



Local financing mechanisms for roofwater harvesting in Uganda

Hans Hartung

Roofwater harvesting has been spreading at an impressive rate in the Oruchinga Valley in south-western Uganda over the past 10 years. Local savings and credit groups have been important for helping households make this large investment, and microfinance institutions might play an increasing role in future.

Water is very scarce in the Oruchinga valley, South of Mbarara, Uganda since there is only temporary surface water and groundwater is either absent or mineralized. Women and children often have to walk 5–8 km to and fro to fetch water, sometimes even more. This consumes a lot of their time and energy.

Roofwater harvesting was seen as a possible solution to the problem and its introduction started in a significant way after 1993. A representative of ACORD (Agency for Co-operation and Research in Development) was sent to a rainwater harvesting workshop organized in Kenya in 1993, and through this work over the next few years people in the area gradually gained interest. This was reinforced by an exchange visit to an area of Kenya where tanks were already in use, and assistance given in building demonstration tanks. The initial work was supported by Bread for the World of Germany, but the construction of tanks is now paid for by savings groups, comprising mostly women. The roofwater harvesting idea has spread to the whole country; an average of more than 600 tanks is now constructed annually in Mbarara district (see Figure 1).

A variety of different tank size options was available for the community groups to select from, ranging from 6–15m³, and the appropriate bills of quantities and item costs were provided. The groups themselves made their choice of the tank size, depending on their economic capacity and other

factors like roof size and the number of household members (water users). A common tank size is 10 m³, for which materials cost Ug.Sh. 430 000 (€190).

All tanks in this area are made of ferrocement with weld-mesh reinforcement. Gutters are made of corrugated iron sheets for roofs or bought in the market at Mbarara, the district headquarters. Inspired by the original project, rainwater tanks have also since been built by other organizations in adjacent areas, copying the same basic approach, for example, by the Centre for Community Solidarity, a local NGO. Politicians at local, district and national level are now increasingly convinced of the advantages of roofwater harvesting, especially for areas where other sources are not available.

In Kibwera, community members have noted several benefits since acquiring rainwater tanks; especially in

the dry season when they can now water vegetable gardens and small animals. The tanks have helped women and children to save time and do other activities near the house. For people with HIV/AIDS, water near the house is 'a blessing'. Initially many people feared that the tanks were only for rich people and they were scared to join savings groups, but they are now convinced of their benefits.

As in many parts of rural Africa, the high initial costs of the rainwater storage tank, gutters and down-pipe have acted as a major obstacle to widespread implementation. Effective financing is therefore seen as a key factor in helping the spread of roofwater harvesting.

The following different groups and organizations involved with financing roofwater-harvesting systems in the Oruchinga valley are

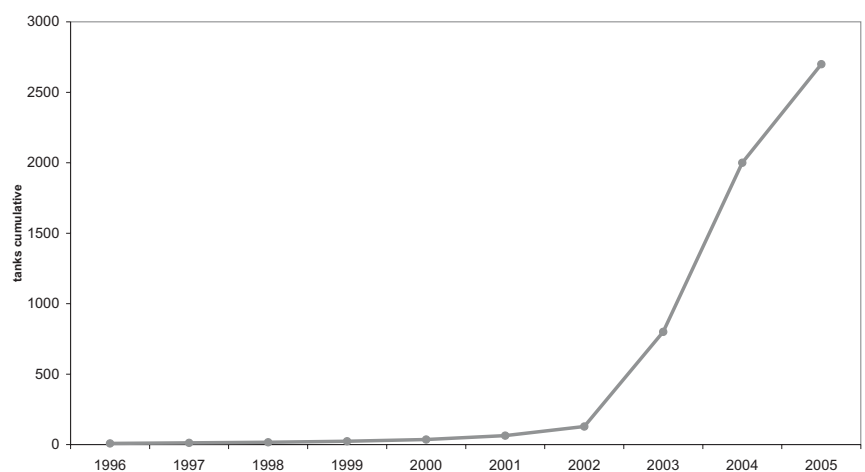
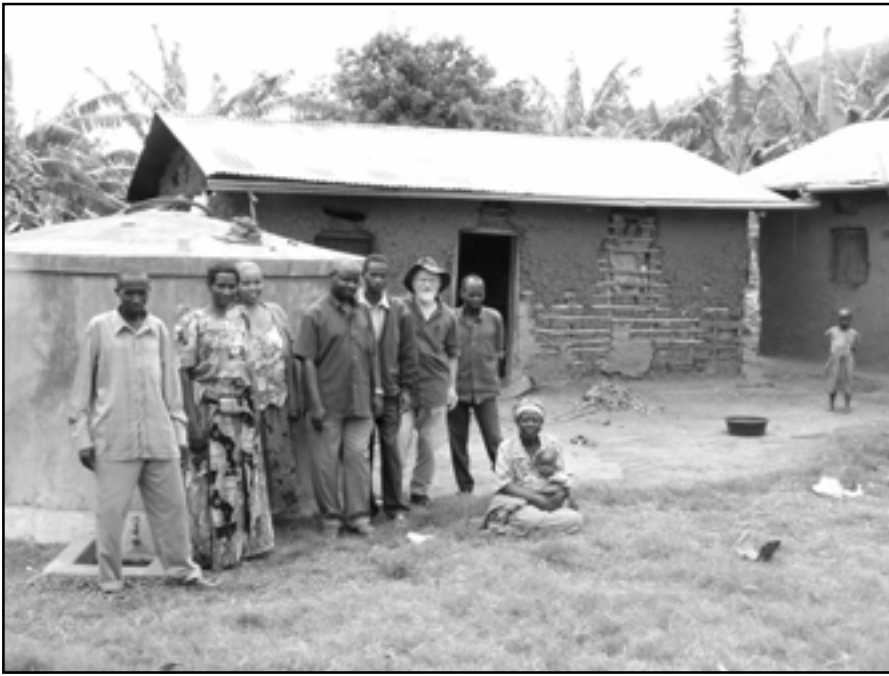


Figure 1 Rainwater harvesting tanks built in Oruchinga Valley

Table 1 Examples of financing mechanisms for rainwater harvesting found in Isingiro District, south-west Uganda (formerly Mbarara district)

	<i>Isingiro Rural Savings & Credit (ISRAC)</i>	<i>Bukanga Co-operative Society</i>	<i>Mabona Parish Savings & Credit Association</i>	<i>Bukanga-Isingiro Rainwater Association</i>	<i>Centre for Community Solidarity, CCS</i>
Membership	Approx. 2300 (Oct. 2005)	Approx. 730 (incl. 240 women)	27 (incl. 11 women)	34 groups (average 15 members each)	
Legal status	Public company	Public company	Company	Association	NGO
Registration	With district	With district	With Registrar of companies	At district level	–
Working capital (€)	168 000	68 000	2700	1550	–
Procedure to get loan	Application as individual or as group member	Application as individual or as group member	Apply as group member	Member applies through group. Max. loan €90, added to by group	Not an organization giving loans, but mobilizes groups and associations
Guarantee / collateral	Known by community, usually land title	Usually land title	Trust between members	Borrower guarantees with agricultural products, e.g. bananas	–
Interest	3% per month (can be adjusted)	3% per month (can be adjusted)	3% per month (36% annually)	2% p.m., 1% is for the association and 1% goes back to the group	–
Positive points	<ul style="list-style-type: none"> • large base • formal and approved procedures • AMFIA¹ member • groups can be members • loans made for 15 tanks • flexible loans 	<ul style="list-style-type: none"> • large base • formal and approved procedures • AMFIA member • groups can be members • loans already made for some tanks • flexible loans 	<ul style="list-style-type: none"> • small group with formalized status and bank account • simple and effective form of 'self-help' • trust among members replaces formalities 	<ul style="list-style-type: none"> • capital comes from entrance fee and is loaned out • no bank needed • simple and effective form of 'self-help' 	<ul style="list-style-type: none"> • very good contact with the surrounding population • recognized as <i>the</i> RWH institution • bank account and international standing
Weak points	<ul style="list-style-type: none"> • chairman is a political figure, i.e. organization might get into politics 	<ul style="list-style-type: none"> • political influence 	<ul style="list-style-type: none"> • informal character both a strong and a weak point • dominated by a strong individual 	<ul style="list-style-type: none"> • not integrated into the formal banking system • informal, minimal bureaucracy this is both a strong & weak point 	<ul style="list-style-type: none"> • not an 'international' NGO, which is also its strong point
Comments	<ul style="list-style-type: none"> • will transform into a co-operative society, as only then can they legally take savings 			<ul style="list-style-type: none"> • convinced government to give support 	<ul style="list-style-type: none"> • can act as adviser for the technology, and help in mobilizing all these groups

Note: 1. AMFIA is the Ankore Micro-Finance Institutions Association



Mabona Parish Savings and Credit Association with group members and the author in front of a self-financed rainwater harvesting tank

summarized with additional information in Table 1.

Savings and credit groups

Mabona Parish Savings and Credit Association Ltd. This association uses a typical ‘merry-go-around’ approach, which can be found in many countries throughout Africa. In this, each member of the group agrees to make a regular contribution, for example monthly, so that one individual member can benefit. For example if a group of 12 householders each agree to make a monthly contribution equivalent to 1/12th the cost of the materials for a tank, and provide free labour and collect locally available materials (e.g. sand), one tank can be built every month. After a year, every member of the group will have their own tank.

The spread of roofwater harvesting in Laikipia, Kenya has been based on this principle and it has been key to its ongoing uptake in south-west Uganda. Like all the savings groups in the area, the Mabona group is self-selected with a constitution that spells out conditions of membership, management structure, responsibilities and obligations and loan eligibility and procedures. Most of these groups save for only one purpose, in this case for roofwater harvesting systems, but loans have also been

used for developing banana plantations and homesteads. The ‘Mabona’ group has gone a step further and formalized their operation, registering itself with the sub-county and with the registrar of companies in Kampala (Ministry of Justice).

Bukanga-Isingiro Rainwater Association. In order to increase their voice and get more attention, rainwater harvesting (savings) groups have started to form federations. An umbrella association has formed of 34 groups and has a clear constitution and by-laws. It is now registered with the District as a community-based organization (CBO) and is legally recognized. Each of the 34 groups has had to contribute through a joining fee of Ug.Sh.100 000 (€45) to a common fund. This fund is extended back to member groups (and in turn passed on to individual members) in the form of a loan at an interest rate of 2 per cent per month (1 per cent for the association towards running costs and another 1 per cent for the group towards its operational costs). All loans are of an amount of Ug.Sh.200 000 (€90) and must be paid back within four months. The loan is restricted specifically to roofwater harvesting systems and has to be supplemented by the beneficiary’s group.

Microfinance institutions

Isingiro Rural Savings and Credit. (ISRAC) is typical of the microfinance institutions that have been formed all over Uganda. It is a democratic membership-driven, not-for-profit financial organization, owned, governed and managed by its members who have the same common bond. ISRAC covers a specific area in the south of the former Mbarara district and has already given loans for rainwater tanks – but in a very formalized way. A contract was awarded to a construction company that will build tanks for customers of ISRAC. But the organization has now begun to support self-help groups directly.

Bukanga Rural Development Savings and Credit Co-operative Society. This is a very similar organization to ISRAC, but concentrates mainly on the neighbouring areas to the north. ‘Bukanga’ has already given loans for roofwater systems, but with a much more flexible approach than ISRAC, whereby the beneficiaries can contribute their labour, buy materials themselves and thus save a substantial amount towards the costs of constructing the tank. They are organized as a co-operative, the only institutional set-up allowed on this small scale to take deposits from its members.

Technical and management support institutions

The Centre for Community Solidarity (CCS) is a community-based organization with an emphasis on rural development of the Oruchinga Valley. It has a lot of experience in rainwater harvesting. It has been subsidizing rainwater tanks through various donor funds. It is not a financial institution but facilitates the formation of savings groups and associations. It can assist in giving technical assistance, oversee and monitor construction of the rainwater systems and give training to local masons and groups in managerial matters.

Economic activities to finance the tanks

A key question which is often asked is: how can individual families raise the money to pay back the loan for the tanks? The answer is, once the rainwater tanks are filled they can engage in a

number of economic activities. Some of these are a product of the use of surplus water not required for household uses (i.e. drinking, cooking and washing). Others result from women being able to use the time (and energy) that is now freed up from water collection for more productive purposes. The following are amongst the economic activities reported by different groups:

- improved agricultural production, e.g. growing vegetables and other produce to be sold at the market during the dry season
- using the time freed from fetching water for other non-farm microenterprises
- surplus rainwater and recycled greywater used for establishing tree nurseries
- selling boiled and filtered rainwater to neighbours
- porridge and local beer production for sale
- watering livestock and poultry.

Conclusion

After more than ten years, the experience with roofwater harvesting in the Oruchinga valley indicates that it is fulfilling a real need of the people in the area. In addition, roofwater harvesting has spread from Oruchinga to other parts of Uganda through exchange visits, and also to other countries, like



Microfinance institutions such as ISRAC are gradually becoming interested in financing rainwater tanks

Zimbabwe and Rwanda. It is clear that the people are willing and able to finance their rainwater supply in part or totally by themselves, if suitable financing mechanisms are made available. People quickly gain the necessary skills and experience with operating group savings and credit schemes after they have been given some training. Clear, transparent terms and conditions as well as rules for the operation of the

schemes are necessary to ensure problems are avoided.

A supportive political environment for rainwater harvesting as well as microfinance are important, and these are already present in Uganda. Microfinance institutions are interested in providing support for rainwater harvesting and are in the process of starting this 'credit line'. Most recently, both ISRAC and Bukanga each received a long-term interest-free credit line for €10,000 from Arche Noah Foundation of Germany at the beginning of 2006. With this money they have established a credit line for groups investing in rainwater harvesting. There are several different financing mechanisms in existence and these can operate side by side, complementing each other without fear of competition. Microfinance institutions can be important actors in contributing to the spread of roofwater harvesting systems, which require a substantial initial investment.

Acknowledgement

The author would like to thank Charles Rwabambari, CCS, without whose work in rural Uganda this article would not have been written.

About the author

Hans Hartung works as the Water Co-ordinator, FAKT.



This rainwater tank in Uganda has a capacity of 10 m³ and is made of ferrocement