REDD+ activities in the district of Hoima, Uganda

Piloting conservation farming, rural financial services¹ and beekeeping as forest conservation incentives

Final report

to

Tullow Uganda Operations Pyt Ltd



Wildlife Conservation Society



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¹ With Funding from the Darwin Initiative



















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Executive summary

WCS and partners piloted the impact of introducing conservation farming, setting up business saving groups and promoting beekeeping packaged as a set of incentives to conservation the forest on the lands of the Private Forest Owners in the parish of Kibanwja, one of the priority REDD+ parishes in the district of Hoima. In addition, abiding to the UNFCCC REDD+ safeguard, these project activities are intended to "do good" to the "project affected people" of the Murchison-Semliki REDD+ project.

Conservation farming is a climate smart agricultural practice helping farmers adapt to climate change. It is also a low capital and low technology farming system, while intensifying the cultivation of the existing land. The latter is important to stop deforestation of the last existing forests in the Murchison-Semliki Landscape. Business Saving Groups are group based financial organizations set up to help poor households provide access to capital by pooling and lending their savings among group members, while interest rates remain low compared to commercial micro-financing institutions. Lack of access to capital is one of the barriers for poor households to invest in their existing enterprises and set up new ones. Beekeeping was promoted as a forest friendly enterprise with the prospect of generating a profitable income. Beekeeping is one of the alternative livelihood options offered to the Private Forest Owners to diversify their income and minimize the risks of economic shocks; beekeeping also improves pollination of crops such as beans and resulting in bigger harvests.

72 Private Forest Owners were introduced to conservation farming during a one-week training and the skills of 10 lead farmers who volunteered to set up demonstration plots of half an acre were further trained. Harvests increased on average by 71%, the equivalent of an additional 1.8 tonnes per hectare. The farmer field day attracted more than 200 visitors and some 500 farmers visited the demonstration plots afterwards. Two Business Saving Groups were set up. Each one on average had saved 1.5M UGX in six months and between 46 and 92% of the members had a loan. Beekeeping was promoted through a demonstration day and the repayment scheme through the newly established business saving groups was explained and accepted. The eight subsidized starter packages for beekeeping were taken up representing 16 new beekeepers.

Overall the project activities were well received and appreciated by the Private Forest Owners. The ten lead farmers profited financially from the increased surplus which helped paying school fees, do home improvements and save extra money. Private Forest Owners saved above average in their business saving groups compared to groups elsewhere. The beekeeping needs more time before its benefits can be evaluated, but the quick uptake of the starter packages shows an eager interest. WCS and partners are happy to conclude that the incentive package provided through the Murchison-Semliki REDD+ project is doing the Private Forest Owner good!







1. Introduction

Since the industrial revolution greenhouse gases from fossil fuels have increased the capacity of the atmosphere to store heat. As a result the global average temperature of the atmosphere has increased and is now at the capacity to melt the polar ice sheets and mountain glaciers (IPPC, 2007).

Roughly 21% of all greenhouse gases (GHG) are emitted by developing countries where rural communities clear and burn forest for agriculture and where most people are using fuel wood or charcoal to cook. To avoid that the atmosphere warms up even more, it is important to Reduce the amount of greenhouse gas Emissions from Deforestation and forest Degradation (REDD). This means teaching farmers better farming practices to avoid that they have to continuously clear new forest for agriculture and it means introducing forest friendly alternative sources of energy for cooking.

WCS and partners² assembled in the Northern Albertine Rift Conservation Group (NARCG) have been developing a REDD project in western Uganda and working with small hold farmers who still have natural forest on their land the so-called Private Forest Owners. For conservation NGOs these forests are important because they represent wildlife habitat and corridors between forests on public land such as Budongo and Bugoma Central Forest Reserves.

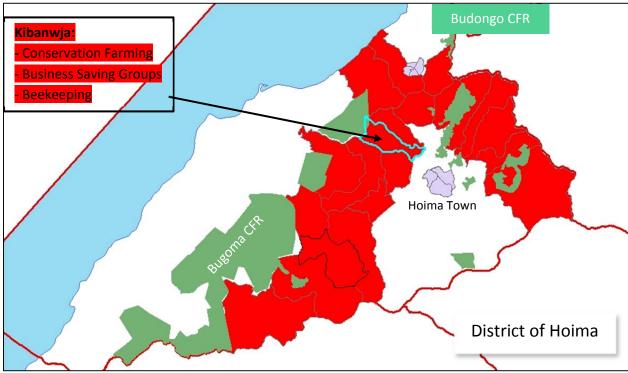
But these forests are also essential for farmers to be able to cope with climate change. Forests provide important climate regulating ecosystem services. They buffer against extreme whether events and avoid that the surrounding land in this case farmland dries out. If all these forests would disappear, agriculture would become increasingly difficult and harvests would fail regularly causing hardship to rural households.

To save the households from the negative impact of climate change, WCS and partners introduced conservation farming, group saving and loan associations (Business Saving Groups) and beekeeping to the small holder farmers (Private Forest Owners) as REDD+ project benefits. In return they are asked to conserve their forests.

WCS assumes based on the theory of change hypothesis that this combination of incentives will effectively and efficiently reduce greenhouse gas emission, save biodiversity and alleviate poverty among the Private Forest Owners.

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² the Chimpanzee Sanctuary Wildlife Conservation Trust, the Jane Goodall Institute, ECOTRUST, Flora and Fauna International



Map 1 showing the location of the Kibanwja Parish as one of the REDD+ priority parishes (red) in the district of Hoima.

2. Site and target beneficiaries

WCS and partners are implementing the Murchison-Semliki REDD+ project which is situated in western Uganda east of Lake Albert. The project area covers the districts of Hoima, Masindi, Kibaale and Kyenjojo. This is where the last remaining natural forests on private land remain in Uganda. The pilot site, Kibwanja Parish is situated in the district of Hoima and it is one of the 13 parishes where REDD+ activities have been prioritized (see map). The forests in these 13 parishes form an important corridor linking the Bugoma and Bodongo Central Forest Reserves.

There are 256 hectares of forests in the parish of Kibanwja. Agriculture is the main livelihood and source of income. Small holder farmers with natural forest on their land formed an Association for Private Forest Owners (PFOA). These farmers are participating in the Murchison-Semliki REDD+ project. Over the last five years and through the process of Free, Prior and Informed Consent (FPIC³), they have been introduced to the concept of REDD+, consulted about the benefits and disadvantages of the REDD+ project and they have finally given their consent for the implementation of the REDD+ project. Consequently, the Private Forest Owners have agreed to conserve their forest in return for direct and indirect monetary and non-monetary benefits generated through the REDD+ activities presented as the incentive package.

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³ Free Prior and Informed Consent (FPIC) is a compulsory safeguard and without the consent of the "project affected people" the REDD+ project will not be implemented.







3. Methods

3.1 Incentive package and benefits

The project activities piloted were selected based on the need to tackle deforestation, generate short-term results to show case project benefits and leverage buy-in from the Private Forest Owners. Traditional farming was identified as the main driver of deforestation and a lack of rural financial services (agricultural loans) as the barrier for agricultural improvements and opportunities to invest in better inputs for a better production, such as improved seeds, and fertilizers. For the project it was also important to show that tackling deforestation was a win-win opportunity for farmers instead of a tradeoff decision. Finally, the project wanted to provide PFOs an opportunity to invest in alternative and profitable forest friendly livelihood for cash income and diversify their livelihoods.

Conservation farming helps to intensify agriculture on existing land and counters the need to clear new forests. In the districts around the town of Lira, farmers who had adopted conservation farming saw their harvests increase by 40% on average. The benefit of adopting conservation farming is clearly a winwin situation and its short term benefit would already be evident after one farming season. Similarly, Village Enterprise's experience in setting up Business Saving Groups (i.e. village banks, Group Savings and Loans Associations) in the landscape showed that these groups were keen to pool their savings and lend to one another providing members an opportunity to start an enterprise at a low interest rate while also getting a return of investment on their savings. Beekeeping was introduced as an alternative source of income with a relatively quick turn over within one season and with a big market demand.

Conservation farming, setting up Business Saving Groups and promoting beekeeping were also selected because in combination they create synenergy. By pooling their money in a BSG, PFOs have the opportunity to loan money and purchase better inputs for a better harvest. With the harvest surplus they are able to pay back their loans and save extra money; similarly for beekeeping. In addition to generating income from beekeeping, having more bees next to their fields would also increase pollination of their crops such beans and fruit trees. Better pollination also means bigger harvest and more income from selling the surplus.

3.2 Conservation Farming

Conservation farming is a climate smart agricultural practice which adapts farmers to climate change while increasing their harvests compared to traditional farming practices. The principles of conservation farming are zero tillage and mulching using either planting basins or riplines. Conventional ploughing and turning the soil as a land preparation practice for planting has the disadvantage that it opens up the top soil. Consequently, the disturbed top soil loses its moisture and nutrients through desiccation and decomposition.

Conservation farming keeps disturbance of the soil to a minimum and through mulching creates an organic layer conserving moisture and nutrients in the soil. To control weeds in newly established fields either species specific herbicides are sprayed to control them or cover crops are planted. The herbicides

are only needed in the beginning. When legumes are used as a cover crop, they also enrich the soil with nitrogen boosting soil fertility.

The conservation farming training was carried out by CLUSA a specialist in the conservation farming. CLUSA's outreach and training program consists of an one work week training session, selecting and training lead farmers in setting up demonstration plots, two follow up visits to check crop performance and a final visit to measure crop production and organizing farmer field day event to show case and promote conservation farming to a wider audience.

The classroom trainings cover topics such as historic traditional land use to access the effect poor soil management, soil characteristics, concepts and practices of conservation farming, application of herbicides, fertilizers and pesticides, use of spray pumps, pest management, the conservation farming calendar, animal traction for ripping, cover crops and finally a cost benefit analysis comparing conservation farming with traditional practices.

Practical training consisted of setting up demonstration plots of half an acre planting maize (seed variety Longe10H) in planting basins (35cm in diameter and 15 cm deep) 60 cm interspaced from basin center to center. Lead farmers were trained in applying mineral fertilizers⁴ (diammonium-phosphate (DAP) and Urea), and correctly mixing herbicides (glyphosate and 2,4-D(Dichlorophenoxyacetic acid)). Finally, two demonstration plots were planted with Mucuna, a legume green manure cover crop (*Mucuna pruriens* (L.) DC). Mucuna is used as an alternative for spraying with herbicides as it grows densely with the advantage that it also improves the soil.

3.3 Business Savings Groups

Setting up the Business Saving Groups has been done with funding from the Darwin Initiative Foundation. This project activity was part of the original project proposal but was removed due to the issue of withholding tax of 6%. The reason for reporting on this activity is because the beekeeping project activity as a livelihood improving activity was closely linked to the Business Saving Groups (see under *Beekeeping*).

A Business Saving Group is similar to a Village or Group Saving and Loans Association (V/GSLA) or Village Bank. This means that a group of around 30 people put their savings together and lend to members of the group. The Business Saving Groups (BSGs) have been set up by Village Enterprise a specialist in providing rural financial services to poor households and they have been working in the district of Hoima for several years.

The Village Enterprise (VE) training program consists of 5 modules dealing with basic saving and record keeping principles, but also how to form a trustworthy executive committee, how to create a constitution and finally how to handle lending and loans while avoiding a negative impact on the natural resources the BSG members depend on for their enterprises. In addition, business mentors from VE

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⁴ mineral fertilizers, unlike petroleum based fertilizers, do not contribute to GHG emissions

supervise and provide back stopping services to the new BSGs and they ensure that BSG members frequently meet which is one of the success factors for a BSG. Unique to Village Enterprise's training program is the flexibility with which members can determine their constitution, by laws, rules and regulation. Self-determining constitutions have been a major factor in the performance of the BSGs.

3.4 Beekeeping

Beekeeping was already introduced to the PFOs as a forest friendly enterprise by the Chimpanzee Wildlife Conservation Trust (CSWCT). Malaika Honey provided technical training and the market, while Postbank was supposed to provide credit for PFOs to purchase the beekeeping equipment. The response of the PFOs was positive and many enrolled in the programme.

However, the financial mechanism with the Postbank did not work out which is why WCS did not replicate this existing model. The other observation from Malaika Honey was that beekeeping promoted by NGOs by handing out beekeeping equipment and providing training for free or subsidized did not result in commercial enterprises. Beekeeping requires active management of the hives and they observed that hives were abandoned after a while when beekeepers run into issues or colonization of the hives was slow and poor.

Therefore, WCS modified the beekeeping enterprise repayment scheme. Instead of relying on commercial banks such as Postbank, WCS used the newly set up Business Saving Groups (BSGs) as the financial mechanism. PFOs who want to start their beekeeping enterprise can apply for a loan from the Business Saving Group. This has the advantage that the interest rates remain low (10% instead of 40%) and that the capital remains in the BSG. In addition, WCS also hopes that the peer pressure from BSG members on the new beekeepers will force them to take their enterprise serious and not abandon their hives. Finally, PFOs have to apply as a team of two people. This again was to avoid that PFOs get discouraged.

To promote the beekeeping enterprise, WCS provided eight starter packages at a subsidized rate of 30%. To make beekeeping interesting to the BSG, WCS developed a financing mechanism where WCS bought the equipment, hand it over to the Beekeeping teams and they pay back to the BSG. In this way the BSGs would get extra capital instead of providing loans to the teams with their own savings.

Table 1 Return of Investment repayment scheme over two year and 10% interest											
						Colonization			income		
						50%	80%	100%			
		Produ	uction								
		hives	(kg)	price /kg	product	year 1	year 2	year 3	year 1	year 2	year 3
	Conhar Bookiyo (KTD)	4	30	5,000	honey	2	3.2	4	300,000	480,000	600,000
Kenian Topbar Beehive (KTB)		4	13	15,000	Bwax	2	3.2	4	390,000	624,000	780,000
Gross Income									690,000	1,104,000	1,380,000
	subsidized (30%)								247,500	247,500	0
start up costs	without								389,500	389,500	0
Net Income	subsidized (30%)				•	•			442,500	856,500	1,380,000
	without								300,500	714,500	1,380,000

Table 1 shows the rate of return for beekeeping teams to start up their beekeeping enterprise for teams currently subsidized and future teams without subsidy. Teams are paying back their loans over two years at an interest rate of 10 %. Each teams starts with four hives. Colonization of the hives can be slow. Therefore, we used a scenario from a success rate starting at 50% or two hives to 100% in the third year or four hives. Under both scenarios a team would already make a profit in the first year. WCS provided 4 subsidized starter packages per BGSs.

4 Results

4.1 Conservation farming

Harvests - In Kibanwja 72 (16 female, 55 male) Private Forest Owners participated in the five day training carried out by CLUSA. Following this training 10 (1 female, 9 male) Private Forest Owners volunteered as lead farmers and they received additional training in herbicide application. Each lead farmers planted on average 0.5 acres; in total 5.3 acres or 2 hectares were planted with maize using conservation farming principles and practices. After three months the maize was harvested, measured and compared to yields obtained through traditional farming. Table 2 shows the harvest results of the demonstration plots and the proportional change (%) compared to traditional harvests. Harvests increased across all lead farmers on average by 71%, ranging between 875 and 1442 kg per acre or between 2.2 and 3.6 tonnes per hectare. These values are close the results from optimal experimental conditions. All the 10 lead farmers were high impressed by the production.

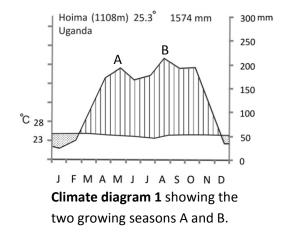
Table 2 Differences in production between traditional and conservation farming practices								
	Traditional farming (kg/	conservation farming acre)	traditional farming (toni	conservation farming ne/ha)	increased yields			
average	589	1007	1.5	2.5	71%			
max	725	1442	1.8	3.6	99%			
min	498	875	1.2	2.2	76%			

Adoption – The PFOs lead farmers were taught seven agronomic practices of conservation farming: 1) herbicide use, 2) digging basins, 3) fertilizer / manure application, 4) planting, 5) Mulching, 6) weed management, and 7) crop rotation between seasons. Table 3 shows the number of PFOs adopting the Conservation Farming practices. Farmers adopting more conservation farming practices also had bigger yields but the relationship is weak $(R^2=0.4)^5$.

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⁵ R²=1 is a strong correlation, close to 0 is weak

Table 3 Success of adoption of conservation farming (CF) and outreach									
farmers	CF prac	tices	Land u	Farmer					
lailleis	adopted	not	season A	season B	visits				
1	4	3	0.5	0.5	197				
2	1	6	0.5	0	5				
3	3	4	0.5	0.5	29				
4	5	2	0.8	0.8	14				
5	3	4	0.5	0.5	6				
6	0	7	0.5	0.5	5				
7	2	6	0.5	0	32				
8	7	0	0.6	0.6	175				
9	7	0	0.5	0.5	38				
10	2	5	0.4	0	5				
Average	3	4	-	-	51				
Total	-	-	5.3	3.9	506				



Outreach – The Farmer field day in Kibanwja Parish was organized as part of sensitizing the wider farmer community about conservation farming. More than 200 farmers attended the event including several district technical officers. After the event lead farmers tracked the number of farmers visiting their demonstration plots and inquiring about conservation farming. The last column in table 3 shows the outreach effort. In total 506 farmers visited the demonstration plots and inquired about conservation farming. On average 51 farmers visited each lead farmer, but visits ranged widely from 5 to 197. The most frequently asked questions were related to: 1) labor intensity of digging the planting basins, 2) and the mulching in between the basins, and 3) concerns about applying herbicides.

4.2 Business Saving Groups

Establishment - After the first meeting introducing the concept of the Business Saving Group, the Private Forest Owner Association (PFOA) of Kibanwja agreed to participate. The Private Forest Owner Association consists of 55 members and normally the association would have been divided into two groups of 23 and 22. But due to the spatial distribution of members and the convenience to meet at a weekly basis the association was divided in three groups (20, 20 and 15 members). The Business Saving Groups only received the first two modules from the in total five modules.







Table 4 Saving and loaning history* of the Business Saving Groups (BSG) in Kibanwja Private Owner Association (PFOA)										
PFOA	BSG	<u>Members</u>				-	Saving record			
77 671		Total	sa	ving	loa	ining	quarter 1	quarter 2	Total	
Kibanjwa	Kaigo	24	17	71%	22	92%	811,000	1,089,000	1,900,000	
	Kolping	26	19	73%	12	46%	0	1,304,000	1,304,000	

^{*} startup date: June 15, 2015

Savings - Table 4 shows the saving and loaning history of the two Business Saving Groups of the Kibanwja Private Forest Owner Association, the total number of members, those actively saving and taken a loan since the time of their startup. Both Business Saving Groups are about the same size (24 and 26 members) with about the same percentage of actively saving members (71 and 73%). In the Kaigo BSG more members have a loan (92%) than in the Kolping BSG (46%). This is because the Kaigo BSG started saving already in the first quarter whereas the Kolping only started to save in the second quarter, but at a high rate. The Kaigo BSG increased its saving by 278,000 UGX from 811,000 to 1,089,000 UGX. The Kolping BSG started slower but saved more in the second quarter than the Kaigo BSG, 1.3M and 1.1M, respectively. Although, these Business Saving Groups only started up recently, the savings are accumulating.

4.3 Beekeeping

Capacity assessment - Malaika Honey visited the existing beekeepers in the parishes where they provide training under the Chimpanzee Sanctuary Wildlife Conservation Trust (CSWCT) beekeeping Initiative, which included the Kibanwja Parish. In Kibanwja PFOA two Private Forest Owners were trained in beekeeping by Malaika. However, these two beekeepers never received their equipment; neither did they resort to using traditional bee hives like other beekeepers in the other parishes did in a similar situation. Consequently, they lost some of their skills. Nonetheless, they and others were still interested in beekeeping.

Training - Malaika Honey organized a demonstration event for the members of the Kibanwja PFOA. This was an opportunity for all of them to learn in detail about the beekeeping enterprise, the technical skills required and the market opportunity with Malaika Honey as a hive products trader.

Uptake - To promote the beekeeping enterprise among the Private Forest Owners, WCS subsidized 8 beekeeping starting packages for the Kibanwja PFOA. Each starter package was for a team of two Private Forest Owners. In January, four teams in the Kaigo BSG and four teams in the Kolping BSG applied for a loan through their BSGs to purchase the beekeeping equipment; in total 16 Private Forest Owners started a beekeeping enterprise.

5 Discussion

5.1 Conservation farming

Intensifying agriculture on existing land to stop deforestation through improved farming is one of the important project activities for any REDD+ project. In this case we opted for training farmers in conservation farming because of its win-win situation and because it helps them adapt to climate change. Conservation farming had not been practiced in the Murchison-Semliki Landscape and we tentatively hoped for improved yields around 25%. Therefore, we were astonished by the average increase of 70%, up to 99% in some cases and not lower than 45%. This is far more than the average of 40% experienced in Lira.

Of course with only 10 lead farmers the sample size is small and most likely yields increases will be lower once the agricultural program gets scaled up across all the 13 REDD+ priority parishes. Furthermore the relationship between adoption of seven conservation practices and increased yields was weak (R²=04). The improved inputs such as improved seeds and mineral fertilizers will certainly have contributed to the increased yields.

The conservation farming practices are not particularly difficult but the correct application is important. Most farmers did not apply all seven practices or not correctly. Sufficient mulching and correctly spraying for weed control was one of the issues. This is a well-known challenge with conservation farming in the early phases. This requires close supervision by the experts in the early phases of farmers practicing conservation farming. When rolling out the agricultural program across all 13 REDD+ parishes special attention will be paid to this aspect, because the establishment of the organic layer is of major importance to be able to adapt to climate change.

Conservation farming as an incentive was highly appreciated by the ten lead farmers. All of them were very astonished by the high yields. The income they received from selling their surplus helped pay for school fees and other home improvements such as putting up corrugated iron roof sheets. The farmer field day was well attended as well. Conservation farming must have been promoted from word to mouth as 500 farmers visited the ten demonstration plots, which is much more visitors than the total members of the Kibanwja Private Forest Owner Association.

5.2 Business Saving Groups

Poor rural households in the Murchison-Semliki Landscape lack access to rural financial services. Financial institutions such as commercial banks and micro-financing institutions are not very interested in these poor farmers and on the other hand they charge interest rates of at least 40%. Distances from existing branches are far and most farmers are illiterate including in business skills.

The two business saving groups only received the two basic modules of total five modules of the Village Enterprise curriculum. Nonetheless after six months almost three quarters of the members were actively putting savings aside and the total cumulated amounts reached close to 2M for the Kaigo BSG

and 1.3M for the Kolping BSG. According to our socio-economic study from 2010, the average house hold has an annual income of 1.5M UGX or 125,000 UGX per month. This amount includes the value of their own consumption of their production; in other words their actual cash holdings are much lower. So, this is a good performance for the saving rate.

In the case of the Kaigo BSG the 17 actively saving members were able to set aside almost 20,000 UGX per month since the startup of their Business Saving Group (6 months). The Kolping BSG started saving later but the 19 actively saving members saved more than 20,000 UGX per month. According to Village Enterprise the savings will cumulate faster over the next months after as members start to see the benefits. Access to a loan is clearly appreciated in the Kaigo BSG as almost all members (92%) asked for one. In the Kolping BSG only half asked for a loan, but they also started saving slower. The members of the two Business Saving Groups seem to be happy with this benefit as most of them are saving and lending to one other and performing above average.

5.3 Beekeeping

Beekeeping was already introduced as a forest friendly enterprise, knowing that there is a strong demand for honey with a relatively short return of investments. Despite the fact that the financial mechanism with Postbank did not work out, some farmers were motivated to pursue their enterprise using accessible though less productive traditional bee hives. Other farmers found other sources of financing their enterprise and did well according to CSWCT's follow up visits. Therefore, beekeeping was reintroduced but with a different financing mechanism.

The beekeeping trainings were well attended and new beekeepers presented themselves. The financing mechanism was accepted by both the new beekeepers and the Business Saving Groups indirectly benefiting from this initiative. All eight starter packages (16 Private Forest Owners) were eagerly taken up despite potential peer pressure from the other members of the Business Saving Groups to comply with the repayments including a 10% interest. Of course, the Business Saving Groups have the safeguard that they can confiscate the equipment and sell it; similarly, the new beekeepers to pay off their debt.

The hives and equipment were only supplied in late December and January. Colonization of hives can be slow and in the first season mainly propolis is produced by the bees instead of honey. Therefore, it is still too early to determine how successful the beekeeping incentive is and how attractive it will become for other Private Forest Owners to join, but the uptake of all eight starter packages is a good sign.

6 Conclusions

For any REDD+ project it is important to find out if the proposed incentive package is truly appreciated by so-called "project affected people" and whether the activities underlying the incentive package are truly effective technically stopping deforestation and greenhouse gas emissions and whether the benefits as a result of the incentive package are truly making a difference to the households socioeconomic terms. In other words, the REDD+ project is supposed not only "avoid causing harm" but it should "do good".

In technical terms conservation farming has proven that it is able to intensify agriculture on existing farmland in the short term. The WCS program in Zambia has proven that conservation farming can also extend the longevity of the existing farmland. So, there is good hope that conservation farming will also be effective in the long term. The other question: "Is conservation farming doing the farmers good?" The surplus created through conservation farming was highly appreciated by the farmers and used for paying school fees and home improvements. The extra cash from selling the surplus harvest may have helped these lead farmers putting aside more savings in the Business Saving Groups.

According to Village Enterprise the Kibanwja Business Saving Groups members are effectively pooling their money and lending their saving to each other. Some business saving groups perform better than others but the ones in Kibanwja are performing above average indicating that the Private Forest Owners must be happy about this benefit and fulfilling their need for rural financial services. From the above average performance of the BSGs we can conclude that this benefit is doing the Private Forest Owners good.

For the beekeeping it is too early to draw any conclusion whether this benefit is doing the Private Forest Owners good and whether it if an effective incentive to conserve the forest. WCS will monitor the beekeeping initiative to track it successfulness using honey production and new beekeepers as indicators.

From April 2015 to January 2016 we have piloted conservation farming and business saving groups as a vehicle to provide rural financial services. So far we can conclude from this study that the incentive package has been attractive, effective and doing the "project affected people" good. WCS will continue to monitor the impact of the incentive package over the next two year as the conservation farming and business saving groups program scale up across all 13 REDD+ priority parishes in the district of Hoima.

Acknowledgements

WCS is very appreciative of the funding having received from Tullow Uganda Operation for the opportunity to pilot the above mentioned project activities. We have not only learned from the experience but it also allowed WCS and partners to advance and secure other funding opportunities for the Murchison-Semliki REDD+ project. The results and conclusions of this report will also feed into the national REDD+ strategy for Uganda.