

## **Low participation of small holder farmers in rural finance services. The case of Magugu paddy growers in Babati, Tanzania**

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**Abstract:** *This study investigated the factors behind the low participation in rural finance by smallholder farmers at Magugu Village, with Mshikamano Savings and Credit Cooperative Society (SACCOS) being the central focus. The aim was to describe the modus operandi of the SACCOS; to establish its strengths and weaknesses, to assess the existing products and services provided with regard to the specific financial needs of the members and, to analyze the growth capacity of the SACCOS. The results showed that a lack of knowledge on the rules, regulations, policies and services and products offered by the SACCOS contributed to the low participation of farmers in rural finance in Magugu. Mshikamano SACCOS showed the ability to grow, and its products and services were found to be adequate to cater for the needs of Magugu paddy farmers. However, the institution does not have enough own resources to deliver its products and services without donor support. The SACCOS has a good loan recovery performance, good governance and strong partnership with other related organizations as measured against the USAID's diligent tool assessment. Poor marketing of the products and services, inadequate technology, and poor structuring of the services provided are the major weaknesses of the SACCOS. Recommendations for a future sustainable SACCOS include the creation of a 'saving culture' among the members and, investment in modern financial operation technologies.*

**Keywords:** Microcredit - Rural development - Rural areas - Development finance  
Community participation - Rice - Agricultural workers - United Republic of Tanzania - East Africa

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### **Introduction**

To learn more about why smallholder (paddy) farmers in Magugu village did not participate in rural finance a study was carried out focusing on one of the main financial service providers in this area: Mshikamano Savings and Credit Cooperative Society (SACCOS). In short: Mshikamano SACCOS. The total study sample consisted of 54 respondents who elicited/provided information about paddy farmers' participation in rural finance. For the performance analysis of Mshikamano SACCOS use was made of the diligent/the due diligence tool developed by USAID (2006) to assess the SACCOS. Following suggestions by Zeller *et al.*, 2003; Elia (2006) and UNCDF (2009) this tool was used in this study to calculate financial sustainability and growth capacity indices of SACCOS's. Assessment criteria for this tool include both financial and non financial aspects e.g., governance effectiveness and strategy, management effectiveness, product development and delivery, asset and liability management, accounting and financial management, financial sustainability, outreach, prudence and transparency in product pricing, and finally, financial transparency. Each aspect has sub-components

with respective scores that contribute to the final score. The diligent tool summary scores and the overall performance of Mshikamano SACCOS are indicated in Table 5 elsewhere in this document. Further, an analysis on strengths and weaknesses was also carried out to understand the factors that may contribute or hinder the fulfilment of Mshikamano SACCOS's objective: *the provision of financial services to paddy farmers aimed to improve both quantity and quality of rice production.*

### **Magugu: an economic hub**

Magugu Village is located in Mbugwe division, Babati district, Manyara region in the northern part of Tanzania. The village is situated 23.5 km from Babati township along the Singida – Arusha highway. Magugu village has a population of about 26 132 with a ratio of 1:1 for both males and females. It is along longitude 35° 46' 0.120" east and latitude 4° 01' 0.012" south. Its elevation is 1 177 metres above sea level. The area has an annual rainfall of about 500 mm.

Whereas Magugu was first inhabited by Mbugwe people only, now people from various ethnic groups from all over Tanzania have come to settle here as the village has become an attractive hub of economic activities. It is an important rice producing centre and has a lot of other business activities as well; people are running retail shops, barber shops and sell food and drinks in restaurants and bars. You will further find carpentry workshops and other self-liquidating merchandize businesses, e.g. hardware stores and gas filling stations.

### **Rice: main food & cash crop**

For a long time now, rice has been the main food and cash crop in Magugu village followed by sunflower, onions and groundnuts. Magugu rice is very famous for its good aroma and taste which attract traders from other areas like Arusha, Dar es Salaam and Zanzibar, especially during harvest time which lasts from April to early June.

Paddy is grown during the rainy season (November to April). Irrigation-fed agriculture is practiced for crops like vegetables, maize, sunflower, lablab, and beans. These crops are grown during the months of May/June up to October.

Agriculture is the major economic activity at Magugu. The majority of the farmers own farms with an average size of two hectares per household. Tractor and oxen are mostly used and hand hoeing is a rare technology for tilling the land. Moreover, power tillers are currently gaining popularity and are likely to become the dominant land tilling technology in the near future.

The majority of the farmers of Magugu community is semi-literate.



**Paddy field**

## Mshikamano SACCOS

Mshikamano SACCOS is a registered Cooperative Society in Magugu village with registration number MNR 0012. Its

operation officially started on 9 September 2003 with a total of 43 members out of whom 12 were men and 31 women as shown in table 1.

**Table 1: Mshikamano SACCOS members status and joining trend over the period of September 2003 to October 2009**

Year	2003	2004	2005	2006	2007	2008	2009	Total	Average	
	Number of members joining									
Male	15	11	14	27	34	19	50	170	24	
Female	27	12	2	3	7	8	13	72	10	
Groups	0	0	0	0	3	0	1	4	1	
Institutions	0	0	0	0	0	0	1	1	0	
Total	42	23	16	30	44	27	65	247	35*	

Source: Mshikamano SACCOS (2009).

The trend of members joining Mshikamano SACCOS has been erratic over time i.e. decreasing from 42 members in 2003 to 16 members in 2004, before finally rising to 65 members by October 2010. This gives an average of 35 new members per year (i.e 14.17% annual growth rate). The total amount of liquid capital of Mshikamano SACCOS is Tshs 136 Million which includes shares, deposits and savings.

not less than Tshs 50 000 for a member to qualify for a loan. The loan provided is two to three times the balance held in a respective saving account of a member. Mshikamano SACCOS uses the saving account balance as part of a collateral for members' loans. However, the saving account is awarded an annual interest rate of 4% which is normally paid at the end of Mshikamano SACCOS' financial year (1st January to 31st December).

## Products and services

Products and services offered by Mshikamano SACCOS focus on both farming and non-farming activities. Different types of loan facilities and saving account services are provided that suit farmers' financial needs over the annual farming cycle.

### Saving Account

Mshikamano SACCOS operates saving accounts for its members which are used as a requirement for members to qualify for a loan. The by-law governing Mshikamano SACCOS loan provision requires that the saving account of a member must have a minimum balance of

### Deposit Account

Mshikamano SACCOS operates deposit accounts for both members and non-members. These accounts, however, are not pre-requisites for accessing loans from the SACCOS by a prospective borrower. Deposit accounts are divided into two major categories namely; fixed deposits which cannot be withdrawn until the end of the specific specified time (i.e. 3, 6, 9 and 12 months) and normal deposits which can be withdrawn any time. The fixed deposits earn interest annually at the rate of 1.5, 3, 4.5 and 8% for 3, 6, 9, and 12 months respectively. On the other hand, the normal deposits accrue interest of 6% based on the average amount kept annually, and it is calculated at the end of

Mshikamano SACCOS' financial year.

### Loan Provision

Mshikamano SACCOS provides loans for different economic activities ranging from agriculture, capital equipment (e.g. power tillers) to social emergencies (e.g. sickness and accidents). The loan processing procedures are simple to undertake and the interest charged is affordable to borrowers (i.e. 1.8% per month). As contrasted with the other types of loans which are season-specific, emergency loans are issued throughout the year and are charged an interest rate of 2.5% per month of the remaining amount.

The major credit line provided by Mshikamano SACCOS comprises agricultural loans. These are issued from November onwards with a grace period of six months. They are provided in three phases of paddy farming, that is, during

ploughing, weeding, and finally harvesting and transportation.

A storage loan is normally required to meet the expenses of the Warehouse Receipt System (WRS) which has so far proved profitable to farmers. The loan is sanctioned soon after harvesting time normally during May/June with a grace period of seven months. The stored paddy is used as collateral for the loan. The loan provided is up to 75% of the stored paddy value.

The SACCOS members annual loan requirement for either agriculture or WRS is normally equal or above Tshs 150 Million. The loan recovery is 71.23% as shown in Table 2. The high percentage of loan recovery indicates a sense of ownership that members have towards Mshikamano SACCOS.

**Table 2: Mshikamano SACCOS loan performance as of October 2009 from January 2009.**

Loan detail	Amount (Tshs)
Total amount of loan that had been disbursed from January up to October 2009	150 000 000
Total amount of loan recovered as of October 2009	106 845 000 ( 71.23 % )

### Training

Mshikamano SACCOS was among the frontrunners in starting the WRS and issuance of the related loans thereof in 2003. Capitalizing on its experience Mshikamano SACCOS provides training on the operational modalities of the WRS and general entrepreneurial skills and knowledge.

### Paddy Storage Facility

Paddy storage is the service offered to members and non members after harvesting. The paddy harvested is properly dried and cleaned in order to remove stones and other unwanted materials. The moisture is measured before weighing and labelled ready for being stored at Tshs 500 per bag set by

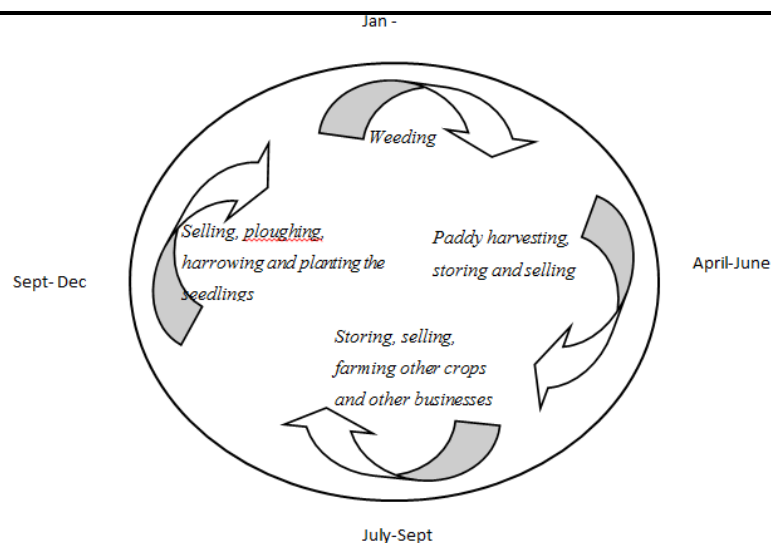
Mshikamano SACCOS taking into account insurance and security costs. The new rate came into effect as from October 2009. The maximum time allowed for paddy storing is 11 months, starting from May. This has been set by Mshikamano SACCOS in order to allow new harvests to be stored. Paddy stored in the warehouse (see Plate 1) is insured against any unforeseen risks such as fire. It is also used as collateral for the WRS loan.

Financial needs paddy farmers  
In the study area, agriculture is the major source of income next to some other income generating activities as mentioned earlier. The respondents' results in Table 3 indicate different social areas that paddy farmers around Magugu consider financially challenging. The highest need for financial resources lies in agriculture scoring 42.31%, followed by infrastructure and business at 23% and 19% respectively. This shows that the majority of the populace in Magugu depend on crop farming for

their living and development. Moreover, it indicates that people around Magugu still needs financial assistance in order to fully exploit the potential of rice production. Magugu farmers follow a repetitive seasonal and annual cycle which involves on-season rain-fed farming and off-season irrigated farming (as shown in Fig. 1) below. The months of July up to September are spent for irrigated farming of non-paddy crops. At the same time, non-farm business activities are carried out up to early November when people shift their focus to paddy farming (see figure 1 below).

**Table 3: Financial needs of paddy farmers by village**

Financial need purpose	Village name				Overall
	Magugu n=32	Mapea n=4	Gichamedia n=6	Mawemairo n=12	
	% of the respondents				
Building a house	3.85	0.00	0.00	0.00	3.85
Agricultural activities	38.46	0.00	3.85	0.00	42.31
Marketing	3.85	0.00	0.00	0.00	3.85
Business operation	19.23	0.00	0.00	0.00	19.23
Infrastructure requirement	11.54	0.00	0.00	11.54	23.08
Livestock keeping	7.69	0.00	0.00	0.00	7.69
<b>Total</b>	<b>84.62</b>	<b>0.00</b>	<b>3.85</b>	<b>11.54</b>	<b>100.00</b>



**Figure 1: Annual calendar of activities for Magugu paddy farmers**  
Source: Mshikamano SACCOS (2009).



**Mshikamano office cum warehouse**



**Piled paddy**

## Growth capacity

The growth capacity of Mshikamano SACCOS was assessed by making use of the overall performance indices as specified by the scores of the USAID's diligent tool, e.g. outreach, penetration rate, financial sustainability, etc.

### Outreach and penetration rate

Mshikamano SACCOS' score on outreach was 61.54% which is fair as per USAID's interpretation guide in which less than 50% is rated marginal while over 70% is rated good. However, this shows that the services offered by Mshikamano SACCOS are not fully utilised to have it indicated a good outreach. The low involvement of people in formal financial institutions as reported by Bee (2007), may lead to having many agricultural investment opportunities remaining unexploited due to the use of uncertain and inadequate capital from informal and unregulated creditors. Interest rates charged by informal creditors are overwhelmingly higher (i.e. exceed 10% per month) than those charged by Microfinance Institutions (MFIs) like SACCOS.

The penetration rate as an external outreach indicator, explains the ability of an institution to expand in delivering its services so as to reach more people and saturate the market as defined by Basu et al, (2004). It is calculated by dividing the total number of reported credit union members by the economically active population (WOCCU, 2008; Allen and Maghimbi, 2009; Pollet, 2009). The penetration rate in Mshikamano SACCOS was 2.36% indicating the ability of the SACCOS to achieve geographical outreach, grow and reach more people. This rate is slightly higher than the average penetration rate of cooperatives in Tanzania which stands at 2.22 % (Allen and Maghimbi, 2009).

### Financial sustainability

The Operational Self Sufficiency (OSS)

and Financial Self Sufficiency (FSS) for subsidised institutions are calculated as follows as given by Elia (2006) and UNCDF (2009).

$$OSS = \frac{\text{Operating income}}{\text{Total operating expenses}}$$

$$FSS = \frac{\text{Adjusted operating income}}{\text{Adjusted operating expenses}}$$

institution to be financially sustainable, while above 120% is considered to be good according to the USAID guide. Moreover, Mshikamano SACCOS is shown to have 81.84% of Financial Self Sufficiency (FSS) as indicated in Table 4. According to the decision rule given by UNCDF (2009), the FSS above 100% for an institution indicates a breakeven point achievement. An OSS rate above 150% is excellent while the FSS between 100% and 130% is termed good and that of at least 90% is taken to be fair in justifying financial sustainability. In general, a good number of subsidized institutions normally display OSS above 100%, but they fail to achieve FSS above 100% since they depend much on the donor supports financially.

WRS and agricultural loans respectively instead of 18.5% interest rate offered on the market). Mshikamano SACCOS is considered to be operationally but not financially self sufficient. Thus, Mshikamano SACCOS does not have the resources to deliver its services without creditor support. However, its budget for the year 2010 indicated an intention to move towards both operational and financial self sufficiency as attested by OSS and FSS rates of 143.15% and 115.89% respectively.

**Table 4: Financial sustainability indicators for Mshikamano SACCOS**

Indicator	Year of consideration	
	2009	Expected by Dec 2010
Operational Self Sufficiency (OSS)	105.65%	143.15%
Financial Self Sufficiency (FSS)	81.84%	115.89%

**Overall performance**

The overall performance according to the diligent tool stands at 71.20% as is shown in Table 5 beneath. This implies a fairly promising SACCOS with most of the required structures and systems in place (USAID, 2006). This impressive performance is due to Mshikamano SACCOS' efforts to comply with the basic requirements of SACCOS, such as a valid registration certificate, an identifiable place of business, and financial services as its core business. Moreover, the observed overall performance of Mshikamano SACCOS is due to good leadership whereby leaders are not taking the advantage of their leadership and are not misusing their position by having for instance loans secretly provided or taking loans beyond the amount specified which is violating the agreed credit policies and regulations. Many SACCOS often reveal poor performance because they experience problems of poor leadership, mismanagement and persistent corruption. Poor leadership is often reflected in the lack of accountability and untrustworthiness on the part of management.



**Table 5: Diligent tool summary scores for Mshikamano SACCOS**

<b>Assessment Area</b>	<b>Maximum attainable score</b>	<b>Actual score</b>
Governance effectiveness and strategy	18	14.5
Management effectiveness	6	2.5
Product development and delivery	6	4.5
Asset and liability management	12	7.5
Accounting and financial management	8	5
Prudence and transparency in product pricing	6	3
Financial transparency	36	28.5
Total (overall performance)	92	65.5 (71.20%)

**Table 6: Factors leading to low participation in rural finance**

<b>Village/ Location of the respondent</b>	<b>Factors</b>				<b>Total</b>
	<b>Lack of knowledge</b>	<b>Operational policies and regulation</b>	<b>Lack of trust</b>	<b>Selfishness</b>	
<b>Percentages of the respondents</b>					
Magugu	20.00	20.00	6.67	13.33	60.00
Mapea	-	-	-	-	-
Gichamedia	-	-	-	-	-
Mawemairo	20.00	20.00	0.00	0.00	40.00
Total	40.00	40.00	6.67	13.33	100.00

## Participation in rural finance

The results in table 6 indicate that 40% of the respondents were not aware of the services offered by Mshikamano SACCOS. This might lead to a careful conclusion that a lack of knowledge on the rules, regulations, and policies that govern SACCOS' operation is a key factor in the poor participation of the rural people in rural finance. Furthermore, for the semi-literate community involved in this study, people's reluctance to participate in rural finance is caused by the complexity of paper work involved in accessing Mshikamano SACCOS' services.

## Strengths & weaknesses

As said in the introduction, an analysis on strengths and weaknesses was also carried out to gain insight into the factors that either contribute or hinder Mshikamano SACCOS's objective: *the provision of financial services to paddy farmers aimed to improve both quantity and quality of rice production*. Here, the results of this analysis are summarized.

### Strengths

#### Good Loan Recovery

Mshikamano SACCOS comprise members who are committed and consider themselves as owners of the SACCOS. This can be seen from a loan recovery rate which stands at 71.23% (see table 2 before).

#### Good Governance

Mshikamano SACCOS is democratically governed through the voice of its own members in General Meetings. This creates harmony and provides a positive attitude and unity among members which might contribute to high loan recovery and repayment rates. Mshikamano SACCOS does not face the problems that many SACCOS in Tanzania do encounter, e.g. poor management, corruption and

embezzlement and lack of cooperative democracy.

#### Strong partnership with other organisations

Mshikamano SACCOS has a good relationship with other organisations which adds value to its performance and development. Mshikamano SACCOS works in partnership with the CRDB Bank which financially supports the SACCOS to get enough agricultural loans to its members during the rainy season. This would not have been possible with Mshikamano SACCOS' own capital.

Moreover, partnership with the National Economic Empowerment Council in collaboration with the CRDB Bank has enabled Mshikamano SACCOS to receive loans at lower rates than market rates. Rural people prefer to receive loans from SACCOS rather than from commercial banks because the SACCOS are usually closer to their living environment. Besides, their collateral system can provide a moer attractive alternative than the ones required by commercial banks.

### Weaknesses

#### Poor marketing of product and services

The types and benefits of products and services offered by Mshikamano SACCOS are not well communicated to members. For instance, Mshikamano SACCOS operates deposit accounts but the deposit mobilization has been very poor as about 96.36% of the respective account holders have no balances in their accounts. This might be due to lack of sufficient information about the services provided and the methods of delivery as shown in Table 6. When people are informed about products or services they can make informed decisions about the usage thereof.

#### Traditional record keeping technologies

Record keeping and product and service delivery in Mshikamano SACCOS is done

manually. Modern technology like computerization of operations (record keeping and service delivery) might support flexibility in service delivery when the environment of operation keeps on changing (a computerized system can maybe easier keep track of such changes than a manually operated system).

#### **Poor packaging of services provided**

The office used by Mshikamano SACCOS is not adequate for provision of financial services due to the fact that it was originally designed to be a warehouse. This is likely to influence people's decision to join the institution as they may have low confidence about the safety of their money. Moreover, in general, poor packaging affects marketing campaigns for the products and services meant to attract new members. In other words, an office that looks reliable is more attractive for people to deposit their money and might attract others to have their financial accounts managed by this trustworthy institution.

#### **Concluding remarks**

Mshikamano SACCOS is owned by all members and the decisions are made democratically in the general meetings. With regard to financial aspects, the SACCOS operates transparently increasing trust among its members and minimizing failure of the institution as compared to many SACCOS that have failed due to embezzlement (Bibby, 2006). For the people of Magugu, paddy farming is their major source of income. The area available for paddy farming is not fully utilized; some land remains uncultivated. The establishment of the SACCOS changed the life of the people in Magugu in the sense that they started to receive loans with a grace period corresponding to paddy farming. The payment starts after harvesting so that farmers can pay their loan after selling their produce. However, instead of selling they might choose not to sell their crops but store them and use them as a collateral to receive a WRS loan which can be used to pay the

agricultural loan. The remaining amount is normally used to fund agricultural activities for other crops during July to September. Then, once the price appreciates, farmers normally sell their paddy/rice and pay their WRS loan while retaining enough amounts to spend and save. In other words, the annual cycle of farming activities in Magugu matches with the two phases of loans that are provided by Mshikamano SACCOS namely, the agricultural and WRS loans. Further, Mshikamano SACCOS' performance is expected to increase. It is the kind of financial institution that provides loans to its members for productive and provident purposes at fair and reasonable rates of interest and with simple terms of repayment. Members are therefore encouraged to continue operating with the SACCOS. Non-members might want to join when they see their fellow villagers gain from the SACCOS economically as well as in terms of knowledge increase. Application of USAID's diligent tool to score the performance of Mshikamano SACCOS showed the ability of the SACCOS to grow as the penetration rate coupled with an average outreach show. However, given the current low participation in rural finance, more emphasis has to be put in education and training programmes with regard to products and services offered. It is recommended to have this done from May to October because the community is then less engaged in agricultural activities compared to the months of November to April. Promotion of a saving culture among its members will finally enhance SACCOS to trade on own capital and move away from dependency on creditors in the provision of its products and services. The SACCOS is also advised to invest in modern technology and move into computerized services like automated teller machines (ATMs) and mobile phone transactions to match the current era financial operations. Mobile phones and mobile units make service delivery less dependent on expensive infrastructure and make delivery of service in the rural areas more simplified and thus increase the scale of outreach. This can be done

in collaboration with other telecommunication service providers through agreements and sharing of the service income. Moreover, a so-called “demonstration” effect can help Mshikamano SACCOS improve its operations and increase its penetration rate. Mshikamano SACCOS can, for instance, share its strategies with other SACCOS in Tanzania and other countries, which have vast experience in the provision of similar services. It may also include sharing of operating models and business practices that have proven

to be successful.

All in all, Mshikamano SACCOS growth prospects seem rather promising, weather permitting. Although the SACCOS loan provision matches the annual cycle of agricultural activities, the Magugu paddy farmers might always face climate challenges that are beyond their control, e.g. excessive rains or droughts, and yet influence their harvests and thus their financial situation.

## References

- Allen, E and Maghimbi, S. (2009). Cooperatives in Africa- African Cooperatives and the Financial Crisis. *Coop<sup>AFRICA</sup> Working Paper*, 3:13–25.
- Basu, A, R. Blavy and M. Yulek (2004). Microfinance in Africa: Experience and Lessons from Selected African Countries. *IMF Working Paper*, 4 (174): 7–19.
- Bee, F.K. (2007). Rural Financial Markets in Tanzania. An analysis of Access to financial Services in Babati District. Thesis for Award of PhD Degree at University of South Africa, Pretoria. South Africa. 299 pp.
- Elia, M. (2006). Women’s Empowerment Project - Pilot Course. School of Management. University of Turin- Italy [[www.saa.unito.it/alfa1/pdf/FSS\\_Banco\\_Procredit.ppt](http://www.saa.unito.it/alfa1/pdf/FSS_Banco_Procredit.ppt)] site visited on 20/07/2010.
- Mshikamano SACCOS (2009). Office reports. Unpublished.
- Pollet, I. (2009). Cooperatives in Africa: The Age of Reconstruction – Synthesis of A Survey in Nine African Countries. *Coop<sup>AFRICA</sup> Working Paper*. 7: 3–31
- UNCDF (2009). Core Performance Indicators for Microfinance. United Nations Capital Development Fund. [[www.uncdf.org/.../microfinance/.../Core%20Indicators—UNDP%20version.pdf](http://www.uncdf.org/.../microfinance/.../Core%20Indicators—UNDP%20version.pdf)] site visited on 26/01/2010.
- USAID (2006). *A Due Diligence Tool for Savings and Credit Cooperatives (SACCOS)*. United States Agency for International Development. Chemonics International Inc., Washington D.C, USA. 17 pp.
- WOCCU (2008). *Statistical report*. Credit Unions Worldwide. World Council of Credit Unions, Washington D.C – USA. 2–4 pp
- Zeller, M, C. Lapenu and M. Greeley (2003). Measuring Social Performance of Micro-Finance Institutions. Final Report. CGAP Printer, Washington DC, USA. 18pp

## Colophon

“Low participation of small holder farmers in rural finance services. The case of Magugu paddy growers in Babati, Tanzania” is one in a series of case studies published by Business Minds Africa to be used for training professionals in agricultural entrepreneurship for the East African job market. Business Minds Africa is an international collaborative network composed of partners from Europe and East Africa, thus combining development expertise with educational capabilities. The case can be downloaded from <http://businessmindsafrica.org/>. The partners of Business Minds Africa are: the International Institute of Rural Reconstruction (IIRR, <http://www.iirr.org>), Higher Institute of Agriculture and Animal Husbandry (ISAE), Jomo Kenyatta University of Agriculture and Technology (JKUAT, <http://jkuat.ac.ke/>), Kenyatta University (KU, <http://www.ku.ac.ke/>), the Kenya Institute of Management (KIM, [www.kim.ac.ke](http://www.kim.ac.ke)), the Royal Tropical Institute (KIT, [www.kit.nl](http://www.kit.nl)), Makerere University ([www.mak.ac.ug](http://www.mak.ac.ug)), Mountains of the Moon University (MMU, [www.mmu.ac.ug](http://www.mmu.ac.ug)), and the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM, <http://ruforum.org>), Sokoine University of Agriculture (SUA, <http://www.suanet.ac.tz/>) and Van Hall Larenstein University of Applied Sciences (VHL, <http://www.vanhall-larenstein.com/>).

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