attending
12/05/2008	KEA workshop on teaching the importance of beekeeping, piggery and agro forestry
21/05/2008	PROLINNOVA and LISF workshop
26+27/05/2008	Climate change/mitigation and adaptation workshop by the Swedish Meteorological and Hydrological Institute. Attended by John Kaganga
21/05/2008	Angela Tejada and Kim Hagen, students from the Vrije Universiteit Amsterdam arrive to do fieldwork
08/06/2008	Angela Tejada and Kim Hagen leave

Annex 4: KEA Green Hill Education Centre- Anthill project

The KEA Green Hill Education Centre is located on the green hill with the mango-trees where KEA's headquarters are based. Besides that the hill is also home to many large ant hills, some almost three meters in height. The ant hills serve many purposes, and that is why they are protected by the school. The LISF is helping the school with that, since the school is one of the two organisations that received funding from LISF. Vincent Lutalo, headmaster of the school and in charge of its money received from the fund, has listed many reasons why the ant hills should be protected. According to him the ant hills are beneficial for:

- "Educational purposes for the students. They can learn about social insects; how they interact and behave together in producing a giant ant hill for their queen to live in
- Inside the ant hill live termites. They protect the ants.
- Some termites are fed to our chicken
- The white ants that live in the hill can be eaten. We make a hole in the ant hill, put a light in there, and then the ants come out. We collect them and put them in a bag. One big bag can be sold for USh 60,000 (Euro 30)
- The white ants that live in the ant hill produce a 'juice' named 'kadoma honey'. It is nice to drink and also helps when you have a cough. We sell the juice in 500 millilitre water bottles for USh 1500 (Euro 0.60)
- Around the ant hill the mushrooms like to grow. They like the soil of the ant hill, and we like to eat the mushrooms
- Big herbal trees also like the soil of the ant hill, and grow near it. From the herbs we can make medicine.
- The soil of an ant hill is good for brick-making. Every now and then we break an ant hill apart to see the social structure. The ants will then move to another place and build a new hill. The soil of the ant hill we use to bake bricks.
- Also they are good for the protection of the environment. The termites prefer to stay at the ant hill, and when they stay there, they do not come to our crops and damage them."



The project that received funding from the LISF is regarding keeping the termites away from the crops. Lutalo: I slashed the vegetation and dug a trench of about seventy centimetres wide. That trench is in between the ant hills and our fields with crops. In that trench I pour a solution of salt, water and ash. The ants don't like that. I pour it in the trench every week. That way the ants stay on one side of the trench, and with them the termites that would otherwise destroy the crops. I got the idea from my father. When I was little we lived in a mud house. My father used to dig a trench around the house to keep the termites away."

Annex 5: Executive committees

KEA Executive Committee

- | | |
|------------------------|-------------------|
| 1. Chairperson | John Kaganga |
| 2. Vice-chairperson | Vincent Serunjogi |
| 3. Secretary/publicity | Dan Lukwago |
| 4. Treasurer | Kamya Jackson |
| 5. Advisor | Leonard Kitaali |

SACCO Executive Committee

- | | |
|---------------------|-----------------|
| 1. Chairperson | John Kaganga |
| 2. Vice-chairperson | Betty Nanteza |
| 3. Secretary | Dan Lukwago |
| 4. Treasurer | Leonard Kitaali |
| 5. Publicity | Haruna Nsubuga |
| 6. Advisor | Jackson Kamya |

KEA LISF Executive Committee

- | | |
|----------------|---------------------|
| 1. Chairperson | Geoffrey Kizito |
| 2. Secretary | Dan Lukwago |
| 4. Treasurer | Jackson Kamya |
| 5. Publicity | Joyce Nantongo |
| 6. Coordinator | John Kaganga |
| 6. Advisors | Betty Nanteza |
| | John Musisi |
| | Mujanbula Senkubuge |
| | Margaret Mabatanzi |
| | Leonard Kitaali |
| | Immaculate Kimuula |

Annex 6: KEA's innovation scoring sheet

Innovation scoring sheet

Category	Technical Description of Innovation	Farmer----- Village ----- Sub-county ----- District-----
Practical Issues	Score (1-10)	Comments
Originality:		Where did idea come from?
Usefulness:		What was the purpose of coming up with the innovation?
Adaptability:		How modified?
Problem solved		What problem is solved by innovation?
Replicability:		Is innovation replicable in locality? Is it marketable?
Acceptability:		Policy-wise, Socially, culturally, ecologically
Technical Viability:		Simplicity, solving technical problem, effectiveness
Economic viability:		Does Problem it solves help to save or generate more? Is it cost effective? Marketability (financial proceeds)
Gender Responsiveness:		Can either sex use it? Do all benefit? Can all be involved in decision making?
Research Potential:		Requirement for further experimentation to get reasons behind its success, research for validity, add science to local knowledge, also research for value addition
Affordability:		Are materials needed available in location
Total (100%)		

OTHER REMARKS:

NAME OF THE ASSESSOR:-

Annex 7: Innovators receiving LISF in 1st round

Innovator 1: Margaret Nabatanzi

Age: 43

Gender: female

Occupation: farmer and pastor

Residence: Kasejjere, Bambula parish

Innovation: Amaranthus. During the famine in 2001 there were not so many vegetables. I grew this type of Amaranthus with big leafs, and we eat the leafs as vegetables. I had many seeds, so I started to fry them and then made powder of it, so it could serve as a basis for sauce for food and porridge. Also the cold porridge, stored in pots, cures wounds in the stomach.



Amount received from LISF: US\$ 72,000

Money spend on:

Ploughing land (rough): 3 people, for 6 days, ½ acre

30,000

Ploughing land (fine): 3 people, for 6 days, ½ acre

20,000

Hoe, 1 piece

4,000

Planting and hole making

18,000

Total:

72,000

Own investment in innovation: unknown

Plough back to SACCO: 15,000 so far

Innovator 2: Joyce Nantongo

Age: 40

Gender: female

Occupation: farmer and trader

Residence: Kasejjere, Bambula parish

Innovation: Drug to cure swine fever in pigs. I take ½ litre of human urine, 5 litres of water with one small piece of soap diluted in it, 0.25 kg of salt, 10 litres of water with 1 bundle of Mululuza in it, 5 litres of water with one small bundle of Kawunyira diluted in it, and ½ kg of ant hill soil. The result is the dose for two pigs. First I only used it when they were sick, but now I give it to them frequently, and they grow fat.



Amount received from LISF: US\$ 60,000

Money spend on:

Jerricans: 3

45,000

Basin: 1

3,000

Jerricans: small

10,000

Jerricans: smallest

1,000

Soap and salt

200

Total:

59,200

Own investment in innovation: no

Plough back to SACCO: all

Innovator 3: John Musisi

Age: unknown

Gender: male

Occupation: farmer and LC1 chairman

Residence: Kikandwa, Bagamba parish

Innovation: It is a mixture of three different herbs to treat animal diseases. I have three different types: A: Mutanjokka, for treating worms. I smash the plant, then add water and salt, and then I use the liquid. B: Amawula, for treating swollen glands in calves (due to excessive intake of milk). C: Omululuza and Nalongo. I mix and cook them. The warm liquid I use to treat fever of the animals. It is important to give it warm, so it can work fast.

Amount received from LISF: US\$ 60,000

Money spend on: unknown (no recordkeeping available)

Own investment in innovation: unknown

Plough back to SACCO: 10,000 so far

**Innovator 4: Dan Lukwago**

Age: 30

Gender: male

Occupation: farmer

Residence: Kasejjere, Bambula parish

Innovation: Making bee-chloroform, to smoke bees out to take the honey. I take Ananteresis tree bark, I soak it in water with salt and then squeeze it. This 'juice' I use to soak a sisal-bag in. Then I let that dry in the sun, for one day if it is sunny. To harvest the honey you burn the roll and smoke the bees out. I used the LISF to gain more knowledge about bee-keeping.

Amount received from LISF: US\$ 72,000

Money spend on:

Sisal bag: 5 small ones

Sisal bag: 3 big ones

Transport for market:

Transport Bunyadde apiary

Transport Namuene apiary: for 2 people

Total:

Own investment in innovation: unknown

Plough back to SACCO: 15,000 so far



15,000

10,500

7,000

9,000

28,000

69,000

Innovator 5: Mary Nasubuga

Age: 74

Gender: female

Occupation: farmer

Residence: Kasejjere,
Bambula parish

Innovation: It has to do with soil fertility. On my hilly land, where I plant crops, I dig horizontal trenches across the land. The water of rain can run off through these trenches and it doesn't wash away the fertile top layer of the soil. Around the trenches I place stones so the speed of water is decreased.



Amount received from LISF: USh 77,500

Money spend on: unknown

I am illiterate and therefore I have kept no records. I hired 4 people, including some kids, for some days to clear the land.

Own investment in innovation: unknown

Plough back to SACCO: all

Innovator 6: Betty Nanteza

Age: 48

Gender: female

Occupation: farmer and tailor

Residence: Kasejjere, Bambula parish

Innovation: Making mango-wine. I take 10 jerrycans of ripened mango's. I peel and squeeze them, and then there is about 4 litres of mango juice. I add 1 jerrycan of water and Mululuza, that acts as yeast. All that I put in a drum for 2 days. Then I distil it for 2 hours, which leaves me with 1 jerrycan of regular mango-wine. When I distil that again, it leaves me with ½ jerrycan of strong mango-wine (like a liquor). To that I add some vanilla. (the picture shows the polythene lined basin where the effluents are deposited in)



Amount received from LISF: USh 50,000

Money spend on:

Jerrycans: 3 13,500

Plastic bottles: 20 5,000

Vanilla 5,000

Drum for distilling: 1 70,000

Total: 93,500

Own investment in innovation: 43,500

Plough back to SACCO: 14,000 so far

Innovator 7: Virisita Nasimbwa

Age: 59

Gender: female

Occupation: farmer

Residence: Kasejjere, Bambula parish

Innovation: It is a nature animal drug. I received LISF for the de-worming one, but I also used it for the one that kills ticks. The de-worming one I use a the leafs and vegetables of a wild type of eggplant, Mutanjoke leafs and Mululuza. All on 1:1:1. Then I add water and boil it for 1 hour. After cooling it down I make the animal drink it. Calves I give 300 ml, cows 500 ml.

Amount received from LISF: US\$ 55,000

Money spend on:

Jerrycan: 1

1,800

Basin: 1

1,500

Panga: large, heavy knife to cut vegetation, 1

3,000

Sac: 1, to use as a sieve

500

Funnel: 1

500

Big saucepan: 1

10,000

Soda bottles: 4, to put liquid in

2,000

Pig: 1

20,000

Iron sheet: 1, to fix roof of my house

5,000

Total:

54,300

Own investment in innovation:

some little money, but I kept no record of that

Plough back to SACCO:

7,000 so far

**Innovator 8: Haruna Nsubuga**

Age: 33

Gender: male

Occupation: farmer

Residence: Kasejjere, Bambula parish

Innovation: It is to plant banana's in not so fertile land. I planted Etelle/Bitete, a type of indigenous grass, and termites to the soil for two years. Now there are many banana's growing and to them I add manure. There is this saying 'You have to behave like a termite', that they eat the grass and give soil in replacement, so I thought it would be good. (Haruna is the 2nd person from the right)

Amount received from LISF: US\$ 75,000

Money spend on:

Wheelbarrow: 1

80,000

Panga: large heavy knife to cut vegetation, 1

2,500

Total:

82,000

Own investment in innovation:

5,200

Plough back to SACCO:

nothing so far



Innovator 9: Eleth Nakirembe

Age: unknown

Gender: female

Occupation: farmer and housewife

Residence: Nakwaya, Nakwaya parish

Innovation: It is a herbal pesticide for vegetables. I use 500 g red peppers, 500 g of ash, Oluwoko, Kayukiyuki, Ekifuula, and 5 litres of water. I leave that for 3 days, then I squeeze, mix and crush it. That I leave for 7 days, then I filter the liquid and I use that as herbal pesticide. I can 500 ml of herbicide mixed with 1 litre of water for an area of 20 by 30 feet.

Amount received from LISF: USh 53,000

Money spend on:

File: 1	2,000	
Books: 2		800
Pen: 1		200
Buckets: 2		25,000
Jerrycans: 2		8,000
Basin: 1		2,500
Spraying pump: 1		5,000
Filter: 1		3,000
Transport		7,000
Total:		53,000
Own investment in innovation:	500	
Plough back to SACCO:	21,000	

**Innovator 10: KEA Green Hill Education Centre (headed by Vincent Lutalo)**

Residence: Kasejjere, Bambula parish

Innovation: It is to prevent termites form damaging crops by digging a trench between the ant hills, in which the termites life with the ants, and the gardens. The termites go where the ants go and the ants don't like to pass the trench sprayed with a mixture of ash (2 tins), salt (3 kilos) and water (5 jerrycans). I apply it every week. (Vincent Lutalo is seen sitting in the trench, with translator Harriet and an ant hill on the right)

Amount received from LISF: USh 146,000

Money spend on:

Wheelbarrow: 1		36,000
Salt: 2 cartons		24,000
Panga's: 4		8,000
Hoe: 6		24,000
Labour: 4 people for 5 days		54,000
Total:		146,000
Own investment in innovation:	no	
Plough back to SACCO:	nothing so far	



Innovator 11: Leonnard Kitaali

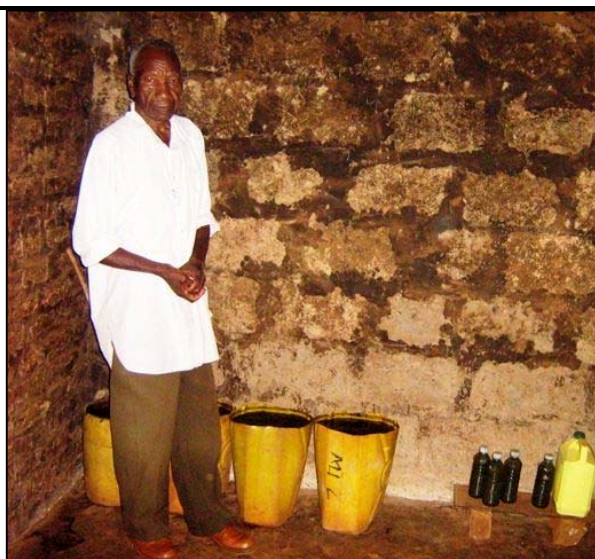
Age: 78

Gender: male

Occupation: retired, former judicial assistant, personal manager and sub-county chief

Residence: Nakwaya, Nakwaya parish

Innovation: A fertilizer for the soil. It is a collection of Kifuwla, Mukassa, Essuunsa, Ekiraalannkuba, Fukweeku, Sebaata and other kind of grasses. I cut all in small pieces, add water and leave it for 14 to 21 days, depending on the hardness of the leaves. Then I drain it and squeeze the liquid out. That I pour on the soil.



Amount received from LISF: US\$ 66,000

Money spend on:

Jerrycans: 4	16,000
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Spade: 1	9,000
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Metallic dish: for frying herbs, 1	6,000
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Gloves: 1 set	6,500
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Polythene bag: 1	10,000
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Transport	10,000
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Total:	57,000
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Own investment in innovation: no

Plough back to SACCO: all

Innovator 12: Maria Rose Kamalwa

Age: 32

Gender: female

Occupation: farmer and housewife

Residence: Kasejjere, Bambula parish

Innovation: Herbal based medicine to treat passion fruit diseases. I take ash, 1 jerrycan of cow urine, and tobacco leafs. I mix it and then add red pepper powder and Kawuntira and mix that. This mixture I leave for 3 days. Then I apply the mixture to the soil. Now the passion fruits don't dry up and I have harvested 5 jerrycans full, which I have sold.



Amount received from LISF: US\$ 61,000

Money spend on:

Jerrycans: 3	12,000
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Wire: 30	30,000
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Labour: to dig holes, 3 days	15,000
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Total:	57,000
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Own investment in innovation: no

Plough back to SACCO: 20,000

Innovator 13: Geoffrey Kizito

Age: 24

Gender: male

Occupation: extension worker

Residence: Kasejjere, Bambula parish

Innovation: Measuring rainfall pattern. With a mineral water bottle and a ruler I measure the rainfall at KEA and in Nakwaya. It is useful because now we can measure the rainfall and determine the climate change. There is no official station measuring it in this region.

Amount received from LISF: US\$ 125,000

Money spend on:

Calendars: to mark days of rain, 4

Rulers: 6

Papers: 2 sets

Files: 2

Transport

Glasses: 2

Pencils: 6

Blackbooks: to keep data, 3

Cups: 4

Upkeeping assistant-measurer in Nakwaya

Total:

Own investment in innovation: 4,600

Plough back to SACCO: 50,000



10,000

18,000

16,000

4,000

43,000

2,000

600

15,000

2,000

20,000

129,600

Annex 8: Innovators receiving LISF in 2nd round

Innovator 14: Teddy Nakalyango

Age: 27

Gender: female

Occupation: farmer

Residence: Kawafu, Bambula parish

Innovation: Organic pesticide to use on greens, cabbages and tomatoes. For a 3 litre jerrycan I use: 1cup of little red chilli peppers, 1 cup of tobacco leaves, 1 cup of Niimu leafs, 6 cups of goat urine, 1 cup of ash, 1 cup of Kawunyira leafs. The leafs are smashed and the peppers cut. The rest is then added, mixed and left for 3 days. Then I sieve it and the juice I put in a basin. I use a broom to sprinkle it on the leafs of my plants, and it gives me better yields.

Amount received from LISF: USh 61,000

Money spend on:

Returned immediately to SACCO

Goat: 1

Jerrycan: of 20 litres, 1

Jerrycan: of 3 litres, 1

Basin: 1

Total:

Own investment in innovation:

Plough back to SACCO:

18,000 for tomato seeds and labour to clear the land

all



30,500

25,000

2,500

500

3,000

61,500

Innovator 15: Kabongezo CBO (on name of Stephen Burundugge)

Residence: Kabongezo, Bambula parish

Innovation: Hatching chicks. You place a pot with holes and warm charcoal inside in a basket with eggs that are wrapped in cotton cloths. You leave it there for 21 days, and then the eggs should be hatched. The temperature should be checked every 3 hours.

Amount received from LISF: USh

75,000

Money spend on:

Nails

Coffee hasks

Pot with holes: 1

Charcoal

Labour (Burundugge is disabled)

Hens

Transport

Total:

Own investment in innovation:

Plough back to SACCO:

8,000

10,000

5,000

8,000

10,000

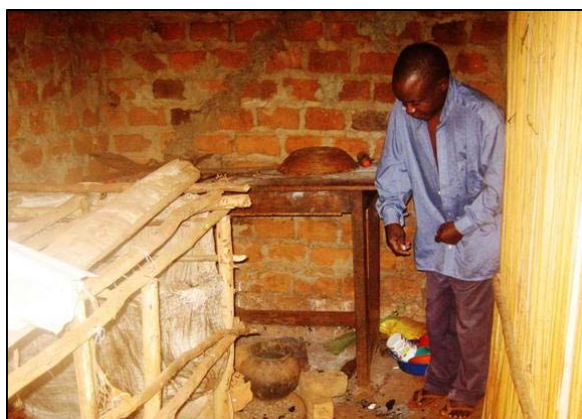
25,000

10,000

76,000

1,000

all



Innovator 16: Jospeh Bukya

Age: 61

Gender: male

Occupation: retired, was employed in forestry sector

Residence: Kasejjere, Bambula parish

Innovation: Powdered vegetables. Overripe, small eggplants are normally wasted. I collect them and boil them for 40 minutes. After that I dry them on a mat for 4 days, and then I pound them, then sieve the big parts out, and the powder that remains can be added to food when the season of eggplants is over. The same I do with Empini and Nambale beans, but then with the leaf. I boil them for 40 minutes to 1 hour, dry them for 2 days, pound and sieve it. Both powders can also be consumed in a cup of hot water.

Amount received from LISF: US\$ 52,000

Money spend on:

Pounding 'motor': 1

Mats: 2

Sieve: 1

Baskets: to keep the powder in, 2, (1 big, 1 small)

Saucepan: 1

Papyrus mats: to place under other mats when it's muddy, 2

Total:

Own investment in innovation:	6,000 for one litre of pesticide to prevent these plants from diseases
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Plough back to SACCO:	all
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**Innovator 17: Oliver Nakyejwe**

Age: 28

Gender: female

Occupation: teacher

Residence: Nakaseta, Bagamba parish

Innovation: Waste water management. I dug a hole in the garden, leaving the soil around the hole compact. In the hole I pour waste water from washing. The hard soil filters out the chemicals, and the clean water seeps into the soil of my garden and feeds my crops.

Amount received from LISF: US\$ 55,000

Money spend on:

Returned to SACCO immediately

Watering can: 1

Seeds

Seeds: for another farmer, to copy my technique

Transport

Total:

Own investment in innovation:	Hired labour to plant other gardens
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Plough back to SACCO:	all
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Innovator 18: Salongo Kakembo

Age: 37

Gender: male

Occupation: farmer

Residence: Kasejjere, Bambula parish

Innovation: Seeds preservation. I use the seeds of passion fruits, green peppers, tomatoes, Nakaati, Bugga, beans and eggplants. For example the eggplants; I cut them in two halves, fill a jerrycan with them, and add water to it. I leave it for 2 days, after which I remove the seeds and wash them 6 times. Then I put them to dry in the sun, only on a sunny day, from 10 a.m. to 5 p.m. When they are dry I start bagging them. I have given tomato seeds away for free, instructed people how to plant them, and now I have created a market for tomatoes in Kampala. For me that has created a job as an agent between the buyers and the sellers.



Amount received from LISF: US\$ 70,000

Money spend on:

Roll of polythene bag: 1 big one	15,000
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Jerrycans: of 20 litres, 4	12,000
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Saucepan: 1	20,000
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Organic pesticide	20,000
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Labour: 4 people, 3 days	10,000
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Transport	3,000
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Total:	80,000
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Own investment in innovation:	10,000 and some money to hire labour to plough land
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Plough back to SACCO:	20,000
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Innovator 19: Christopher Kiseke

Age: 46

Gender: male

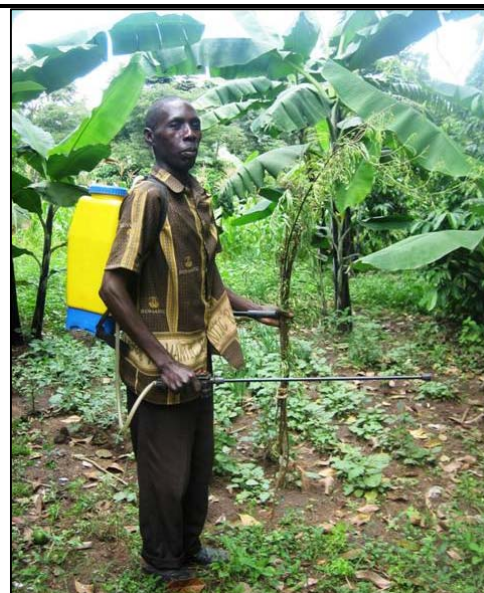
Occupation: farmer, secretary of finance

Kikandwa sub-county, parish chief, chairman

Kawansenyi farmers group

Residence: Kawansenyi, Namuuene parish

Innovation: Local medicinal herbs to spray on vegetables. I use Kifalu, ash, $\frac{1}{2}$ bar of soap, and 10 litres of water. I mix it and leave it for 7 days. Then I filter it and then mix 1 big cup of the mix with 2 big cups of water, and then it's ready to use. I use it to prevent pests like Nabemfunya, which eats the leaves of crops in the dry season. Now I can sell my crops and make money with it. I was using Kifalu myself and saw a woman in Kasese apply ash to her crops (I went to Kasese to learn from the farmers there). Then I thought of mixing these 2 with soap.



Amount received from LISF: US\$ 65,000

Money spend on:

Porridge: to feed my relatives that cleaned the land	2,500
Porridge: to feed my relatives that mulched and cut grass	5,000
Jerrycan: 1	2,000
Soap	1,500
Spraying pump: 1	75,000
Total:	86,000
Own investment in innovation:	21,000
Plough back to SACCO:	all

Annex 9: Participatory map of innovators

Map of Kikandwa Subcounty



True innovator ----- Regular innovator

- 1= Namwene parish
- 2= Bambula parish
- 3= Namigave parish
- 4= Kikandwa parish
- 5= Nakwaya parish

Annex 10: PROLINNOVA

PROLINNOVA was conceived in December 1999, when Southern and Northern NGOs met to consider how participatory innovation in agriculture and natural resource management could be scaled-up through global partnership. At this meeting, ETC EcoCulture, a Netherlands-based NGO, was asked to facilitate the launching of a PROLINNOVA programme built up from country level. NGO's in Africa and Asia facilitated multi-stakeholder design of CP's (Country Programmes) which, in turn, designed international activities to underpin their own activities (www.prolinnova.net).

PROLINNOVA is a programme that focuses on recognising the dynamics of indigenous knowledge and strengthening capacities of farmers to adjust to changing conditions. It builds on and scales up farmer-led approaches to development and looks at informal experiments, carried out by farmers, to develop and try out new ideas for better use of natural resources. Understanding the motivation behind local innovation stimulates joint action where indigenous knowledge and scientific knowledge can be integrated (www.prolinnova.net).

The mission of PROLINNOVA is to foster a culture of mutual learning and synergy in local innovation processes in agriculture and natural resource management. It's vision is a world in which farmers play decisive roles in agricultural research and development for sustainable livelihoods. The programme's goal is to develop and institutionalise partnerships and methodologies that stimulate processes of local innovation for environmentally-sound use of natural resources (Critchley, Verburg, and van Veldhuizen, 2006). To achieve this goal PROLINNOVA seeks to:

- demonstrate the effectiveness of user-led innovation for sustainable development
- build strong farmer-extension-researcher partnerships
- enhance capacities of farmers, researchers and extension agents in participatory approaches
- pilot decentralised funding mechanisms to promote local innovation
- stimulate national and regional policy dialogue to favour local innovation
- set up platforms for reflection, analysis and learning about promoting local innovation
- integrate participatory approaches to farmer-led innovation and experimentation into research, extension and education institutions.

The POG (PROLINNOVA Oversight Group) is an international group that acts as a governance mechanism to ensure the accountability of the individual CP's (Country Programmes), the joint international activities, their donors and constituencies. The IST (International Support Team) supports country-level activities through programme coordination, networking, capacity building, coaching, web-based knowledge management, publishing and advocacy. In each country of operation a local NGO serves as a secretariat for a NSC (National Steering Committee), which defines the CP's activities, gives guidance and helps to mobilise resources (www.prolinnova.net). In Uganda Environmental Alert is the NGO that holds this position and is therefore directly involved with KEA.