External Impact Assessment
VECO East Africa
V1.1

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Report by NewForesight Consultancy

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Disclaimer: this publication represents the views of the authors in their independent capacity as project impact assessors. In coming to our assessment of the pilot interventions, impact on various levels, structural change agenda and lessons learned, the authors have based themselves on all information which was available at the time of writing.

In assessing impacts, and the degree to which these can be attributed to VECO's activities, we have relied on both quantitative as well as qualitative information obtained through sources such as stakeholder interviews, farmer organization representatives, community leaders, partner organizations, and policy level actors. Insights on the farmer-level situation have been derived from the farmer survey conducted by VECO in 2016. Focus Group Discussions. Where data is uncertain, or where lack of data has made it necessary to rely on proxy indicators to draw conclusions, we have highlighted this. Insights and conclusions have been cross-referenced with VECO East Africa.

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1. Executive summary

Based on the findings in this report, we have created an overview of the topics analyzed and evaluated. The outcome of the evaluation is shown below. We use the same color coding throughout the report to present the main findings per section.

Legend:	Successfully implemented	Under development	Action is needed to achieve success	N/A

Uganda: SCA Rice and Butaleja Pilot			
Pilot Intervention	Effectiveness	P1: Production	
		P2: Quality	
		P3: Marketing & Efficiency	
		P4: Access to Finance	
		P5: Environment	
		P6: Gender & Youth	
	Relevance of activities (farmer-level)		
Structural Change Agenda	SCA1: Adoption of quality management system (QMS) for rice		
	SCA2: Adoption of adjusted finance models and products		
	SCA3: Establishment of national rice platform		

Tanzania: SCA Rice and Moshi Pilot			
Pilot Intervention	Effectiveness	P1: Production	
		P2: Quality	
		P3: Marketing & Efficiency	
		P4: Access to Finance	
		P5: Environment	
		P6: Gender & Youth	
	Relevance of activities (farmer-level)		
Structural Change Agenda	SCA1: Adoption of quality management system (QMS) for rice		
	SCA2:Use of data to govern rice chain		
	SCA3: Adoption of adjusted finance models and products		

a. DGD Indicators

i. Uganda

Indicator		Target	2016
1. Number of market chains (pilot chains) in which family farmers (m/f) foresee in their livelihood in a more sustainable way (SSD – IMM)	Increasing income	Baseline: avg 850k USh from rice	Farmer survey indicates USh 5.2m, confirmed higher yields and incomes
	Strengthen position in the chain	-	**Met**. Strengthened access and position of farmers through DIFACOS
	Increased resilience	-	Diversification not possible as only rice production allowed
	More sustainable use of natural resources	-	Limited progress, lack of awareness of farmers
	Improved food security	-	Improvement, despite lack of diversification
2. The market share of smallholder farmers (m/f) in the local markets has been increased by 5% (SSD)	Market share of smallholder farmers in local markets for rice	Baseline: 60% Target: 65%	% could not be determined as part of this assessment, but evidence found that FOs established relations with local buyers and farmers believe their product is locally competitive
3. Number of companies … [not relevant]	# of companies with an inclusive purchase practice / policy	N/A	N/A
4. Share (in %) of family farmers (m/f) that is organized in economical farmers' organizations to collectively market their (SSD – IMM)	Small-scale farmers who sell their products together through the economical farmers' organization (as fraction of the total number of small-scale farmers in these districts)	Target not defined	% could not be determined as part of this assessment, but evidence found that farmers have started bulking their rice. FO management expected 80% of farmers to market collectively
5. Number of new and improved institutional environmental factors that stimulate the inclusion of family farmers (m/f) (SSD – IMM) at the level of: 1/ government: by laws and policy texts 2/ service providers: public and private service provision (BDS)	New, adapted or improved policies, laws or regulations	>5 new laws on national level, for improvement of IMM/SSD	**Partially met**. 1 (Financial Institutions Bill). However, VECO had limited influence on policy level due to reasons beyond its control)[1]
	New, adapted or improved services provided by the government and private players		**Partially met**. Improved access to finance; agro-inputs provided through FOs rather than the market

[1] Input from VECO: *VECO achieved this through the partnership with Uganda Cooperative Alliance (UCA) and Uganda National Farmers Federation (UNFFE). Formation of a national rice platform is aimed at having a stronger and focused voice of the VC to give very specific inputs to these national bodies. Two prominent ones we engaged in are: 1) SACCO bill commonly known as tier III, Agri-finance strategy and bill*

ii. Tanzania

Indicator		Target	2016
1. Number of market chains (pilot chains) in which family farmers (m/f) foresee in their livelihood in a more sustainable way (SSD – IMM)	Increasing income	Baseline: TSh 3.5m	**Met** (TSh 3.9m, higher productivity, reduced costs)
	Strengthen position in the chain	-	**Partially met** (Improvement at farm level: application SRI, higher yield and income; challenges beyond VECO control at FO level)
	Increased resilience	-	**Met** (diverse income sources)
	More sustainable use of natural resources	-	Improvement versus baseline, though more awareness is needed
	Improved food security	-	**Met**
The market share of smallholder farmers (m/f) in the local markets has been increased by 5% (SSD)	Market share of smallholder farmers in local markets for rice	Baseline: 80% (in 2012) Target: 85%	**Could not be determined as part of this assessment** (evidence shows that lower Moshi rice is now establishing itself at local market commanding high demand in local market)
3. Number of companies … [not relevant]	# of companies with an inclusive purchase practice / policy	N/A	N/A
4. Share (in %) of family farmers (m/f) that is organized in economical farmers' organizations to collectively market their (SSD – IMM)	Small-scale farmers who sell their products together through the economical farmers' organization (as fraction of the total number of small-scale farmers in these districts)	No target set	More awareness and capacities on collectively marketing needed. Pilot showed that farmers have started bulking their rice at CHAWAMPU, exact % share of farmers could not be established because the survey took place during the harvesting period.
5. Number of new and improved institutional environmental factors that stimulate the inclusion of family farmers (m/f) (SSD – IMM) at the level of: 1/ government: by laws and policy texts 2/ service providers: public and private service provision (BDS)	New, adapted or improved policies, laws or regulations	>5 new laws on national level, for improvement of IMM/SSD	Not tested as part of this assessment
	New, adapted or improved services provided by the government and private players		VECO has not appeared to have had significant influence on the policy level in the rice sector in Tanzania Quality management manual developed by VECO

b. Summary of conclusions

i. Uganda

Pilot intervention:

VECO's activities in the Butaleja pilot can be considered effective and successful on almost all areas of the pathway of change. Interventions on productivity (extensions staff, pilot blocks with GAP/QMS) were well received and showed direct improvements in the productivity. Quality was improved after careful research (value chain study), and successfully piloted in the field. Vital have been the improvement of FO capacities in this respect, and similar findings were also observed on the marketing and efficiency pathway. Due to successful increases in business capacities, direct improvements were seen in the livelihoods of farmers (lower input prices). Another success story is the access to finance, which was largely attributable to VECO's intervention (VECO introduced saving groups, set-up the FO with external contacts in the financial world, and organized necessary trainings), and was highly valued by the farmers. In terms of sustainability (environmental, gender and youth), VECO has been the primary force pushing for improvements, which resulted in improvements in both FO capacities as well as actual farmer-level improvements (most notably with regards to gender, for which VECO produced a gender analysis report, translated into a gender implementation strategy). In term of environmental sustainability, progress has not been as impressive, although VECO did not undertake many activities in this respect. In line with expectations, successes of the pilot interventions have turned out very relevant at the farmer level, with considerable increases with regards to the livelihoods of farmers. Positively, farmers indicate they have regained their pride for farming.

Based on the observed evidence, the key success factors in the Butaleja context can be summarized as:

- Simultaneously improving FO business capacities as well as piloting strategies in pilot blocks
- Carefully researching improvements (e.g. value chain study and gender analysis report) before implementing them in the field.
- Strong FO management and a positive effect with regards to investments in organizational capacities. Strong management also made the provided links with external parties more valuable, as FO's were able to fully utilize VECO's contacts
- Noteworthy is the interplay between gender and finance in the Butaleja pilot. Due to the creation of many women-only savings groups, gender equality was greatly improved. VECO could use this as a stimulus to consider how different interventions can be achieved simultaneously, rather than seeing sustainability interventions (environment, youth, gender) as separate pathways

SCA:

VECO's Structural Change Agenda in Uganda has been partially successful. The creation of a national rice platform was unsuccessful as the MOU was never signed. This factor seemed outside of VECO's control. Understandably, the SCA activities for the adoption of a quality management system have not yet been fully implanted, as the pilot was delayed. Lastly, the adoption of adjusted finance models and products has been very successful. This success can be attributed to a combination of: a well-piloted approach; the inclusion of players across the chain; good dissemination among partners; and well-presented case studies and examples—all of which eventually led to actual governmental change. This represents an exemplary case of how the SCA strategy of VECO can and should function. Unfortunately, reporting on SCA activities has been poor as SCA objectives changed over time, had limited relevant indicators, and 2016 reports were not completed on time for this assessment.

Based on the observed evidence, key success factors in the SCA context can be summarized as:

- A well-piloted approach
- Inclusion of players across the entire chain
- Good cooperation and dissemination among partners
- Well-presented case studies and examples, shared with relevant partners
- Capacity building of partners, based on VECO's expertise
- Focus on one topic, allowing sufficient resources dedicated to make it a success

In Uganda, we have observed a strong link between the pilot interventions and the Structural Change Agenda for both SCA 1 (QMS) and SCA 2 (Finance). Both are aimed at using the learnings from the pilot interventions to influence the policy-level, and thus creating structural change. For SCA1 (QMS), the process is not yet complete as the program was delayed, but the infrastructure and intentions are present. For SCA2 (Finance), we see a best-in-class example of how pilots and SCA interact. Learnings from the pilots have been utilized and disseminated with partners, who have indicated that they were instrumental in creating structural change (as the government consequently adjusted their policies). SCA3 (National Rice Platform) had no link with the pilots as it was solely aimed at improving the structural environment.

Key lessons learned:

- Clearly defining cooperation with other organizations and finding a mechanism to ensure each party upholds their obligations. Although the Framework of Cooperation was signed as a very good first step, the implementation was not fully successful. Communication among organizations could be improved, perhaps on a more regular basis.
- VECO invested in a stronger FO organization which seemed to have reaped many benefits. However, it is important to consider the sustainability of the organizational investment, and whether the situation would remain viable if VECO were to stop its support. VECO could perform a cost/benefit analysis for future policy advice.
- Although pilots have been very successful, dissemination to non-pilot farmers has been relatively limited. This holds for GAP, QMS and GEP. VECO should carefully consider the most effective and efficient (cost/benefit) way to further expand the pilot. Although simple scaling will likely be effective, other options such as creating role models, community trainers, or dissemination meetings could be considered.
- VECO could consider to see sustainability (environmental, youth, gender) as more integral parts of the other interventions, rather than as separate pathways
- Committing to fewer focused activities for maximum impact
- Clearly defining SCA objectives, and adding new objectives rather than changing them, to enable these to be evaluated at the end of the program
- Defining indicators based on outcome rather than output. Current indicators add little interpretation value and cost time to track/fill.
- Make objectives and indicators 'SMART' to help focus and prioritization, while allowing for the measurement of progress. 'SMART' indicators must be:
    - Specific
    - Measureable
    - Achievable
    - Relevant
    - Time-bound

- A Framework of Cooperation seems like a good initiative in facilitating organizational strength and cooperation and appreciation of other partners' skills and contributions. It is suggested to investigate how the Framework of Cooperation could be improved in the future.
- As gender equality improved through the creation of women-only savings groups, useful to understand linkages between different interventions, and consider pathways as cross-cutting

Key successes include:

- VECO's interventions in the Butaleja pilot can be considered effective and successful on almost all areas of the pathway of change, leading to improvements in farmer livelihoods
- Most notable results have been achieved in connection with piloting of SRI methodology
- Improvements in access to finance
- Improvements in gender equality, including introduction of women-only saving groups
- Improvements in business capacities with regards to sustainable environment practices
- Farmers report feelings of regained pride for farming.
- Strong FO management facilitated linkages between farmers and external parties

Key challenges include:

- The SCA in Uganda was only partially successful. This was because the pilot was delayed, the national rice platform never came to fruition, and quality management system was not fully implemented
- Lack of cash flow for fertilizer purchasing remains challenge to productivity.
- Little awareness or concern of environmental challenges at farmer-level

ii. Tanzania

Pilot intervention:

VECO's activities have only had a limited effect due to a disagreement between FO Lomio and FO Chawampu, which has highly distorted and delayed VECO's activities. The most notable results have been achieved with the piloting of the SRI methodology, which was received well and has resulted in increased productivity and income, and decreased water usage. Other activities were also halted: namely, the QMS manual was not implemented, the marketing and efficiency activities were only partially handed over from Lomia to Chawampu (which faced a lack of trust from farmers); and finance activities had little impact. What has shown more promise is the gender strategy that was modelled after the Butaleja intervention – although it is too early to observe conclusive results. Relevance for farmers was confirmed by those activities that were effective (mainly SRI), with even non-farmers benefitting from the increased village income. Important to note is that female famers report not being able to access trainings. This could be something to investigate in the future.

SCA:

VECO has been unsuccessful in achieving its SCA objective in Tanzania. Partially, this can be attributed to the delay in the pilots, such as the delayed introduction of QMS due to difficulties with FO management. As the manual has not been validated yet, limited policy recommendations could be made.

However, another reason for not meeting the SCA objectives appears to be VECO's inability to influence national policymakers. A recurring pattern for all three SCAs is that VECO does not have the network to directly influence policy at the national level and, furthermore, did not initially partner with those parties

that do. This could be driven by lack of focus which leads to limited funding per objective, and insufficient knowledge of, or research into, the working of the institutional environment.

In the design of the pilots and the SCA, there was a clear link with regards to QMS and the finance models. However, as the delay in the pilot interventions has resulted in limited evidence to scale, it is not surprising that the actual link between the pilot and SCA is limited. The theoretical approach is intended to first develop successful pilots and use these to achieve structural change on the policy level. However, there is awareness that VECO will need to partner with other institutions in order to achieve structural change on the national level.

Key lessons learned:

- A strong FO which is well organized and governed is an essential building block for further interventions. The FO is the vehicle for VECO's pilot interventions and, without VECO, the FO's cannot effectively execute a support strategy.
- An FO needs to build trust in the community before being able to engage in collective activities; this is related to a strong organization and governance structure.
- Learnings from other regions could be utilized to create similar successes. One notable example is the Butaleja gender approach or the Butaleja finance approach.
- Dissemination of SRI methodology to non-pilot farmers has been relatively limited. VECO should carefully consider the most effective and efficient (cost/benefit) way to further expand the pilot. Although simple scaling will likely be effective, other options such as creating role models, community trainers, or dissemination meetings could also be considered.

Going forward, it is recommended that VECO allocates more resources to the selection and involvement of influential partners (through more focus or more funding), to enable VECO to plan in advance how learnings from the pilot interventions will be used as evidence for structural change. In order to ensure maximal usefulness of the pilot interventions, VECO could consider identifying the most promising partners before designing its pilots. This way, VECO would make a frontrunner case for combining efforts in a fragmented landscape of many small actors, each working towards their own structural change. It is also recommended to investigate and address the reported problem of female famers' inability to access trainings. Finally, VECO EA could assess the most effective and efficient (cost/benefit) way to further expand the pilot (especially dissemination of SRI methodology) to non-pilot farmers

Key successes include:

- The pilot appears to have fostered successful gender strategy–although too early to observe conclusive results

Key challenges include:

- VECO's activities have been distorted and delayed due to disagreement between two FOs, and VECO unsuccessful in achieving SCA objectives.
    - Delay in pilots; QMS manual was not implemented; marketing and efficiency problems; little impact of finance activities; difficulties with FO management.
- Female farmers report not being able to access trainings
- VECO's inability to influence national policymakers due to insufficient networks and lack of access to parties/institutions with influence contributed to unmet SCA objectives

2. Introduction

This report by NewForesight is the external impact assessment of the VECO rice program in East Africa, DGD-funded, 2014-2016, and was commissioned by Vredeseilanden/VECO (hereafter named VECO). NewForesight performed this independent impact assessment from September 2016 to November 2016, looking at the rice strategies and pilots in Uganda and Tanzania in order to assess the regional change strategy to develop the rice-subsector in East Africa. During this period NewForesight performed similar assessments for West Africa (rice), DR Congo (rice), Indonesia (cocoa), Central America (cocoa) and Andes Region (coffee) – for which separate reports are available.

The report is structured as follows: chapter 3 explains the evaluation method, chapter 4 assesses the effectiveness and relevance of the Butaleja pilot (Uganda), chapter 5 assesses the Structural Change Agenda for Uganda, chapter 6 assesses the effectiveness and relevance of the Moshi pilot (Tanzania), and chapter 7 assesses the Structural Change Agenda for Tanzania.

3. Evaluation method

VECO aims to unlock smallholder potential by creating change across the value chain with a critical mass. Their strategy is to pilot promising interventions across the chain on a small scale (reported in the Chain Intervention Reports - CIR), and identify which lessons learned are to be utilized to influence the institutional environment, in order to create lasting structural change (reported in the Structural Change Agenda Report). We therefore first evaluate the effectiveness and the relevance of the pilot interventions, and then follow this with an evaluation of the structural change agenda, including its link with the pilot interventions.

VECO works with the Theory of Change model (both for pilot interventions and structural change agendas), referred to here as Pathways of Change (PoC), given that there are multiple pathways to achieve the desired impact. We have taken the Pathways of Change as starting point of our analysis – evaluating each pathway separately, before drawing conclusions on the total impact.

VECO focuses its pilot interventions on supporting Farmer Organizations (FOs). For our evaluation we look at the (direct) outcomes at the FO-level, in order to assess the effectiveness of VECO's interventions; followed by the (indirect) impact at the farmer-level, in order to assess the relevance of VECO's interventions.

In order to report a balanced perspective on the obtained impact, we make use of mixed methods evaluation, looking at both quantitative as well as qualitative data. As the data was primarily provided by VECO, we have triangulated the findings with key informant interviews (with FO and community leaders and policy-level partners), and focus groups discussions (with farmers) obtained through field visits in October and November 2016.

For the **pilot interventions** we used the following approach:

1. We requested VECO to define the Pathways of Change (PoCs) for those interventions where it was not yet defined.
2. We extracted the FOs' business capacity indicators from VECO's Chain Intervention Reports, and wrote initial hypotheses on the effectiveness of the interventions.
3. We requested VECO to comment on the initial hypotheses, providing insights and pointing us towards additional explanatory data sources.

4. We extracted quantitative (result indicators) and qualitative observations from the Chain Intervention Reports (CIRs), summarizing the observed evidence.
5. We reformulated the hypotheses and made a list of questions for the key informant interviews and focus group discussions in order to triangulate our findings.
6. We visited the pilot interventions and held key informant interviews and focus group discussions.
7. We evaluated all evidence and wrote main conclusions on the effectiveness of each pathway of the pilot intervention.
8. We analyzed farmer survey data (obtained by VECO with capacity building support by NewForesight), in order to assess the relevance of VECO's interventions.
9. We identify comparable data from the VECO 2013 baseline reports, where possible.
10. We evaluated all evidence (including FGD outcomes) and wrote main conclusions on the relevance of VECO's interventions.
11. We reviewed the findings on effectiveness and relevance, concluding the impact assessment of the pilot.

For the **Structural Chain Agendas (SCAs)** we used the following approach:

1. We requested VECO to define the Pathways of Change (PoCs), for those SCAs where it was not yet defined.
2. We reviewed the relevant progress indicators in the Structural Change Agenda Reports (SCARs), defining initial hypothesis on the effectiveness of the SCA.
3. We extracted the relevant qualitative information from the SCAR.
4. We extracted the relevant qualitative information from the Chain Intervention Reports (CIRs).
5. We reformulated our hypotheses on the effectiveness of the SCA and made a list of questions for key informant interviews.
6. We interviewed key informants from partner organizations.
7. We evaluated all evidence and wrote main conclusions on the effectiveness of the SCA activities
8. We evaluated the link between the pilot interventions and the SCA, assessing VECO's ability to create structural change.
9. We reviewed the findings on the effectiveness of the SCA, and the link between the pilots and the SCA, and concluded the impact assessment of the SCA.

VECO EA was sent a full draft of this document and had an opportunity to provide comments and feedback.

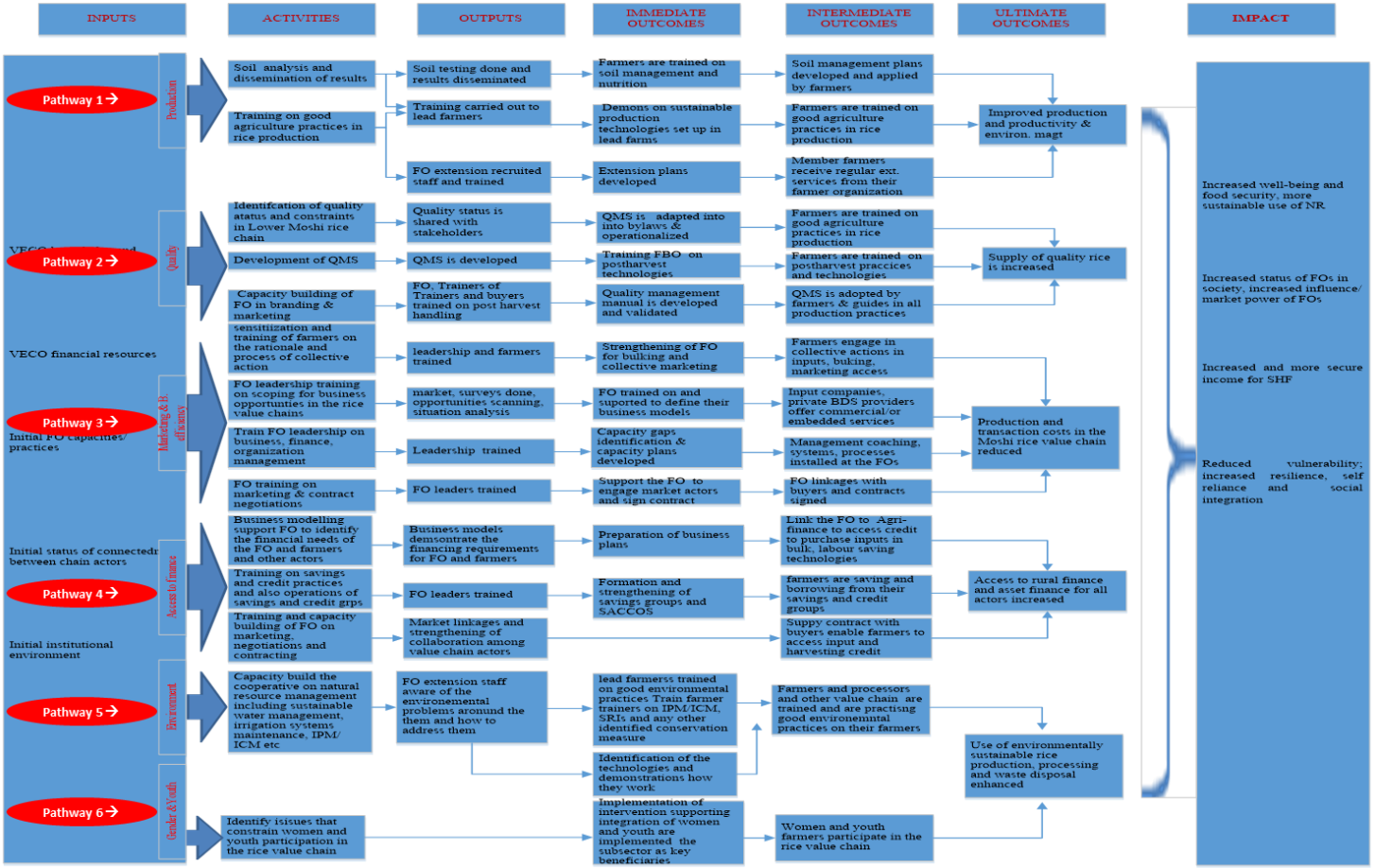
Sources of input for the assessment:

Level of analysis	Source	Date
Farmer livelihoods	Farmer Survey	October 2016
	Baseline reports	2013
	Focus Group Discussions (FGDs)	October 2016
Farmer Organizations (FOs)	Chain Intervention Framework (CIF)	2014
	Chain Intervention Report (CIR)	2016
	Key informant interviews	October 2016
Policy level	Structural Change Agenda Framework (SCAF)	2014
	Structural Change Agenda Report (SCAR)	2015 (Uganda), 2016 (Tanzania)
	Chain Intervention Report (CIR)	2016
	Key informant interviews	October 2016

4. Butaleja Pilot

a. Pathway of change

There are 6 different ways through which the Butaleja pilot tries to achieve its outcomes and impact. The pilot is located in the Butaleja district, Doho irrigation scheme, managed by farmer organization DIFACOS. The different pathways of change are mapped in the figure below.



We have performed an assessment of each pathway in order to determine the effectiveness of the activities, i.e. their ability to achieve the intended change.

b. Effectiveness of VECO intervention

In this section, we evaluate the effectiveness of VECO interventions. For each pathway, we have derived a main conclusion after reviewing the observed evidence and the results from the triangulation in the field.

i. Pathway 1: Production

Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Soil analysis and dissemination of results Training on good agriculture practices	Soil testing done and results disseminated Training carried out to lead farmers FO extension recruited, staffed and trained	Farmers are trained on soil management and nutrition Demonstration on sustainable production technologies set up in lead farms Extension plans developed	Soil management plans developed and applied by farmers Farmers are trained on good agriculture practices in rice production Members farmers receive regular ext. services from their farmer organization	Improved production and productivity & environmental management

Main findings

Although productivity was not originally in the scope for VECO (as defined in the Framework of Cooperation 2014), VECO reconsidered this in 2015 as the partners were not sufficiently fulfilling their roles and responsibilities. As a result, VECO hired extension staff and started piloting GAP and QMS on two blocks, supporting 508 farmers in 2016. Results have been positive with high increases in productivity, fully attributable to VECOs activities. Main catalyzer for the productivity increases seems row planting, allowing efficient (machine-based) weeding and fertilizing. Main challenges reported are sticking to the cropping calendar and lack of cash flow for fertilizer purchasing. FO has started services on credit to address the latter, attributable to VECO's business and financial support. Non-pilot blocks are only limitedly learning, something to be addressed in the future.

Observed evidence (source: CIR)

Evidence from business capacity indicators: No initial analysis of immediate and intermediate outcomes, as no business indicators were linked to this pathway.

Main conclusions from CIR:

- Productivity (yield per acre) increased from 18 bags/acre in 2014 to 20 bags/acre in 2015, but unclear if results are structural, as results for 2016 are not yet measured
- Good Agricultural Practices (GAP) increased significantly. % of farmers using SRI, IPM/ICM or other GAP skills and technologies has increased from 30% at the baseline to 56% in 2015 (target: 60%), potentially driven by higher prices for quality rice
- 60% of members plant uniform rice varieties, 75% harvest on time and dry within drying areas.

- FO has developed GAP-QMS and started piloting it in 2 blocks (5A/5B) in 2016, supporting 508 farmers (~half of FO members) in improving the quality of their rice. 80% of farmers have planted their rice in rows, allowing machine-based weeding and fertilizer application
- Framework of Cooperation (2014) defined roles and responsibilities of each supporting organization. Productivity or farm mechanization issues were not VECO's role (VECO focuses on QMS, Agri-finance, strengthening FO). In 2015, reach of other organizations turned out inadequate; hence, it was decided that VECO would intervene along the entire chain again, including production.
- In 2016, FO started offering services on credit (tractor services, agro-inputs, extension services, cash advances when farmers bulk their rice, among others). A feasibility study was conducted, including a financial analysis, which found the business model to be financially viable. This was followed by a 3-year business plan. Due to inadequate funds and the need to validate the model, only 3 blocks were selected for piloting. The other blocks will be included in the next phase after validation and review of the model and availability of funds. The SACCO has already applied for credit from the Micro Finance Support Centre with regards to lending to the farmers to enable them pay for the services (mainly land preparation, puddling, harvesting, fertilizer). VECO was required to invest in the project, with the intention of the project to become a revolving fund. The main activity seems to be walking tractor service (10% of GAP block acres used this).

Triangulation (source: key informant interviews and FGDs)
Productivity increased in pilot/demonstration blocks thanks to VECO's support with bringing in trained extension staff (productivity moved from 18 bags to 26 bags per acre due to GAP practices). Farmers are asking for expansion of the project to other blocks. One constraint is the high labour costs of line planting, but the FO believes this could be reduced if the project is scaled. Additionally, farmers ask for more machines and tools to reduce manual labour. The biggest challenge with the GAP is the cropping calendar, as many farmers do not stick to the agreed schedule, which has a major effect on the cost of harvesting. This is because it is very hard or even impossible to harvest certain parts of land as the crop in various parcels mature at differential rates and different times. The harvesting machines cannot therefore reach some of the parcels as it would mean passing over immature rice fields.

Productivity in the non-pilot blocks increased less, as farmers use random transplanting (instead of line). However, farmers report the occurrence of a sharing of skills, learnings and knowledge. Pilot farmers reportedly share knowledge and non-pilot farmers enquire on their approaches, even from outside the region. A challenge remains access to fertilizer, which farmers do not buy due to lack of cash flow.

ii. Pathway 2: Quality

Activities	Outputs	Immediate Outcome	Intermediate Outcomes	Ultimate Outcomes
Identification of quality status and constraints in Lower Moshi rice chain Development of QMS Capacity building of FO in branding & marketing	Quality status is shared with stakeholders QMS is developed FO, Trainers of Trainers and buyers trained on postharvest handling	QMS is adapted into bylaws & operationalized Training FBO on postharvest technologies Quality management manual is developed and validated	Farmers are trained on good agriculture practices in rice production Farmers are trained on postharvest practices and technologies QMS is adopted by farmers & guides in all production practices	Supply of quality rice is increased

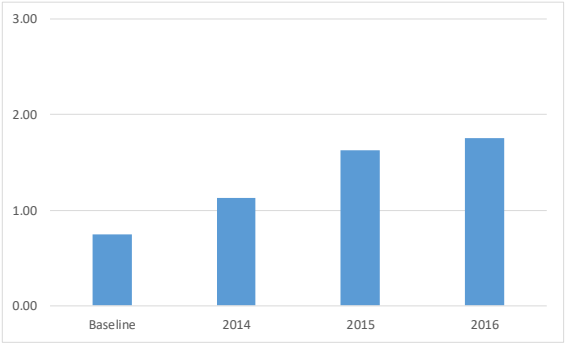
Main findings

VECO has put quality on the FO's agenda, after a careful value chain study, indicating the importance of quality for market access. QMS has been implemented in two pilot blocks (see pathway 1), fully attributable to VECO. Quality of rice has subsequently improved according to the farmers, although this is not yet reflected in reporting figures. Quality improvements are being dedicated to GAP-QMS, specifically row-planting, good water management and processing (FO bought quality milling machine in 2014). Relevant FO capacities have improved impressively, in context of the very low scores at the baseline. The biggest challenges are dissemination of GAP-QMS to non-pilot blocks (as in pathway 1), and the proliferation of types of varieties (and finding the best one given the circumstances).

Observed evidence (source: CIR)

Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
DIFACOS	0.75	1.13	1.63	1.75
1. To what extent has the FO acquired group management skills?	2.00	2.00	2.00	2.00
2. To what extent has the FO acquired business management skills?	0.60	0.60	1.40	1.60
3. To what extent has the FO acquired marketing skills?	1.00	2.00	2.00	2.00
4. To what extent the FO promotes sustainable production and natural resource man-agement skills to its members?	0.00	2.00	2.00	2.00



Overall, all indicators in this pathway showed an improvement between the baseline and 2016 figures, indicating that the outcomes in this pathway have likely been achieved. Interestingly, for several indicators, the starting values were very low (score of 0, meaning the skills or capacity was absent at the FO), indicating that the intervention was able to build up business capacities at the FO from a very basic starting position. It is relevant to note here that the government handed over the rehabilitated scheme to the FO in 2013 and that the VECO programme started in 2014.

Input from VECO:
The baseline is informed by the results of the VC study that clearly showed that there was no coordination among chain actors. Therefore the farmers did not have an idea of the quality requirements of the market. At the same time, the issue of lack of competitiveness of local rice was found to be as a result of poor quality of local rice. A study was carried out to understand the quality issues along the whole VC. On the basis of the report (attached for Uganda), a QMS at production level was found to be a relevant intervention. It is true that there was nothing before our intervention as the FOs were involved in managing irrigation water only and not production and marketing.

This result area was to a large extent within VECO's control. The focus of most of the other stakeholders, and advocacy in general, has been influencing the government to reduce imports rather than supporting farmers to increase quality which is one of the major factors affecting their competitiveness.

As noted in your comments, we started from a very low score and despite some successes, we still have a long way to go.

Main conclusions from CIR:

- Targets on quality were not met (% of milled rice that meets UNBS and East Africa standards), with only 1% achieved in 2015, versus a target of 15%.
- FO acquired a quality milling machine (2014), which is the preferred mill due to high quality and low price
- FO has developed GAP-QMS and started piloting it in 2 blocks in 2016, supporting 508 farmers in improving the quality of their rice. 80% of farmers have planted their rice in rows, allowing machine-based weeding and fertilizer application. GAP-QMS includes the planting system commonly known as System of Rice Intensification (SRI), which reduces the amount of seed used, increases tillering, improves seed size and therefore weight, reduces water use and has the potential to increase productivity to 40-45bags/acre. Quality impact of GAP-QMS pilot not yet clear, as 2016 harvest is not yet done.
- Market study (see pathway 3) helped identify the need for quality

Triangulation (source: key informant interviews and FGDs)
GAP training produces more and better rice, while grading & joint-marketing allow for a better value proposition to the market. QMS is widely applied by trained farmers. The quality of rice is good compared to neighboring regions. FO attributes this to good water management and good processing. The biggest challenge on quality is the types of variety that are grown and finding the best variety for the given circumstances.

iii. Pathway 3: Marketing & Efficiency

Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Sensitization and training of farmers on the rationale and process of collective action FO leadership training on scoping for business opportunities in the rice value chains Train FO leadership on business, finance, organization, management FO training on marketing & contract negotiations	Leadership and farmers trained Market, surveys done, opportunities scanning, situation analysis Leadership trained FO leaders trained	Strengthening of FO for bulking and collective marketing FO trained on, and supported to, define their business models Capacity gaps identified & capacity plans developed Support the FO to engage market actors and sign contract	Farmers engage in collective actions in inputs, bulking, marketing access Input companies, private BDS providers offer commercial/or embedded services Management coaching, systems, processes installed at the FOs FO linkages with buyers and contracts signed	Production and transaction costs in the Moshi rice value chain reduced

Main findings

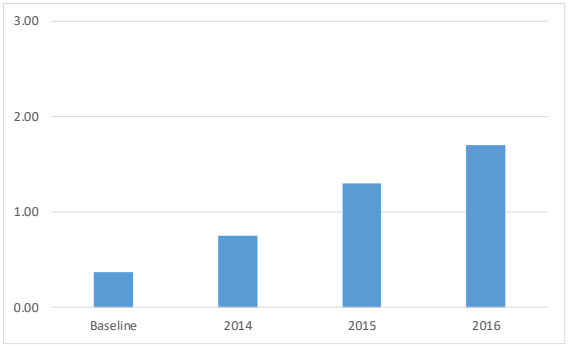
Significant progress was made regarding marketing & efficiency, clearly attributable to VECO's activities. Improvements were made in both the internal organization, as well as the connectivity to the market. Improvements are reflected in higher business capacity scores, and were confirmed in the triangulation.

Most notably, collective processing, bulking and marketing were successfully implemented, and transaction costs were significantly reduced as a consequence. To achieve these results, investments were made (more expensive general manager, investment in services-on-credit fund). It is therefore recommended to perform a cost/benefit analysis in the future, before making further policy recommendations. Other next steps could be the exploration of certification possibilities.

Observed evidence (source: CIR)

Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
DIFACOS	**0.38**	**0.75**	**1.30**	**1.70**
2. To what extent has the FO acquired business management skills?	0.67	0.67	1.33	1.33
3. To what extent has the FO acquired marketing skills?	0.20	0.80	1.40	1.80
5. To what extent does the FO builds up and maintains external relations?			1.00	2.00



Overall, fairly consistent progress appears to have been achieved across all business capacity indicators in this pathway. The notable exception is in the area of certificates. With respect to the core indicators for this pathway (related to the acquisition of marketing skills), all (except for one indicator) ended on a value of 2 in 2016, indicating good progress in this pathway.

Input from VECO: These results reflect what we have seen on the ground. A lot still needs to be done to validate and review the business model, including cost/benefit analysis. The aim is to strengthen the business case for the FO and efficiency. This review will be undertaken in January. Nonetheless, it appears that significant progress has been achieved, and this result area was to a large extent within VECOs control.

Main conclusions from CIR:

- FO board drafted a business plan (2014)
- FO conducted a market survey (2014), resulting in: 1) formal contracts with 5 wholesale buyers; 2) a standardized offering; and 3) acquiring of quality milling machine.
- FO has developed a brand for its rice (Doho Rice) in 2015 which was successfully marketed to 4 wholesale buyers. However, supply was too limited to sustain this.
- In 2015, FO appointed a marketing agent (Rosemary Kirabo who is also head of the Uganda Consumer Cooperative Union (UCCU). FO aimed to join UCCU.
- In 2016, FO started offering services on credit (tractor services, agro-inputs, extension services, cash advances when farmers bulk their rice, among others). A feasibility study was conducted and a business plan was drafted. VECO was required to invest in the project, and aimed for this to become a revolving fund.
- The Board of Directors was renewed and a (more expensive) general manager was hired, who together seem to have been better in enforcing compliance to FO rules.

Triangulation (source: key informant interviews and FGDs)

The FO reports strong progress on business capacities. Governance policies were formulated, business management was improved, and collective processing, bulking and marketing took off—all as a result of VECO's support. Many farmers did not believe bulking was possible, but were positively surprised, as it also generated a higher price. FO is proud of its achievement to launch Doho-branded rice, which was only possible with the VECO trainings on market research. Collective purchasing of inputs has decreased input prices, especially due to eliminating individual transportation costs. The link with the input dealer

was facilitated by VECO.

iv. Pathway 4: Access to Finance

Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Business modeling to support FO to identify the financial needs of the FO and farmers and other actors Training on savings and credit practices and also operations of savings and credit groups Training and capacity building of FO on marketing, negotiations and contracting	Business models demonstrate the financing requirements for FO and farmers FO leaders trained Market linkages and strengthening of collaboration among value chain actors	Preparation of business plans Formation and strengthening of savings groups and SACCOS	Link the FO to Agri-finance to access credit to purchase inputs in bulk, labour saving technologies Farmers are saving and borrowing from their savings and credit groups Supply contract with buyers enable farmers to access input and harvesting credit	Access to rural finance and asset finance for all actors increased

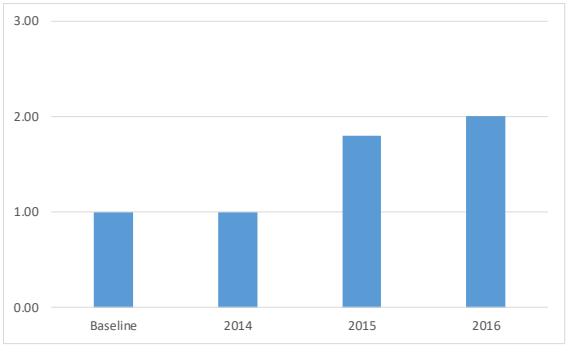
Main findings

Great progress has been made with regards to access to finance, largely attributable to VECO's activities. SACCO and SGSLAs, introduced with VECO's support, have been successful and growing, reflected in the increased access to financial services from 40% at the baseline to 98% in 2016. Farmers report and praise significantly lower interest rates, compared to shylocks. Financial training has been given to both FO and members, and VECO introduced the FO to third parties for external financing, for which negotiations are currently underway. All in all, VECO's activities have greatly and successfully supported both the FO and its members in better access to finance.

Observed evidence (source: CIR)

Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
DIFACOS	1.00	1.00	1.80	2.00
1. To what extent has the FO acquired group management skills?	2.00	2.00	2.00	3.00
2. To what extent has the FO acquired business management skills?	0.75	0.75	1.75	1.75



There appears to have been consistent progress across all indicators measured for this pathway. A notable exception is the area of risk coping strategies (please provide insights into why this is the case). In addition, while these indicators suggest that the FO has become more capable of attracting finance, it would be useful to assess the extent to which the FO has actually become better at accessing / attracting finance in practice.

Input from VECO: The results reflect the situation on the ground though a lot still needs to be done. All was under VECO's control.

Main conclusions from CIR:

- Access to financial services greatly increased from 40% of farmers in the baseline to 96% in 2015 and 98% in 2016. Amount of loans accessed showed large increases and far exceeded the target
- FO formed a member-owned SACCO (2014) with 85 members in 2014, mostly men. In 2016 this increased to 302 members.
- 45 Solidarity Group Saving and Credit Associations (SGSLAs) provided access to 946 members, mostly women. 1/3 of loans were used for rice production, and 2/3 of loans for other uses.
- SACCO gave financial literacy training to members (2015).
- 465 women (14 saving groups) underwent training in group dynamics, record keeping and financial literacy in 2016.
- In 2015, VECO appointed a consultant to develop a value chain finance business model (agri-business accelerator prototype). VECO invited (government-owned) Micro-Finance Support Centre (MSC), and the (private) Opportunity Bank to provide credit to FO (and eventually other chain actors). In 2016, FO is trying to meet requirements of MSC (setting maximum liability at general FO meeting).
- In 2016, FO's SACCO received training and technical services (financial management, strategic planning, savings and product development, financial literacy, SACCO governance, and Business Development skills) from the Project for Financial Inclusion in Rural Area (PROFIRA) under the Ministry of Finance, Planning and Economic Development.
- Farmers require immediate payment for rice, which is a barrier for cooperative selling, illustrating the importance of adequate financial models.

Triangulation (source: key informant interviews and FGDs)

Farmers report that VECO introduced the SACCOs, which have had a great impact. Before this introduction, interest rates of 17 to 28% were paid, while SACCOs only cost 4% (it should be noted that

this is still high compared to the interest rates charged by microfinance institutions). Impact can potentially be even larger, as farmer's still report not using fertilizer due to monetary constraints.

v. Pathway 5: Environment

Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Capacity building in the cooperative on natural resource management including sustainable water management, irrigation systems, maintenance, IPM/ICM etc.	FO extension staff aware of the environmental problems around them and how to address them	Lead farmers trained on good environmental practices, train farmer trainers on IPM/ICM, SRIs and any other identified conservation measure Identification of the technologies and demonstration how they work	Farmers and processors and other value chain actors are trained and are practicing good environmental practices on their farms	Use of environmentally sustainable rice production, processing and waste disposal enhanced

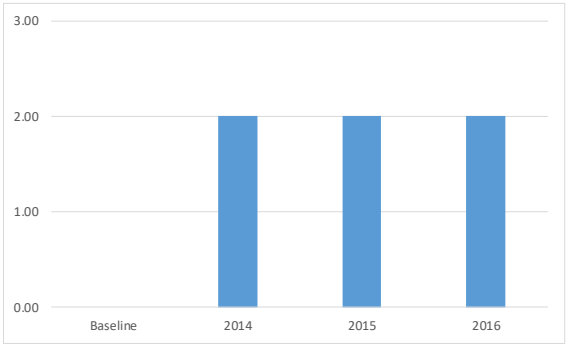
Main findings

VECO has been one of the main advocates of sustainable environmental practices (notably the promotion of SRI) within the FO, and significant improvements in business capacities with regard to managing natural resources, have been made. Important in this regard is the enforceability/transferability of knowledge on good environmental practices to the farmer-level – which remains a challenge. Focus group discussions indicate that farmers have little awareness/concern of environmental challenges.

Observed evidence (source: CIR)

Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
DIFACOS	0.00	2.00	2.00	2.00
4. To what extent the FO promotes sustainable production and natural resource man-agement skills to its members?	0.00	2.00	2.00	2.00



Interestingly, in terms of promoting sustainable production practices, the FO in Butaleja appears to have started from a position of absence of these capabilities; after which these skills were more or less

immediately created from the first year of the intervention, and remained stable in the period 2014-2016. As such, it appears that this pathway was a success for this intervention. However, it would be interesting to know why the score of 2 was reached immediately and whether it would be possible to further increase this to full capacity (a score of 3) in the future. One consideration is that it may take some while for farmers to truly come to appreciate the benefits of SRI, because it comes with many up-front costs (notably increased labour costs), and farmers do not always initially believe that you can grow rice with less water.

Input from VECO: It makes sense. VECO was responsible for promotion of sustainable rice production in this FO and influenced other players to come in play different roles therefore VECO can claim the results achieved.

Main conclusions from CIR:

- More sustainable use of natural resources increased from 30% in baseline to 60% in 2015 (target 2016: 80%) – Farmer Livelihood Outcomes
- 50% of waste is reported to be recycled or reused as added value by product (2016). Only rice straw is re-ploughed back into the fields. Rice husks are not put to good use (attempts to make briquettes failed)
- New board of FO now enforces encroachment rules that forbid growing crops on the embankments to avoid soil erosion.

Triangulation (source: key informant interviews and FGDs)
Farmers have little awareness of environmental challenges, besides the risk of water shortage. VECO encourages the FO to maintain the irrigation infrastructure. Farmers report fertile soil and therefore seem little concerned with environmental challenges. As farmers use natural fertilizer (decomposed rice straws) due to financial constraints, limited damage is done to the soil.

In terms of waste, husk is currently sold to Kenya (for production of animal feed or curry powder). FO notes that it would be good to internalize these skills (thus taking larger part of value chain).

vi. Pathway 6: Gender & Youth

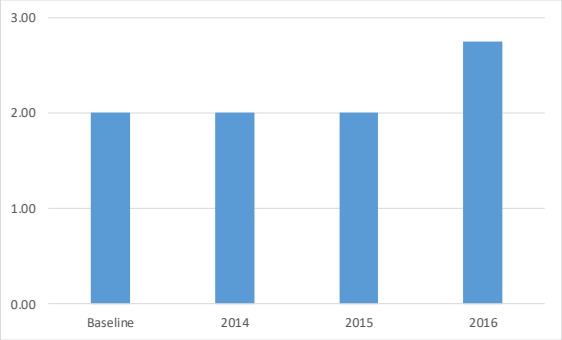
Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Identify issues that constrain women and youth participation in the rice value chain	-	Implementation of intervention supporting integration of women and youth in the subsector as key beneficiaries.	Women and youth farmers participate in the rice value chain	Use of environmentally sustainable rice production, processing and waste disposal enhanced

Main findings
Although good improvements have been made on gender equality, and some improvements on youth equality, overall participation is still low. VECO has been the only organization to actively advocate gender and youth equality within the FO, and improvements are therefore likely attributable to VECO's activities. Successful has been the gender analysis report and related gender implementation strategy, including the formation of 22 women-only farmer groups. This has led to increased farming participation and increased influence on decision-making. Financial independence (pathway 4) plays an important role in this respect, and

future activities could also focus on gender distribution of income. Youth empowerment (and formation of youth groups) has been less successful, as it remains difficult to engage them in agriculture. New strategies/pilots need to be tested here.

Observed evidence (source: CIR)
Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
DIFACOS	2.00	2.00	2.00	2.75
1. To what extent has the FO acquired group management skills?	2.00	2.00	2.00	2.75



Gender and youth issues do not appear to have been weak areas for the FO in this intervention, as all indicators had a starting value of 2 in the baseline year. Nonetheless, progress to a score of 3 was achieved in 2016 except for one indicator, indicating that good progress was achieved in this pathway.

Input from VECO: See gender analysis report! And: VECO was the only organization among the many that addressed gender dynamics within this FO and put in gender implementation strategy being executed now. More information will be provided in this year's CIR due in December

Main conclusions from CIR:

- SACCO is dominated by men, but SGSLA's are dominated by women, with many women-only groups.
- Important progress has been made on gender equality. The FO has formed 22 women-only farmer groups comprising about 770 farmers in order to ensure that women also participate and benefit from the pilot project interventions (such as trainings, access to extension services, agro-inputs, technology, credit, etc). Furthermore in April 2016, a women was elected as Treasurer of the organization.
- Initial progress has been made with respect to youth. A total of 25 youth (all male) have been recruited as causal workers in the FO (machine operators or security guards).

Triangulation (source: key informant interviews and FGDs)
Women participation has improved due to VECO's activities. More equality is reported, both in terms of farming participation (weeding, post-harvest activities), as well as influence on decisions, and the Board includes a woman. The remaining issues of domestic violence and unequal distribution of income still stand. As one female respondent commented, *"We plan the farming together, we work together in the*

field and harvest together but the distribution of money after sell is not at my willing; I think my husband benefits more. Traditionally, I have to respect my husband"

Progress can be largely attributed to VECO's trainings on group dynamics and financial literacy by forming 22 women groups (25 women per group). Women's access to savings-groups has had a positive impact.

Progress on youth empowerment has been slower, as formation of groups has been less successful. Many youngsters work as laborers, few own farms. It is a challenge to interest youth in rice production, as opposed to growing vegetables. Access to land is another major constraint. Finally, young people are looking at alternative sources of income outside of farming that earn more income. In the words of an FO Board Member, *"The youth are non-complicit so to say. They have negative feeling towards agriculture. They only engage in activities that attract quick money making."*

c. Relevance of VECO intervention

In this section, we evaluate the relevance of VECO's interventions by looking at the farmer-level impact. We investigate whether the VECO interventions at the FO-level have also created notable differences (positive or negative) on the famer impact level. This is done in two ways: by reviewing the results of the focus group discussions, and by comparing the farmer survey (2016) with baseline data (2013). It must be noted that comparison is difficult at times, as indicators differ significantly over time.

Main conclusion of focus group discussions (FDG) with farmers
The focus groups discussions confirm the positive impact of VECO's interventions. On all areas, except environmental sustainability, farmers are enthusiastic about the changes brought about by VECO's activities. Farmers report stronger unity and solidarity; praise the options for saving & lending offered by SACCO; report higher productivity; report increased income; and observe improvements in women and youth empowerment.

In terms of rice production, farmers previously could not make use of certain patches of land as they were not levelled or prepared. VECO's introduction of new techniques for improved agriculture has enabled them to prepare these lands for cultivation, which—in addition to trainings on rice plantation and other Good Agricultural Practices—has helped boost yields. In terms of GAPs, farmers highlight practices such as using a cropping calendar, rice transplantation, bulking and marketing collectively, as being very useful. Farmers do note that SRI (specifically line transplantation) carries high labour costs, but they are of the opinion that these costs will fall once line transplantation is no longer the exception but the rule across all pilot blocks. Farmers also highlight increased mechanization and more modern tools as addition which could help decrease the costs of line transplanting and increase the impact of SRI (relative to the low technology they still use). Farmers who were not involved in the demonstration patches have found it somewhat harder to change their mindset. Accordingly, many farmers request that VECO expand this project to all blocks in the Doho scheme.

VECO played a major role in reinvigorating the previously-fledgling DIFACO, which is now attracting many organizations as well as government attention. In the opinion of farmers, DIFACO has also been able to connect farmers to inputs wholesalers, enabling the timely delivery of inputs at lower price and transportation costs. Nonetheless, there are a few farmers who remain suspicious of registering with DIFACO because of mismanagement in the past.

Nonetheless, the VECO intervention allows farmers to bulk sell rice at the centre, which helps farmers fetch a superior price, facilitates record keeping and audits, and enables farmers to get a better sense of the total production. VECO has supported the links between DIFACO and reliable markets.

The establishment of SACCO has provided farmers with loans at interest rates of 4% (for members), which farmers broadly identify as a significant improvement over the previous rates of commercial banks (17-28%). Some farmers claim that the success of SACCO has even caused some other banks to reduce their interest rates to attract farmers, although this is still unconfirmed.

Using increased income, farmers report they are able to educate children, cover domestic spending, and be more aware of developments outside of Butajela. Even so, many farmers maintain side plots of maize, beans, cassava, or keep livestock to ensure resilience, even though harvest has been good in the last years. A small number of farmers report that they would suffer if the rice crop is affected. However, many farmers also appear highly dependent on few crops, indicating low resilience, which is a concern. Even so, in general, the food security situation has been good in recent years, although it could be further improved by improving food preservation mechanisms.

Regarding environmental sustainability, farmers identify concerns over a lack of water availability and soil deterioration in some blocks. VECO provided QMS training as part of GAPs; however, in general farmers have little awareness of sustainability issues, and the VECO intervention appears to have done little to change this.

Farmers report that women's participation rate is impressive—they are represented at boards and other instruments, and their opinions carry more weight than they used to. Nonetheless, an unequal division of income from rice remains deeply ingrained, and there are reports of domestic violence. Still, some farmers have suggested that though unequal relations are deeply ingrained, VECO trainings are slowly bringing about a change in the dynamic between women and men.

Farmers report that they believe youth are benefiting from engaging in rice farming, whether as labourers or working in fields they own or hire themselves. However, some youth who were interviewed suggest they continue to see rice farming as very intensive and something for older people. Some FO members also express skepticism, suggesting that young people are not interested in agriculture, and "only engage in activities that attract quick money making".

Overall, farmers report an increased status for farming and a regained pride to be a farmer, as they are receiving increased social standing through the larger contribution they make in feeding their community. Whereas being called a farmer used to be a somewhat demeaning term, the repute and status of farmers has raised along with their business case: *"In Doho, the most beautiful houses you see are for farmers, farming is business now".*

Finally, VECO has facilitated exchange visits to Tanzania, Kenya and Rwanda, which has helped farmers increase the scope and knowledge exchange, bringing in new knowledge, and expanding the market.

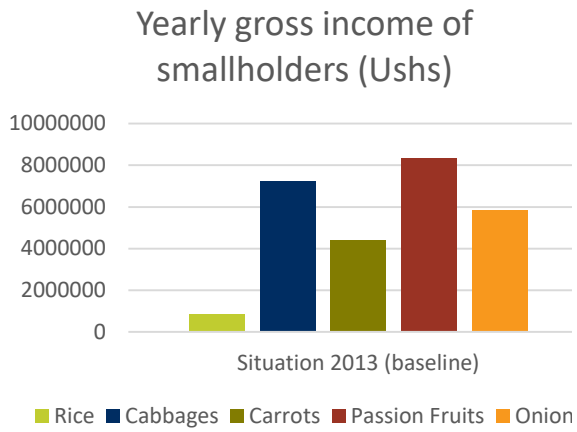
All in all, the focus group discussions confirm the relevance of VECO's activities, in line with the findings of the effectiveness assessment, and farmers appeal to VECO to continue working in Butelaja.

Comparison of baseline and 2016 farmer survey

1a. Income

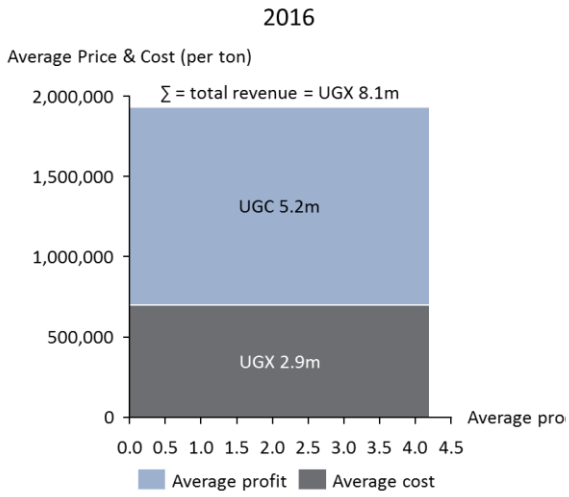
Baseline (2013)

- Average income from rice in the baseline was USh 850k



2016

- Average income from rice in the 2016 farmer survey was USh 5.2m

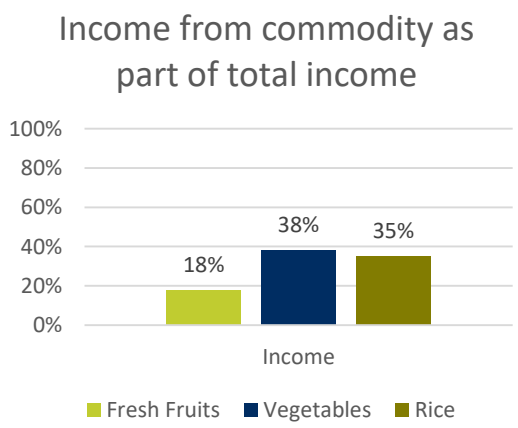


Discussion

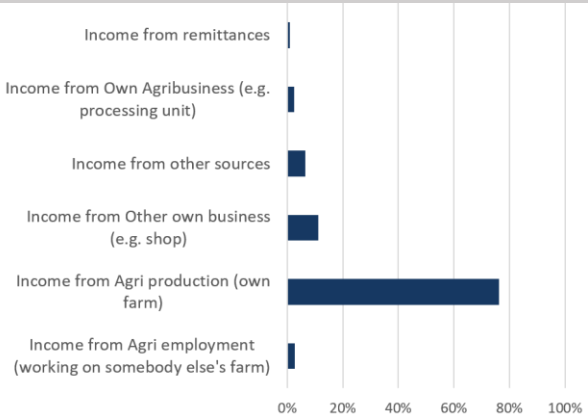
- Figures are not directly comparable due to different sample and changes of price over time.
- However, income from rice seems to have increased significantly, possibly pointing to data errors
- During FGD, farmers mention that *"farmers are respected due to the huge contribution we make in our community in terms of feeding the people as compared in past".*
- During FGD, farmers report increased productivity from 18 bags per acre to 26 bags per acre
- During FGD, farmers report: *"all farmers in pilot plots have said to have their yields increased which again results in an increase in the incomes of farmers"*

1b. Resilience (diversity of income sources)

Baseline (2013)



2016



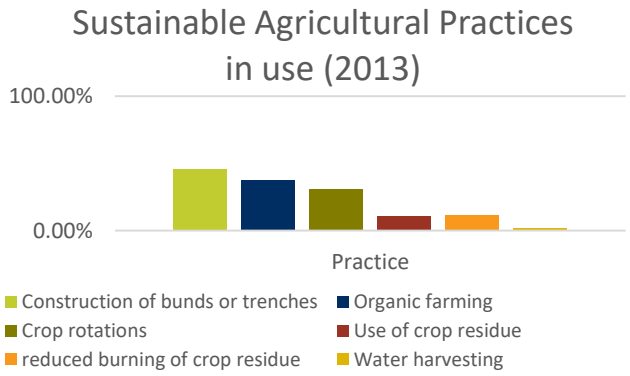
Discussion

- Total income from agriproducts was 91% in 2013, which reduced to less than 80% in 2016;
- Results indicate income has diversified more in 2016, an indicator of **increased resilience;**
- During FGD, farmers said they have some side plots to grow other crops/livestock on a small scale. A small number of farmers said that, if the rice crop is affected, they will suffer from it.

1c. More sustainable use of natural resources

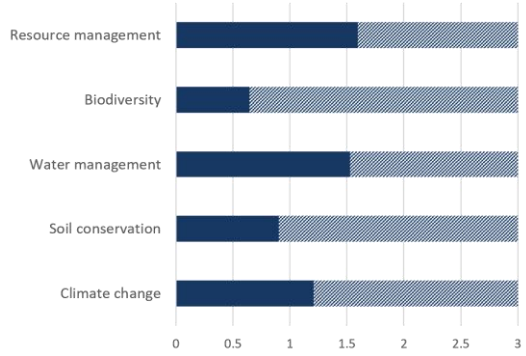
Baseline (2013)

- Some sustainable practices present, although primarily related to water management
- Crop residue used for soil conservation



2016

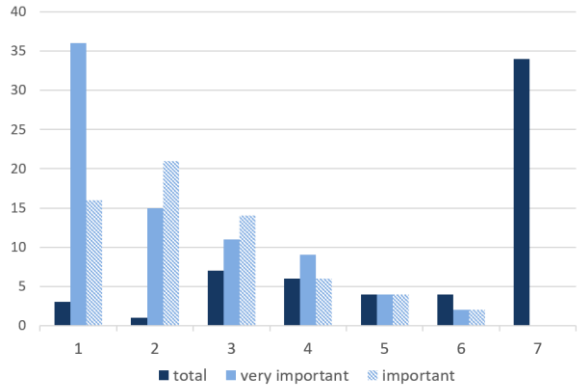
Values below indicate a score from 0 to 3



Discussion

- In 2013, sustainable agriculture practices were not very common in 2013, all indicators were applicable less than 50% of the time, with water management being the most applicable.
- In 2016, sustainable use of natural resources is still not very widespread, with scores of max 1.5 out of 3, with resource management and water management being most widespread.
- Comparing the baseline with 2016, **little progress is apparent** and the topic of water management remains the top performer.
- During FDG, farmers report they *are "not sure of the environmental problems they face, except that there is limited water, especially during the dry season, and also soil deterioration in some blocks*"

1d. Diversity of crops and livestock

Baseline (2013)	2016
No relevant baseline data	The chart below indicates the number of farmers surveyed on Flores who receive 1-7 different sources of on-farm income. In the survey, farmers were given a choice of indicating the importance of each source of income. As the below chart shows, the vast majority of farmers had 7 or more crops or livestock on their farmers. However, a high number of respondents indicated having 2 or less sources of income that were important or very important for farmer livelihoods. 

Discussion

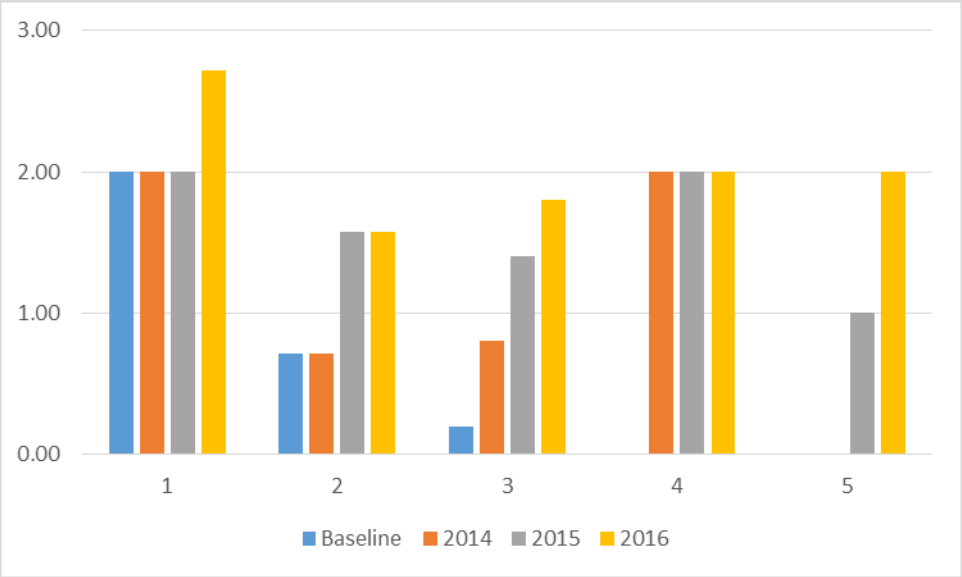
- No relevant baseline data for 2013.
- Analyzing the 2016 farmer survey results, we observe that most farmers have more than 7 crops and livestock, and almost all farmers have 3 or more crops and livestock, indicating a high diversity of crops.
- When further investigating how many crops and livestock are deemed very important for the livelihood of the farmer, we observe that about half of the farmers only have one very important crop/livestock, which is a concern for resilience.
- If we also look at important crops/livestock, most farmers then have two crops, although many also report only one. This is worrisome and an **indicator of low resilience**.
- During FGD, farmers said they have some side plots to grow other crops/livestock on a small scale. A small number of farmers said that if the rice crop is affected, they will suffer from it.

2. Increased status of FOs

Baseline (2013)	2016

Analysis of FO business capacity indicators shows varying improvement for the FOs across business capacity categories. A more detailed analysis can be found in the previous section, however below a summary is presented. The 5 categories are:

1. To what extent has the FO acquired group management skills?
2. To what extent has the FO acquired business management skills?
3. To what extent has the FO acquired marketing skills?
4. To what extent does the FO promote sustainable production and natural resource management skills to its members?
5. To what extent does the FO build up and maintain external relations?



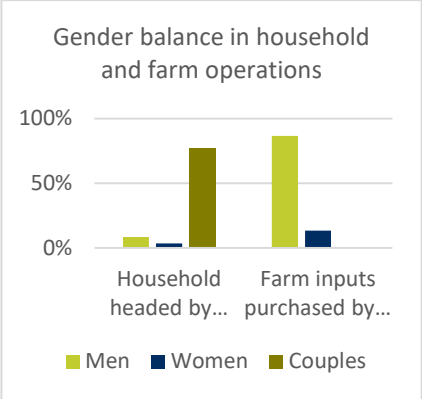
Discussion

- During FGD, farmers mention the success of the FO's activities, with many noting that VECO's intervention has increased trust in DIFACOS, and the feeling of membership—a far cry from its initial state when it was almost failing because of a lack of unity.
- However, farmers also note that *"there are some farmers who are not willing to register […] with DIFACOS because of past history"*

3a. Women's status and empowerment

Baseline (2013)

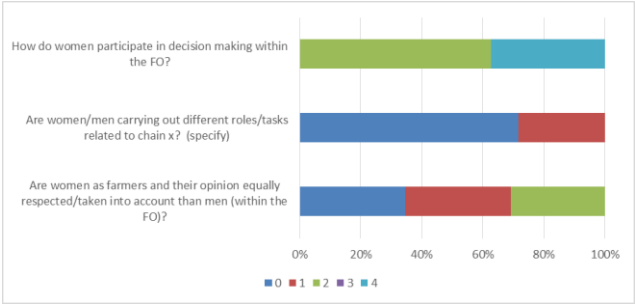
- In 2013, most households were headed by couples, while most farm inputs were bought by men.



2016

In the below chart, scores are shown for 3 questions.

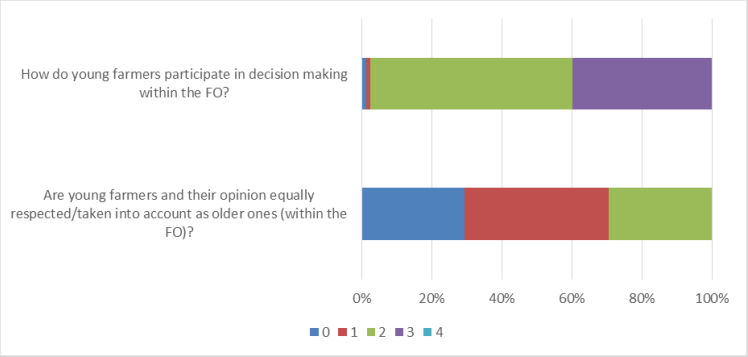
- Question 1: increasing scale from 0-4
- Question 2: 0-no, 1-yes
- Question 3: 0-less, 1-equally, 2-more



Discussion

- In 2013, we observed that households were mostly headed by couples, but farm inputs were purchased by men 90% of the time.
- In 2016, we observe that women's participation in decision making reaches a score of almost 70%, while the score on women's opinion taken into account is almost 50%.
- As it is difficult to compare these different metrics, no strong conclusion on improvements or deteriorations can be derived.
- During the FGD, farmers report the participation of women is impressive, and VECO was praised for its leading role, although some issues remain. As one female respondent commented, *"We plan the farming together, we work together in the field and harvest together but distribution of money after sell is not at my willing, I think my husband benefits more. Traditionally, I have to respect my husband".*

3b. Youth status and empowerment

Baseline (2013)	2016
• No data on farmer level • Only mention of youth is on business capacities of FO, where the FOs score on average 1 (out of score from 0 to 3) for the statement: *The FO gives equal participation opportunities to women and the young generation*	In the below chart, scores are shown for 3 questions. • Question 1: 0-less, 1-equal, 2-more • Question 2: increasing scale from 0-4 

Discussion

- In 2013, there was no baseline farmer data, but the FO scores indicate that gender and youth equality was not very high.
- The 2016 outcome of the farmer survey indicators on youth participation score much higher (50% and 70%).
- Although data is not directly comparable, it seems as if progress was made.
- During the FGD, farmers report youth engagement is good, and youngsters are taken seriously. Youth is also forming production groups, and it seems youth are really benefiting from engaging in the farming of rice: *"the youth contribution in Doho is undisputable".*

5. Structural Change Agenda Uganda

a. Background

The following information provides a high-level overview of the current landscape in the rice production and trade in Uganda:

International trade:	• Uganda is a net importer of rice (30% imported) • East African Community set tariff of 75% on imports since 2004 to stimulate internal supply, but imports from Asia remain cheap
Production:	• Production is labour intensive, little mechanization, inputs are expensive, limited access to credit, limited access to services and technology • FOs are weak (liaising with government, partially managing irrigation, but not offering business services)

Value chain:	• Domestic market unstructured and uncoordinated, mostly verbal contracts between individuals • Processing is expensive (high electricity cost, poor technology), quality is poor (poor drying, standards not met, high losses), disposal leads to environmental issues • Marketing is difficult due to poor quality compared to imports, low working capital, poor storage, inconsistent supply (weather), and poor infrastructure
Policy and government:	• Government focusses on supporting/funding irrigation

Link to pilots:

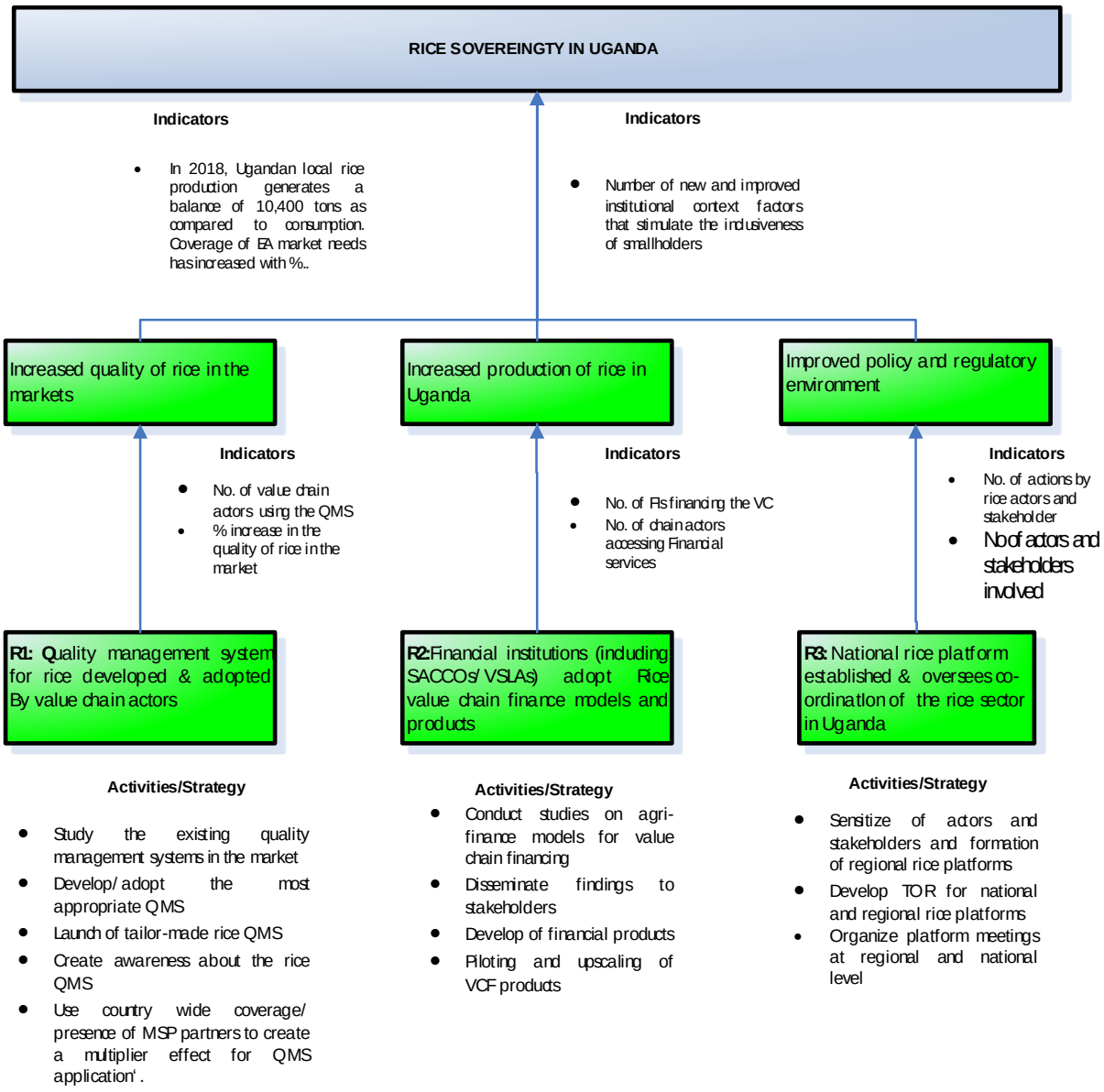
- Pilot in Butaleja

Long-term goal:

- Rice sovereignty in Uganda, with a rice chain that can compete with imports on quality and price

For more information see the VECO SCAF Uganda and VECO SCAR Uganda

b. Pathway of change



Theory of Change: Provision of financial services to the value chain actors to access working capital (fertilizers, seeds, purchase of paddy/rice) and equipments and a universally accepted and adopted quality management system coupled with a conducive business environment will result rice sovereignty in Uganda.

The three sub-SCAs are:

1. Value chain actors in Uganda adopt use of the quality management system for rice developed
2. Financial institutions (including SACCOs/VSLAs) adopt the finance models and products developed
3. National rice platform established to oversee and coordinate the rice sector in Uganda

In scope	Out of scope
Increasing quality (adhering to market standards)	Infrastructure (irrigation, roads, storage, electricity)
Providing access to agri-finance (allowing quality inputs)	Mechanization of farmers (including financing of machinery)
Obtaining skills & technology on agronomy	Efficient water use
Conducive business environment	Production & marketing of quality seeds

c. Observed changes in outcomes at SCA level

Main conclusion SCA1: Adoption of quality management system (QMS) for rice	VECO has made some contributions, but mainly financial (e.g. hiring UCA), and on the farmer level (see Butaleja pilot pathway 2). Scaling the successful pilot to the policy level has not yet been implemented, as the program was delayed. Hence, no value judgement can yet be made on the SCA strategy yet. However, we positively observed sharing among VECO Tanzania and VECO Uganda regarding QMS design.
Main conclusion SCA2: Adoption of adjusted finance models and products	VECO has made strong contributions to the structural change with regard to adjusted finance models and products. This SCA is exemplary for the theoretical model that VECO has in mind. Successful interventions at the pilot level (see Butaleja pilot pathway 4), have been used as case studies and examples for policy change. VECO hereby played the essential link between on-the-ground initiatives and policy change. Partners praise VECO for their capacity building activities and their support with case studies and field visits, which have resulted in actual adjusted government regulation.
Main conclusion SCA3: Establishment of national rice platform	SCA3 was suspended in 2015, as there were many other actors already involved in establishing the National Rice Platform. However, the rice platform never took off due to large differences in geography and interventions among participants. In 2016, VECO tried to revive it though the organization of National Rice multi-stakeholders meetings, a first step towards a National Rice Platform.

Observed evidence from indicators (source: SCAR)
Limited indicator evidence is available in the SCAR, as VECO has changed the indicators from 2014 to 2015, and the 2016 progress report was not yet available at the time of writing. Analysis of indicators was therefore not deemed relevant.

Observed evidence (source: SCAR 2015)
SCA3 was suspended as it was developed based on the MOU on collaboration between IFDC, JICA, Kilimo Trust and Ministry of Agriculture. The MOU was never signed and therefore the implementation of the eastern cluster was not possible without the inputs of the other key players.

The implementation of the programme accelerated and VECO was able to meet most of the expectations planned during the period. This was made possible by the changes made to the SCAs to ensure that they are relevant and are among the priorities of the stakeholders and particularly the actors. It is important that future interventions have in built flexibility to enable the implementers to adjust to fit the demands of the stakeholders.

While striving for partnerships with other organizations is important, there are also some potential risks that failure to achieve can greatly affect the anticipated results. Some of the interventions left to other partners like IFDC, JICA, and Kilimo Trust did not take place despite signing the MoU. VECO had no control to compel this organisation to implement the agreed activities. This affected the achievement of objectives and targets anticipated by farmers and the Farmers Organizations. While VECO will continue collaborating with these organizations, it will devise a contingency plan to follow in case partners are not in position to fulfil their commitment.

Observed evidence (source: CIR)

- In 2014 the Rice Industry Secretariat (RIS) and Rice Technical Committee (RTC) was constituted, to guide and M&E the National Rice Development Strategy (NRDS). Accordingly, there is increased coordination of players in the rice sector as a result of government beginning to take up its role in the development of the chain.
- In 2015 the Financial Institutions Bill was passed, allowing new products on the market, reportedly enhancing financial inclusion
- *2015: In regard to the SCA "Financial institutions (including SACCOs/VSLAs) adopt rice value chain financial models and products", a study on agri-finance models for value chain finance was conducted and findings disseminated to stake-holders. Based on the findings of the study, Doho Farmers SACCO adopted the SGSLA-SACCO finance model. A total of 45 SGSLAs have so far been formed, and 30 of these groups have been linked to the SACCO. With this model, the number of farmers accessing financial services has grown exponentially, so has the level of savings and the number of farmers accessing credit. Three credit product prototypes and five (5) livelihood needs enhancement products have also been developed. These products will be piloted in 2016.*

Triangulation with partners (Source: key informant interviews)

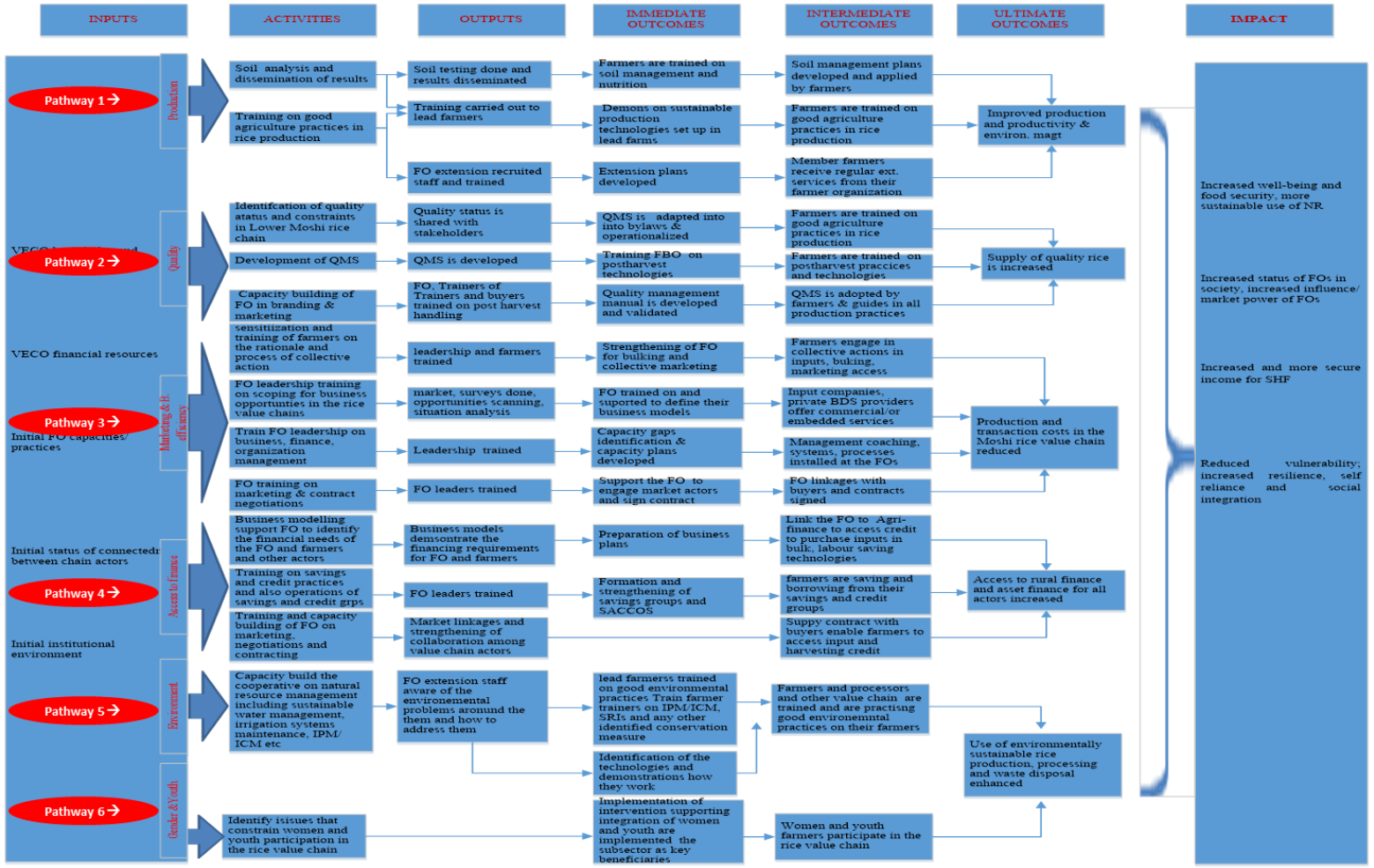
- Interview of UCA, on SCA1 (adoption of QMS): VECO's main contribution to the structural change is financial, in funding UCA activities and hiring knowledgeable external consultants. VECO's primary contribution to QMS is the support of smallholders in understanding quality management issues (and the development of their own QMS).
- Interview of UCA, on SCA2 (adoption of finance models): UCA has benefited very much from VECO's support, especially on capacity building of UCA staff in IBMs, FO assessment trainings, as well as exposure visits and case studies. VECO's main value add seems in showcasing successful pilots in agri-finance, being the link between farmer level and policy level. VECO has been one of the partners to showcase the different agri-finance strategies at the national workshop.
- Interview of UNFFE, on SCA 2 (adoption of finance models): VECO only cooperated in 2014, limited cooperation thereafter. VECO's main contribution seems to be through FOs (strengthening capacities), which allowed UNFFE to link them with SACCOs, and created awareness among farmers. Recently the government adjusted regulation to help farmers save and loan in groups, in which VECO also played a role, primarily in providing exemplary case studies and FO examples. UNFFE also indicates VECO was invaluable in the formation of the "Technical working committee on agriculture financial strategy".
- The objectives of SCA1 was to increase the quality of local rice on the Uganda market by adopting the use of the quality management system for rice and implementing it, and to improve the quality of rice produced and marketed. At the pilot level, the developed QMS was meant to be piloted with DIFACOS over a period of at least three seasons and the results from its use documented and shared with other organizations supporting rice farmers. There was learning by the two countries from each other on the implementation of both objectives. For instance the

QMS for Tanzanian process and methodology influenced the design and process of the QMS in Uganda. The Uganda team came to learn from Tanzania on how to design a QMS. The technical expert from Tanzania ended up providing technical support to the Uganda Team on the design of QMS.

- This achievement on SCA2 was possible because VECO hired the services of SEPSPEL, an experienced service provider in the field of agri-finance, to support the SACCOs that UCA had earlier formed, to organize farmers engaged in the rice value chain into groups with the purpose of introducing a new saving and lending model. This led to adaptability of the solidarity group lending approach. By 2015, a total of 35 Solidarity Groups Savings and lending associations (SGSLAs) were formed in Doho. This savings model led to the membership of the SACCO growing, along with its savings and share capital. Because of its success, Doho Farmers SACCO has adopted the use of this 'new' model in the new groups (so far about 12) that it has managed to form in 2016. Therefore, project has leveraged the learning generated from the pilot as the model was documented and shared widely using media. In September 2016, the model featured on popular Monitor Newspaper.
- SCA3 was suspended as VECO realized there were many other efforts from different actors towards establishing the National Rice Platform. These included National Agricultural Research Organization, Ministry of Agriculture and Africa Rice, which made VECO conclude it would be a duplication of efforts. However, in 2016, VECO realized that the platform had become inactive as the ministry did not support it. VECO therefore wants to revive it. VECO, through the Ministry of Trade, Industry and Cooperatives, took the initiative to organize the National Rice multi-stakeholders meetings to discuss important issues in the rice sector. The collaboration did not work due to:
    - Geographical challenges: Despite of working in the same sector, the geographical coverage was different for each organization. It was therefore difficult to influence issues together, as each region had its own unique challenges.
    - Lack of convergence: Interventions of different organizations were at different levels/ segments of the value chains, had different implementation approaches hence leading to a lack of convergence.

6. Moshi Pilot

a. Pathway of change



Coordinated chain that with improved marketing system that reduces transaction costs, exploring opportunities for export (market linkages), and enhanced access to appropriate and affordable financial services

b. Effectiveness of VECO intervention

In this section we evaluate the effectiveness of VECO interventions. For each pathway we have derived a main conclusion after reviewing the observed evidence and the results from the triangulation in the field.

Note on FO dynamics by VECO: There are two farmer organizations working in the lower Moshi Irrigation Scheme. At the launching of the irrigation scheme in 2008, Lower Moshi Irrigators Association (LOMIA) is charged with the responsibility of managing the irrigation systems and the distribution of the water for irrigation. CHAWAMPU was to be the marketing cooperative that was formed in 1990s to provide marketing services to the farmers in Lower Moshi. At the design and commencement of the current programme CHAWAMPU was going through severe crisis owing to loss of trust from the farmers owing to mismanagement. Farmers decided to work with LOMIA to carry out the marketing roles. In a surprising turn of event CHAWAMPU was revived in 2015 and put up a strong claim for its mandate of marketing the produce from Lower Moshi have collectively agreed to jointly undertake the marketing role. This has changed the marketing dynamics and in 2016 the Lower Moshi decided to once again designate CHAWAMPU the marketing role. VECO has to follow the farmer's decision and is now working with CHAWAMPU and LOMIA

i. Pathway 1: Production

Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Soil analysis and dissemination of results Training on good agriculture practices	Soil testing done and results disseminated Training carried out to lead farmers FO extension recruited, staffed and trained	Farmers are trained on soil management and nutrition Demonstration on sustainable production technologies set up in lead farms Extension plans developed	Soil management plans developed and applied by farmers Farmers are trained on good agriculture practices in rice production Members farmers receive regular ext. services from their farmer organization	Improved production and productivity & environmental management

Main findings

Solid improvements to productivity have been made due to VECO's introduction of SRI demo-plots, which also turns out cost-effective. Dissemination target however was not met, as only 24% of farmers use SRI, while target was set to 40%. VECO also sponsored soil testing, which has been valued strongly by the FO. Unfortunately GAP is not yet widely introduced, and strong resistance exists against organic fertilizer. Future interventions could focus on improvement of learning among farmers (allowing faster dissemination) and extensive GAP trainings.

Observed evidence (source: CIR)

Evidence from business capacity indicators:No initial analysis of immediate and intermediate outcomes, as no business indicators were linked to this pathway.

Main conclusions from CIR:

- Good productivity (yield) increases, from 18 bags/acre (baseline) to 24 bags/acre in 2015, almost on target. This was mainly attributed to the System of Rice Intensification (SRI) methodology.
- In 2016, 30 demonstration plots were established under the System of Rice intensification(SRI), resulting in 312 famers adopting SRI practices from learning from the demo's
- Area under cultivation increased due to better access to water as a result of SRI
- SRI is known to increase labour costs, but this was not the case
- Moshi District Council supported extension services regarding SRI
- In 2016, 48% of farmers have indicated using improved seeds (bought from CHAWAMPU)
- % farmers that use SRI / GAP skills and technology also increased from 1% (baseline) to 24% (2015), although target was 40% (2015)
- Soil samples were tested by Mlingano research institute to allow right amount of fertilizer
- Costs decreased: Labor cost reduced from 57% (baseline) to 33% (2015), input cost reduced from 25.5% (baseline) to 20% (2015)
- VECO supported LOMIA in the monitoring and supervision of field activities

Triangulation (source: key informant interviews and FGDs)

VECO seems to have had a positive influence based on FO interviews.

- SRI is fully attributable to VECO, who introduced it in 2014. Farmers observe considerable increases in production (from 8-14 bags 0.3 hectare to 20-22 bags per 0.3 hectare) and reduction of labour and input costs (less water, less seeds). Quote: *"Introduction of SRI, has boosted morale and encourage farmers to concentrate on rice farming. In area like Chekereni farmers stopped from farming rice fives ago but with benefits of SRI methodology everyone wants to grow rice now" Lomia Manager*
  However, Chawampu FO mentions not all farmers believe SRI is the best.
- FGDs also illustrate SRI is cost effective (more costly due to line transplanting, but this is compensated more by increases in productivity)
- Improved seeds (SARO 5,6,7) also contribute to better productivity.
- Field demo plots are fully attributable to VECO, who came up with the idea and is the main funder.
- Soil testing is fully attributable to VECO, who funded it. Quote: *"Veco has done so much for us, soil testing has been unfulfilled dream eversince now it is true with Veco" Lomia Manager*
- No GAP training performed yet. Farmers are unaware of GAP. When explained, farmers seem to favour industrial fertilizer over organic matter. Farmers ask for demo plots.
  - *1).One FGD participant, " I only heard about GAP when we were experiencing fungus on our rice and government advised to use organic matter instead of synthetic fertilisers but I am not sure if that will bring the bags of rice they demonstrated to us".*
  - *2)" No, for me I will even not touch the dung cow with my hands to use as fertiliser in my plot"*
  - *3)."I don't belief putting dung cow, I will have same yields as it does with artificial fertilisers" FGD Participant*
- Increases in productivity also have effect on non-farmers in Moshi: *Most of people around Lower Moshi have said to increase their income especially during the preparation of plots and harvest. Many have been working as labourers and earn considerable amount and during harvest those who have shops around have said to have increase in selling due to increase of money cyclation. Therefore, increase in yield has positive effects to increase in income and business of people in Lower Moshi.*

ii. Pathway 2: Quality

Activities	Outputs	Immediate Outcome	Intermediate Outcomes	Ultimate Outcomes
Identification of quality status and constrains in Lower Moshi rice chain Development of QMS Capacity building of FO in branding & marketing	Quality status is shared with stakeholders QMS is developed FO, Trainers of Trainers and buyers trained on postharvest handling	QMS is adapted into bylaws & operationalized Training FBO on postharvest technologies Quality management manual is developed and validated	Farmers are trained on good agriculture practices in rice production Farmers are trained on postharvest practices and technologies QMS is adopted by farmers & guides in all production practices	Supply of quality rice is increased

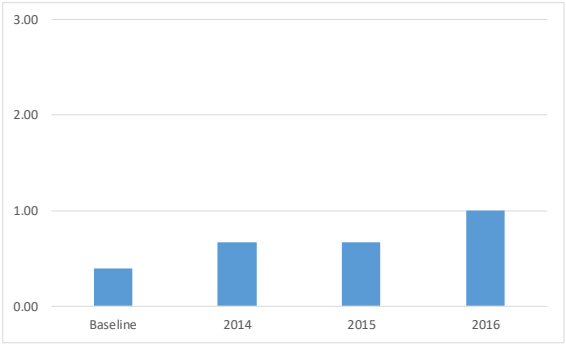
Main findings

Initially good improvements were made by FO Lomia with support of VECO, with the introduction of a quality management team and the development of an annual work plan for QMS (see Lomia QMS report for more information). However, the QMS work plan was never implemented due to a conflict between FO Lomia and FO Chawampu. It is therefore difficult to assess if the efforts would have resulted in quality improvements. Key focus for the future is to still implement the quality manual, possibly with FO Chawampu, so that its effectiveness and related learnings can be observed.

Observed evidence (source: CIR)

Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
LOMIA	0.40	0.67	0.67	1.00
1. To what extent has the FO acquired group management skills?				
2. To what extent has the FO acquired business management skills?	0.50	0.60	0.60	1.00
3. To what extent has the FO acquired marketing skills?	0.00	1.00	1.00	
4. To what extent the FO promotes sustainable production and natural resource man-agement skills to its members?				



Many indicators appear not to have been filled in for this intervention, the vast majority of 2016 figures, but also some figures in the baseline, 2014 and 2015 years. While the amount of data is really too limited to draw significant conclusions, it appears that on the few indicators for which data is available, progress

was very limited at best. It would be great to have additional information into why the data on business capacity indicators for 2016 seems to be lacking.

Input from VECO: The initial gains made in 2014 & 2015 in LOMIA were lost as the LOMIA lost the role of providing business services. A previously inactive cooperative CHAWAMPU that had the mandate of providing business services in Lower Moshi became active again in 2015. LOMIA stopped providing business services in early 2016. CHAWAMPU and LOMIA got into protracted conflict from the last quarter of 2015 on who should be providing business services to farmers. The conflict was finally resolved in July 2016 by the local authority with the decision that CHAWAMPU is the one to provide business services to the farmers. It became irrelevant therefore to report on business services provision by LOMIA after 2015, as it was providing none. The only role that LOMIA was performing was the production extension services.

Main conclusions from CIR:

- Additional insights in Lomia QMS report and LMIS situational analysis
- VECO supported LOMIA in development of quality management team, and the development of an annual work plan for QMS
- VECO supported LOMIA in the monitoring and supervision of field activities

Triangulation (source: key informant interviews and FGDs)
VECO supported the development of QMS manual, but this has not translated into practice, since QMS falls under the new role of Chawampu. Hence no introduction of QMS yet, and no GAP trainings yet. Farmers report good rice quality (good aroma), competitive with big brands from rice producing areas like Mbeya.

iii. Pathway 3: Marketing & Efficiency

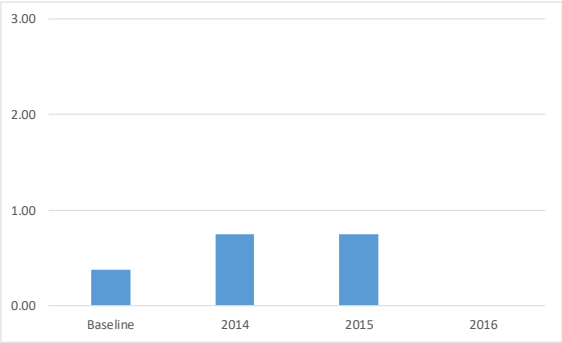
Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Sensitization and training of farmers on the rationale and process of collective action FO leadership training on scoping for business opportunities in the rice value chains Train FO leadership on business, finance, organization, management FO training on marketing & contract negotiations	Leadership and farmers trained Market, surveys done, opportunities scanning, situation analysis Leadership trained FO leaders trained	Strengthening of FO for bulking and collective marketing FO trained on and supported to define their business models Capacity gaps identification & capacity plans developed Support the FO to engage market actors and sign contract	Farmers engage in collective actions in inputs, bulking, marketing access Input companies, private BDS providers offer commercial/or embedded services Management coaching, systems, processes installed at the Fos FO linkages with buyers and contracts signed	Production and transaction costs in the Moshi rice value chain reduced

Main findings
Initial progress was made by FO Lomia, but conflict with FO Chawampu hugely delayed progress. However, some services seems to have been transferred from FO Lomia to FO Chawampu, such as collective purchasing

of inputs, such as pesticides, fertilizer and seeds, attributable to VECO who linked the FO with the suppliers. Limited progress is made on collective processing and marketing, and mistrust of the FO still exists among farmers. Future interventions could first focus on educating farmers on the importance of collective processing and marketing, building trust with the FO. Evidence shows the importance of strong FO governance and organization, confirming VECO's focus on FO capabilities.

Observed evidence (source: CIR)
Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
LOMIA	0.38	0.75	0.75	
2. To what extent has the FO acquired business management skills?	0.00	1.00	1.00	
3. To what extent has the FO acquired marketing skills?	0.20	0.60	0.60	
5. To what extent does the FO builds up and maintains external relations?	1.00	1.00	1.00	



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Input from VECO: The initial gains made in 2014 & 2015 in LOMIA were lost as the LOMIA lost the role of providing business services. A previously inactive cooperative CHAWAMPU that had the mandate of providing business services in Lower Moshi became active again in 2015. CHAWAMPU and LOMIA got into protracted conflict in 2015 on who should be providing business services to farmers. LOMIA stopped providing services in early 2016. The conflict was finally resolved in July 2016 by the local authority with the decision that CHAWAMPU is the one to provide business services to the farmers. It became irrelevant therefore to report on business services provision by LOMIA after 2015, as it was providing none. The only role that LOMIA was performing was the production extension services.

Main conclusions from CIR:

- FO LOMIA started negotiation with supermargetMarenga, but no deal was made yet
- Six farmer groups were mobilized and collectively purchased their agricultural input (fertilizers) from Kibo trading (an agent of YARA company) at the discount rate (linked by LOMIA)
- Costs decreased: Labor cost reduced from 57% (baseline) to 33% (2015), input cost reduced from 25.5% (baseline) to 20% (2015)
- LOMIA started initial thoughts on collective marketing in 2015, mobilizing farmers on the importance. Activities got halted due to conflict with CHAWAMPU.
- 10 groups were formed and trained on group dynamics and management (LOMIA)

Triangulation (source: key informant interviews and FGDs)
Farmers are aggregating crops at the Chawampu warehouse (for free), although not everyone trusts this practice due to past experiences. However, FO claims good prices and good storage.
Farmers are not aware of collective selling, and some are not interested due to lack of trust.
VECO linked Chawampu with YARA, who now supplies inputs through the Chawampu shop. This greatly reduces input costs (pesticides & fertilizer), especially due to savings on transportation costs.
VECO linked Chawampu with ASA to access improved seeds.
No processing machine for rice is available, hence everyone still processes individually.
FO has been unable to find reliable markets outside of Moshi.

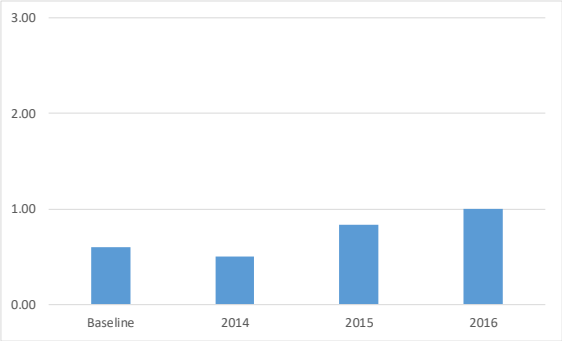
iv. Pathway 4: Access to Finance

Activities	Outputs	Immediate Outcome	Intermediate Outcome	Intermediate Outcome	Ultimate Outcome
Business modeling support FO to identify the financial needs of the FO and farmers and other actors Training on savings and credit practices and also operations of savings and credit groups Training and capacity building of FO on marketing, negotiations and contracting	Business models demonstrate the financing requirements for FO and farmers FO leaders trained Market linkages and strengthening of collaboration among value chain actors	Preparation of business plans Formation of strengthening of savings groups and SACCOS	Link the FO to Agri-finance to access credit to purchase inputs in bulk, labour saving technologies Farmers are saving and borrowing from their savings and credit groups Supply contract with buyers enable farmers to access input and harvesting credit	Access to rural finance and asset finance for all actors increased	Business modeling support FO to identify the financial needs of the FO and farmers and other actors Training on savings and credit practices and also operations of savings and credit groups Training and capacity building of FO on marketing, negotiations and contracting

Main findings
Limited progress has been made with regards to access to finance. This is partially due to the conflict between FO Lomia and FO Chawampu, but initial activities from before the conflict seem little effective. However, as farmers report finance is a key concern, this is an area VECO could extend its involvement. Key for sustainable improvements are grass-root VICOBAs or SACCOs, which currently seem unsuccessful under Chawampu (quick repayment, unsuitable for farming investments) – something for which VECO could possibly turn to the experience of the Butaleja project in Uganda, where this was very successfully introduced.

Observed evidence (source: CIR)
Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
LOMIA	0.60	0.50	0.83	1.00
1. To what extent has the FO acquired group management skills?	1.00	1.00	2.00	
2. To what extent has the FO acquired business management skills?	0.50	0.40	0.60	1.00



As with other indicators, there appear to be a lot of data gaps for the Moshi intervention. Based on the indicators, it would appear that the FO in Moshi has not been able to become more capable of attractive financing as a result of this intervention.

Main conclusions from CIR:

- Results with regards to finance are lagging behind on target
- % of farmers and SME's accessing finance increased from 0% (baseline) to 10% (2015), but still far below target (35% in 2015). Amount of loans accessed was 1 in 2015, while target was 4. Total savings was 7m (2015), while target was 15m (2015).
- Village Community Bank (VCB) was coached by LOMIA cooperative officer, and consequently 9 VICOBA groups obtained 14m Tshs loans for their members for agricultural activities
- Nuru ya Maendeleo SACCOs was offering agricultural loans to rice farmers whereby there are about 12% of rice farmers have already benefited from the service.
- VECO supported LOMIA in setting up a business to business meeting with potential rice buyers

Triangulation (source: key informant interviews and FGDs)
Farmers mention credit is a key concern. Farmers do have access to VICOBA or SACCOS, but amounts are small and start of repayment is required very briefly (2 weeks), hence it is unsuitable for farming investments (requiring 6 months).

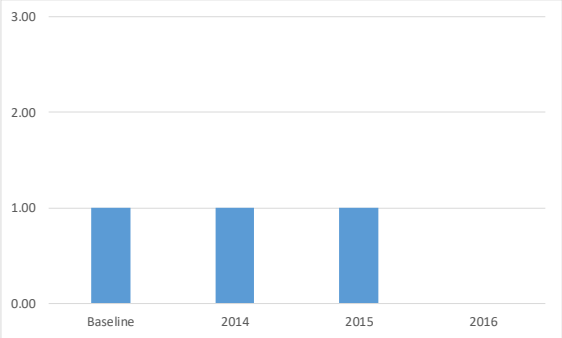
v. Pathway 5: Environment

Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Capacity build the cooperative on natural resource management including sustainable water management, irrigation systems, maintenance, IPM/ICM etc.	FO extension staff aware of the environmental problems around them and how to address them	Lead farmers trained on good environmental practices, train farmer trainers on IPM/ICM, SRIs and any other identified conservation measure Identification of the technologies and demonstration how they work	Farmers and processors and other value chain actors are trained and are practicing good environmental practices on their farms	Use of environmentally sustainable rice production, processing and waste disposal enhanced

Main findings
Although some progress on water efficiency has been made due to VECO's introduction of SRI, VECO supported limited other interventions with regard to environmental sustainability. Although FO Chawampu is aware of environmental issues, no change strategy seems in place.

Observed evidence (source: CIR)
Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
LOMIA	1.00	1.00	1.00	
4. To what extent the FO promotes sustainable production and natural resource man-agement skills to its members?	1.00	1.00	1.00	



For Moshi, only 1 indicator of the 2 in this pathway were measured, and only until 2015. Based only on that one indicator, it would appear that no progress was achieved relative to the baseline.

Main conclusions from CIR:

- Application of SRI in 2016 led to more efficient water use (in turn allowing more areas to be cultivated). % of farmers accessing water on a regular basis increased from 20% in the baseline to 55% in 2015, above target of 50%. However VECO mentions: *The target was not achieved to due water shortage Lower Moshi is experiencing which was contributed by climatic change, poor farming methodology and traditional irrigation practices (constant flooding). We also have to consider removing this indicator as it is outside the direct scope of VECO*
- % farmers that use SRI / GAP skills and technology also increased from 1% (baseline) to 24% (2015), although target was 40% (2015)
- % waste recycled or re-used as value added byproducts increased from 0% to 20% (2015), although target was 75%.
- Total area conserved decreased from 3KM to 0, even though target was 7km for 2015 – VECO reports it is beyond farmer's decision (local government decisions)

Triangulation (source: key informant interviews and FGDs)
Rice stubbles are left in farms puddled, but rice straws are taken to feed livestock (leaving would cause yellow moto virus). Chawampu FO is aware of evaporation issues due to lack of trees, and overuse of artificial fertilizer – however no comments were made on VECOs support/intervention with this regard. Farmers report suffering from coldness and heavy winds (allegedly due to climate change), and are

aware of too much use of agrochemicals such as fertilizer. Quote: *"Here you will not get any yield if you do not use fertilisers" FGD participant*

vi. Pathway 6: Gender & Youth

Activities	Outputs	Immediate Outcome	Intermediate Outcome	Ultimate Outcome
Identify issues that constrain women and youth participation in the rice value chain	-	Implementation of intervention supporting integration of women and youth are implemented in the subsector as key beneficiaries.	Women and youth farmers participate in the rice value chain	Use of environmentally sustainable rice production, processing and waste disposal enhanced

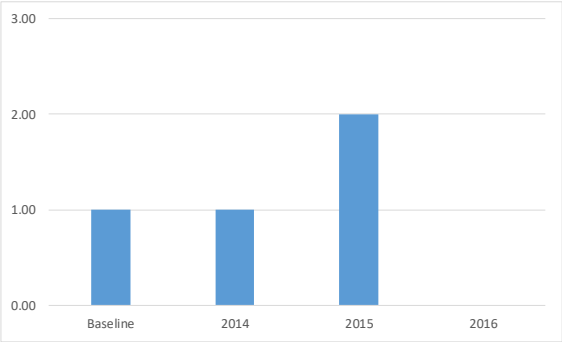
Main findings

Women's participation in farming and decision making (leadership) has slightly increased, to which VECO's activities have likely contributed. Many issues remain, as trainings are only accessed by men, and land ownership is mostly male (due to inheritance). VECO has intensified its work on gender equality in June 2016, modelled after the success in the Butaleja pilot (Uganda) – however results are not yet available. With regards to youth empowerment some progress has been made, as young women are engaging in farming, while men are uninterested. It is unclear to which regard this is the result of any of VECO's activities.

Observed evidence (source: CIR)

Evidence from business capacity indicators:

Row Labels	Baseline	2014	2015	2016
LOMIA	1.00	1.00	2.00	
1. To what extent has the FO acquired group management skills?	1.00	1.00	2.00	



For Moshi, interestingly, the 3 indicators for which data is available (only until 2015) show improvement relative to the baseline. This would indicate that improvement was achieved in the area of gender and youth for the FO in the Moshi intervention, making this the most successful pathway within this intervention.

Input from VECO: The work on gender is integration of gender began in June 2016, so there will be some results reported by end of the project in 2016. The logic was to use the learning from the Uganda Butalejagender study and interventions to replicate in Moshi

Main conclusions from CIR:

- VECO supported LOMIA in the development of gender mainstreaming strategies

Triangulation (source: key informant interviews and FGDs)
Farmer groups are increasingly led by women, and women's groups are formed. Women play an increasing role in farming of rice. Issue for gender mainstreaming isownership rights of plots – as land is scarce and obtained through inheritance (mostly inherited by men). Also, trainings are only accessed by men: women are always left out. However, in the past 3 years, farmers have experienced more participation in decision making due to more women in leadership – attributable to trainings by government & VECO.
Youth empowerment is difficult as youngsters are not interested in farming. However, women youth are engaging in rice farming and also emerge in some leadership roles. Young men however are not engaged in agriculture, and mostly working in transportation (motorcycle/bodaboda). Quote: *"It is pity that farming is left to elders our youth are interested in riding Motorcycles (bodaboda) for fast cash" FGD participant*

c. Relevance of VECO intervention

In this section we evaluate the relevance of VECO's interventions by looking at the farmer-level impact. We investigate whether the VECO interventions at the FO-level have also created notable differences (positive or negative) on the famer impact level. This is done in two ways: by reviewing the results of the focus group discussions, and by comparing the farmer survey (2016) with baseline data (2013). It must be noted that comparison is difficult at times, as indicators differ significantly over time.

Main conclusion of focus group discussions with farmers
The focus group discussions highlight the positive impact of VECO's activities on income, due to higher productivity and lower costs. Interestingly, income effects also benefit non-farmers, as shops see their turn-over increased by the improved employment of laborers on farms.

As a result of the VECO intervention, there has been a marked increase in productivity with the application of GAP and SRI, as well as the use of improved seeds (SARO 5,6,7); farmers using SRI have seen yield increase from 8-14 bags to around 22-22 bags (per 0.3ha). GAP is not used in the Lower Moshi areas, however, because many farmers are not aware of its use, are skeptical that natural fertilizer will bring comparable yields as artificial fertilizer—or otherwise express apprehension over the use of dung as means of fertilizer.

Furthermore, in the FGD farmers reported a decrease in labor and input costs, as a result of improved seeds and new techniques of farming (notably SRI, with which the cultivation of 0.3ha requires only 6kgs of seeds, as opposed to 20kgs previously); farmers also observed that while labor costs were higher in absolute terms when applying the SRI, these costs were more than offset by the increase in yields. In this way, VECO's use of SRI demonstration plots (in collaboration with Lomia) have been successful in illustrating these effects, with one participant noting that *"Many people here in Moshi and Arusha*

now understand the quality rice is that coming from LOMIA, at market people will ask rice SARO5 farmed from LOMIA" .

Nonetheless, many farmers observe challenges with transplantation costs. In addition, the market for rice is not well structured, and farmer organizations are unable to find a reliable market; farmers request LOMIA and VECO to identify a market outside Moshi for a better price for their rice. There is also only limited awareness of the benefits of collective selling, which might require greater education.

There is a need for alternative finance models, as at present there is a lack of credit access because VICOBA or SACCOs have only a small revolving fund available, and repayment schedules generally do not align well with farming schedules—when a farmer gets a loan from VICOBA s/he is required to start repayment within two weeks, when the farming itself takes 6 months.

In terms of resilience, farmers report that many of them are cropping different crops, such as maize, beans, and peas; others have additional sources of income, whether from livestock or non-farm employment, which helps ensure food security. Generally farmers believe they are not vulnerable to food insecurity, as increased yields allow them to buy other food.

There is only limited awareness of environmental sustainability amongst farmers, although farmers do identify certain adverse weather conditions (heavy winds; cold spells) as being a result of climatic change. LOMIA is credited for reviving crops cultivation in the Chekereni area through constructing water drainages, resolving the previous problems in water availability.

Concerning gender empowerment, farmers report partial empowerment of women, but highlight that women cannot often access trainings, and are still not fully empowered in most FOs. On the other hand, there is slow trend towards some women taking leadership roles in organisations—in at least one case a farmer organization (Juhudi) is led by a woman—and women generally report that they feel they are acquiring equal access in making decisions, being elected, and accessing credit in the Union. Though men still dominate many interactions, things are slowly changing.

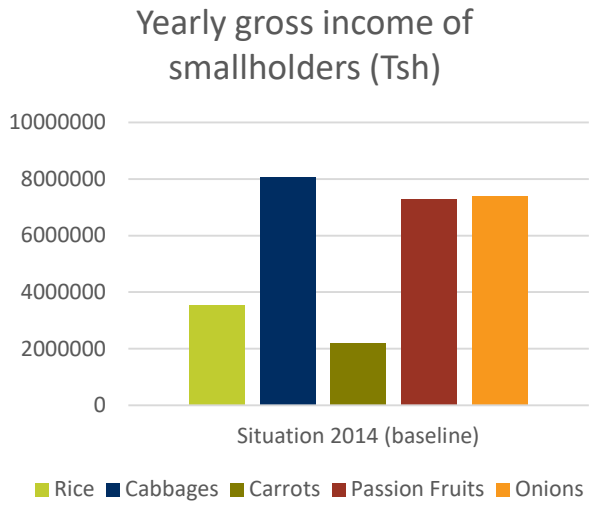
Concerning youth empowerment, progress is seen for female youth, who participates in FO, but a concern is shared on male youth, who have little awareness of the benefits of agriculture and only want to earn fast cash. Farmers believe that the education system does not sufficiently highlight the gains from- and importance of agriculture.

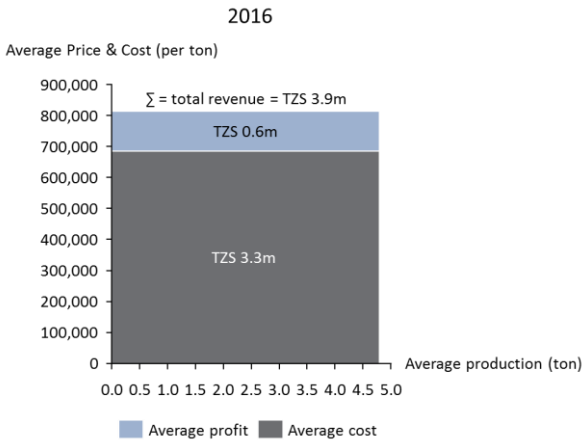
All in all, findings for the relevance of the intervention at the farmer level mostly coincide with findings of the effectiveness assessment. Positive impact has been achieved on productivity and income of farmers (with these effects even multiplying throughout the village), but little progress was made in other areas. This is in accordance with expectations, as many activities have been delayed or constrained due to the Lomia/Chawampu quarrel.

Comparison of baseline and 2016 farmer survey

1a. Income

Baseline	2016
• Baseline indicates an income of Tsh3.5m from rice	• 2016 farmer survey indicates an income of Tsh3.9m from rice





Discussion

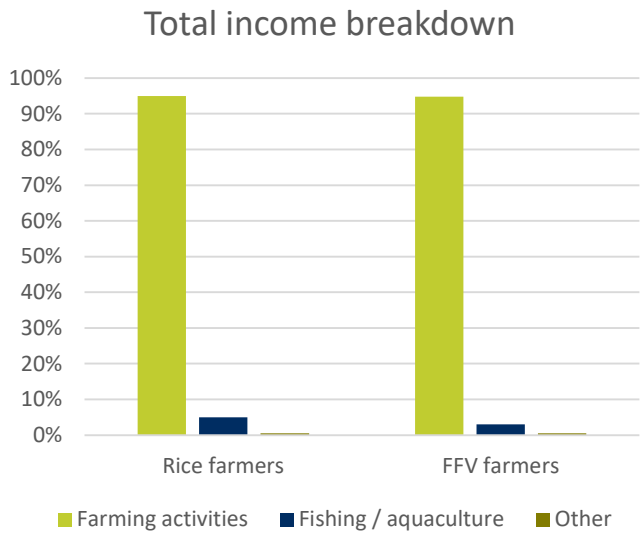
- Figures are not directly comparable due to different sample and possible changes in price over time;
- High amount of costs in 2016 farmer survey results indicate possible data errors, as direct costs are not expected to be as high as illustrated;
- During the FGDs farmers report increased productivity due to SRI (from 8-14 bags to around 20-22 bags, for 0.3ha), as well as reduced costs (improved farming technique and improved seeds);
- Furthermore, in the FGD farmers reported a decrease in labour and input costs, as a result of improved seeds and new techniques of farming (notably SRI, with which which the cultivation of 0.3ha requires only 6kgs of seeds, as opposed to 20kgs previously); farmers also observed that while labour costs were higher in absolute terms when applying the SRI, these costs were more than offset by the increase in yields.
- During the FGDs farmers report it is difficult to find a reliable market outside of Moshi to market the rice, and farmers have little experience with collective selling.
- Interestingly, when talking to non-farmers during the field visit, they also report increase in income, especially during preparation of plots and harvest. As many labourers earn additional income, shops see increased turnover during these periods, leading to considerable (if cyclical) downstream boosts of the livelihoods of people and businesses in Lower Moshi.

1b. Resilience (diversity of income sources)

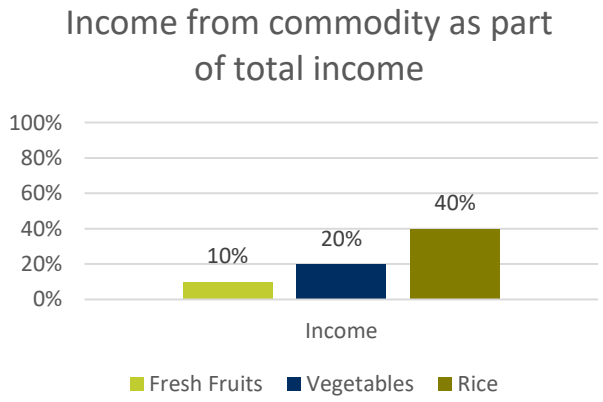
Baseline

Baseline consists of contradictory evidence.

- One indicator indicates 95% of income comes from agriculture:

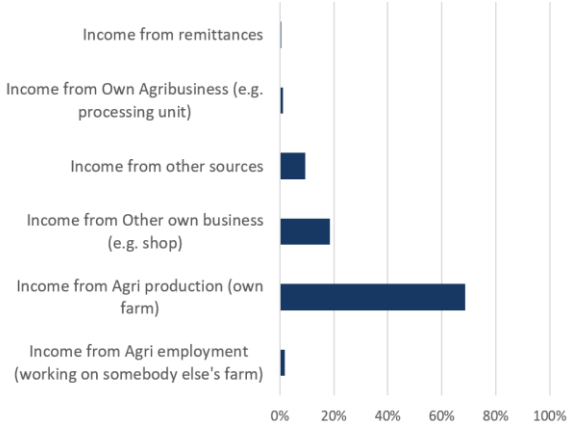


- Another indicator indicates 70% of income comes from agriculture:



2016

- The farmer survey indicates that ~70% of income comes from agriculture.



Discussion

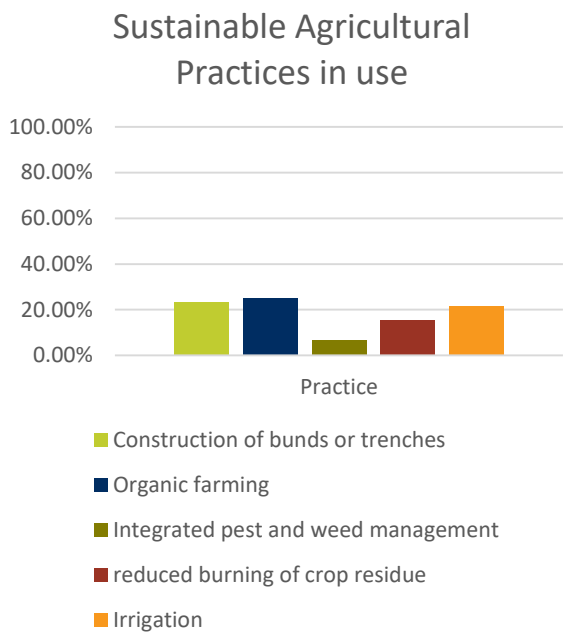
- Direct comparison not possible, due to different data points.
- Results seem to indicate that 30% of income is derived from other sources that agriculture, implying some resilience;
- During the FGDs many farmers report growing many different crops (maize, beans, peas), as well as keeping livestock, in order to avoid depending too heavily on rice.
- During the FGDs some farmers report only growing rice, but they are not concerned due to increased yields, which allows them to buy other food;

- Increasing difficulty with resilience is the poorly functioning savings and credit system, which only allows small and quickly repayable loans (FGD), the repayment schedules of which are not at all aligned with the agricultural calendar;

1c. More sustainable use of natural resources

Baseline

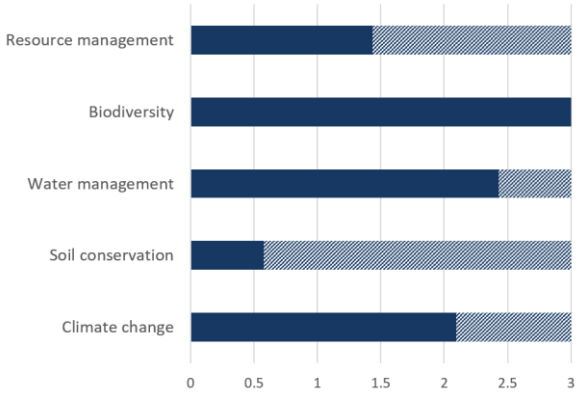
- Baseline scores indicated limited use of sustainable agriculture practices
- Baseline report mentions basic use of irrigation system and organic manure to increase soil fertility



2016

Values below indicate a score from 0 to 3

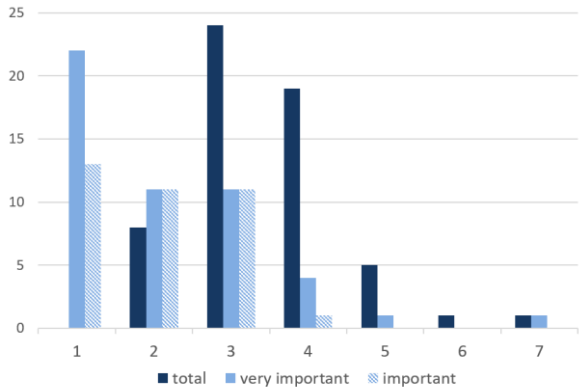
- High scores on biodiversity, water management, and low score on soil conservation
- Biodiversity score indicates almost all farmers do not use pesticides
- Water management score indicates good irrigation and drainage system
- Soil conservation score indicates limited practices to prevent erosion



Discussion

- No direct comparison possible due to different indicators;
- However, scores were relatively low in 2013, while scores are relatively high in 2016;
- Especially on water management progress seems made.
- High score on biodiversity only reflects limited use of pesticides, which may not be a conscious choice, but rather the default option (due to limited availability of and knowledge on pesticides);
- During FGD farmers report limited awareness of environmental sustainability issues, and heavily rely on non-organic fertilizer, expressing distrust or even outright disgust over organic fertilizer

1d. Diversity of crops and livestock

Baseline	2016
No information in diversity of crops and livestock in the baseline.	The chart below indicates the number of farmers surveyed on Flores who receive 1-7 different sources of on-farm income. In the survey, farmers were given a choice of indicating the importance of each source of income. As the below chart shows, the vast majority of farmers had 3 or 4 crops or livestock on their farmers. Moreover, a majoity of farmers indicate to onlky have 1, 2 or 3 important or very important crops or livestock. 

Discussion

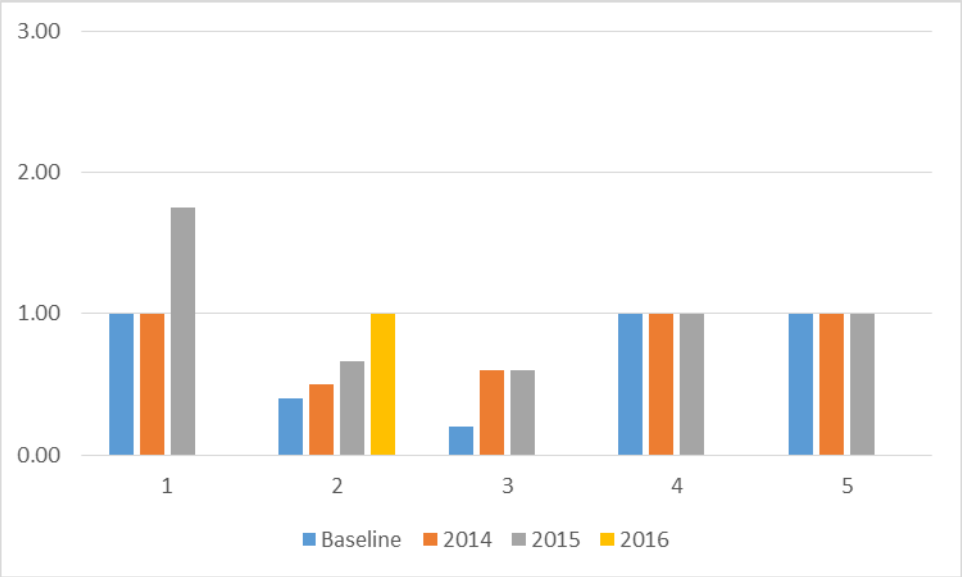
- No comparison possible as there is no relevant data on the baseline
- The 2016 farmer survey results indicate there is a certain amount of resilience, as there is some diversity in crops/livestock. However, many farmers still depend on 1 important or very important crop, which is worrisome, especially when external factors (e.g. weather) destroy the harvest of a specific crop.
- During the FGDs many farmers report growing many different crops in order to avoid depending too heavily on rice.
- During the FGDs some farmers report only growing rice, but they are not concerned due to increased yields, which allows them to buy other food;

2. Increased status of FOs

Baseline	2016

Analysis of FO business capacity indicators shows varying improvement for the FOs across business capacity categories. A more detailed analysis can be found in the previous section, however below a summary is presented. The 5 categories are:

1. To what extent has the FO acquired group management skills?
2. To what extent has the FO acquired business management skills?
3. To what extent has the FO acquired marketing skills?
4. To what extent does the FO promote sustainable production and natural resource management skills to its members?
5. To what extent does the FO build up and maintain external relations?



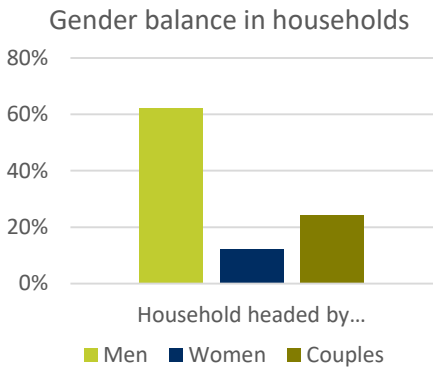
Discussion

- In 2014, only 5% is sold through the groups under contracts imposed by buyers.

3a. Women's status and empowerment

Baseline

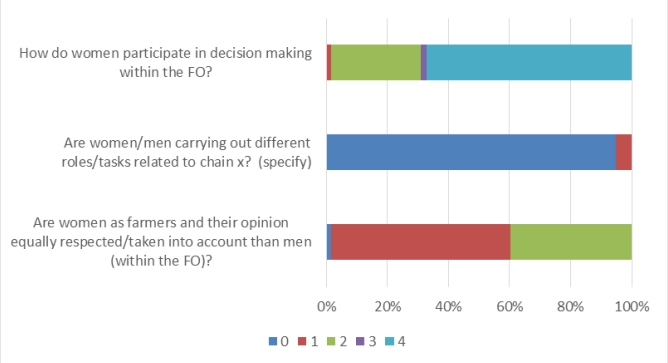
- Baseline data shows households were mostly headed by men (see graph)
- In addition, the baseline report mentions women participation is a concern, as some women are not allowed to participate directly in farmer groups, or were given limited time to participate by their husbands.



2016

In the below chart, scores are shown for 3 questions.

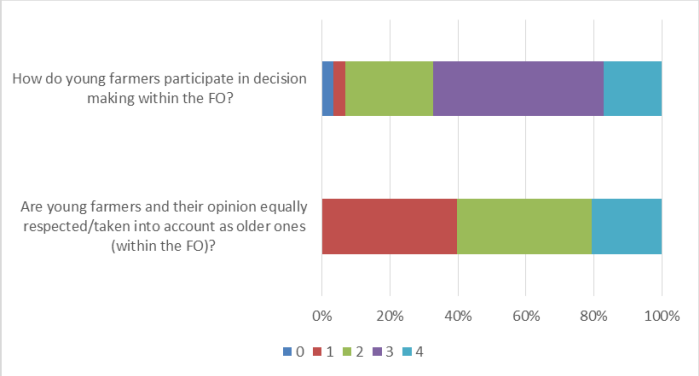
- Question 1: increasing scale from 0-4
- Question 2: 0-no, 1-yes
- Question 3: 0-less, 1-equally, 2-more



Discussion

- No direct comparison possible due to different indicators;
- Situation in the baseline was poor, while 2016 scores are relatively good, indicating possibly progress. Results from FGD however indicate there is still a lot of progress to be made – most notably allowing women to access trainings;
- During FGDs farmers report only partial understanding of the concept of women's empowerment. Moreover, women and men generally agreed that women are not fully empowered in most of the FO.
- During FGDs women report they have equal access to being elected, accessing credit or making decisions, but cannot access any trainings;

3b. Youth status and empowerment

Baseline	2016
• No indicators on youth status and empowerment on the farmer-level • Only one combined indicator on the FO level: "The FO gives equal participation opportunities to women and the young generation", for which all FOs score 1 out of a score from 0 to 3	In the below chart, scores are shown for 3 questions. • Question 1: 0-less, 1-equal, 2-more • Question 2: increasing scale from 0-4 

Discussion

- No direct comparison possibly due to missing indicator in the baseline;
- Baseline FO score indicates poor starting position, and 2016 farmer survey score indicates average position of youth empowerments, hence small progress seems likely;
- Key concern is the involvement of male juniors, who are limitedly interested in agriculture (see FGD results below);
- During the FGDs farmers report male youth are not very interested in agriculture: "It is a pity that farming is left to elders – our youth are interested in riding motorcycles (bodaboda) for fast cash";
- During the FGDs farmers report female youth does participate in the FO, and farmers praise the role of youth, who learn quickly.
- During the FGDs farmers suggest educating the youth on the importance and benefits of agriculture

7. Structural Change Agenda Tanzania

a. Background

The following information provides a high-level overview of the current landscape in the rice production and trade in Tanzania:

International trade:	• Situation very similar to Uganda (although larger rice consumption/production) • Tanzania is a net importer of rice (20% imported) • East African Community set tariff of 75% on imports since 2004 to stimulate internal supply, but imports from Asia remain cheap
Production:	• Production is labour intensive, little mechanization, inputs are expensive, limited access to credit, limited access to services and technology

	• FOs are weak (liaising with government, partially managing irrigation, but not offering business services)
Value chain:	• Domestic market unstructured and uncoordinated, mostly verbal contracts between individuals • Processing is expensive (high electricity cost, poor technology), quality is poor (poor drying, standards not met, high losses), disposal leads to environmental issues • Marketing is difficult due to poor quality compared to imports, low working capital, poor storage, inconsistent supply (weather), and poor infrastructure
Policy and government:	• Government focusses on supporting/funding irrigation • Seed subsector recently liberalized, resulting in private offering of improved seeds

Link to pilots:

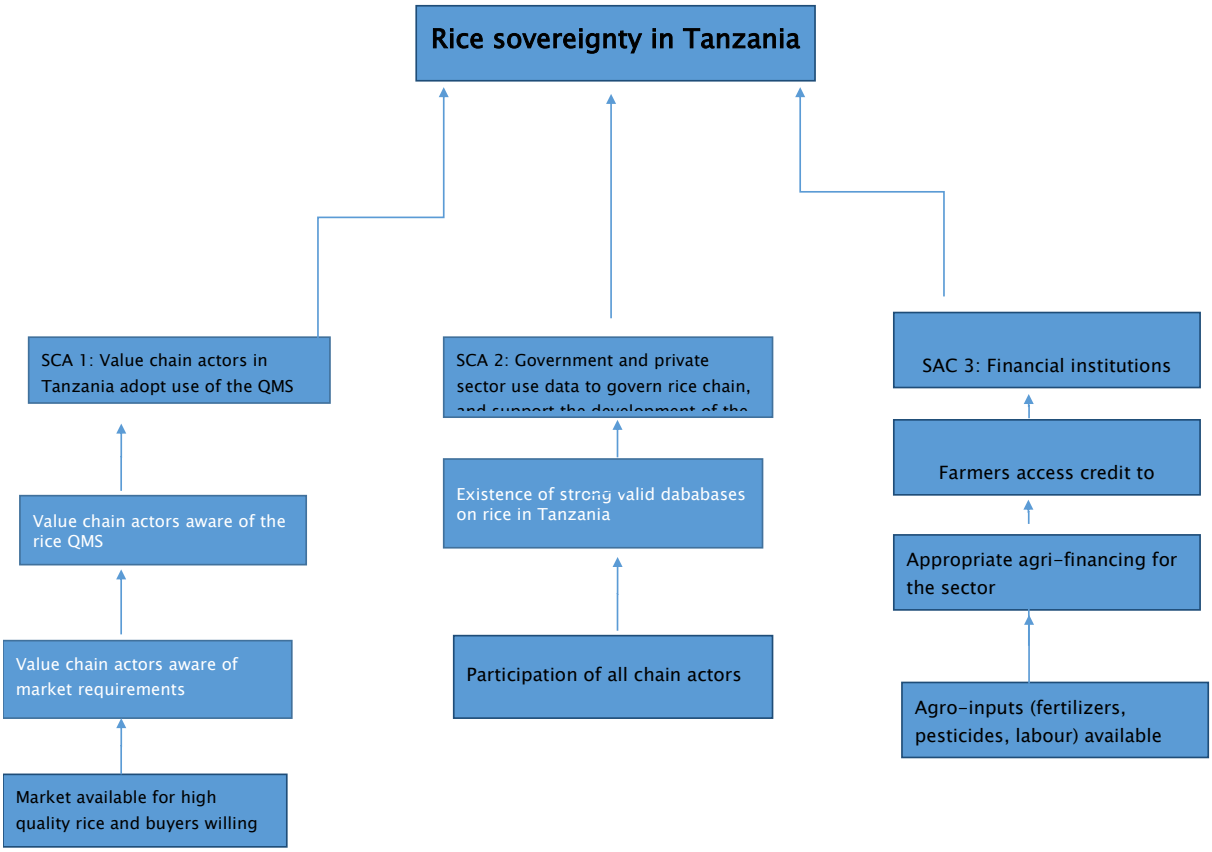
- Pilot in Lower Moshi

Long-term goal:

- Rice sovereignty in Tanzania, with a rice chain that can compete with imports on quality and price

For more information see the VECO SCAF Tanzania and VECO SCAR Tanzania

b. Pathway of change



The three sub-SCAs are:

1. Value chain actors in Tanzania adopt use of the quality management system (QMS) for rice developed.
2. Government and private sector use data to govern rice chain, and support the development of the rice sector in Tanzania
3. Financial institutions (including SACCOs/VICOBAs) adopt the finance models and products developed

Disclosure: initially the SCAF defined different sub-SCAs, but this was revised in November 2014. The original two sub-SCAs were:

1. Harmonized and coordinated strategies for the rice sub sector including market regulations, that favour rice sovereignty in the Tanzania
2. A sustainable and competitive local rice value chain in terms of price, quantity, and quality with linkages among well-coordinated chain actors

c. Observed changes in outcomes at SCA level

Main conclusion SCA1: Adoption of quality management system (QMS) for rice	The objective of this SCA is have wide adoption of quality managements system by smallholder farmers and value chain actors' in order for them to integrate the EAC grain standards in their production system. VECO unfortunately did not meet its SCA targets regarding adoption of GAP and QMS. No chain related studies were conducted, results of pilots were only limitedly disseminated, few networks were set-up. One explanation is that partner EAGC had limited resources, hence partnership shifted to Kilombero Agriculture Research Institute (KATRIN), who will validate the QMS manual in second half of 2016 and will try to institutionalize it. Another hurdle has been the delays in the pilot phase (due to Lomia/Chawampu uncertainty), which have made it impossible to implement the QMS manual in the pilot. Lastly, the validation process of QMS was delayed; the reason for this was that it was not possible to carry out the validation within the DGD budget, as a consequence of which there was a need to tap into resources from a new Food Trade Market project (commissioned by UKAID) to complement the limited resources for SCA work in Tanzania.
Main conclusion SCA2: Use of data to govern rice chain	Sub-SCA was discontinued from the interventions of VECO after realization that it was not feasible or realistic to work with the JICA, which was supposed to be the lead organization due to implementation and time constraints.
Main conclusion SCA3: Adoption of adjusted finance models and products	VECO has done some work on reviewing the VICOBA model and strengthening the VICOBAs in Lower Moshi, but the pilot is not yet successful enough to share. The pilot is at a very small scale and therefore not yet documented. Furthermore, VECO seems unequipped to influence financial policy on the national level, and should seek more strategic partnerships in order to achieve its SCA objective.

Observed evidence (Source: SCAR)

- In 2016 Tanzania was a massive net exporter of rice (1 million MT export vs 0,9 million MT consumption)
- In May 2016 Tanzania banned the import of rice in order to give room to local producers
- In 2016 VECO started a new project on food trade (linking smallholder surpluses to regional markets, UKAID), complementary to the DGD project focusing on innovations in quality and production.
- VECO did not meet its SCA targets regarding adoption of GAP and QMS. No chain related studies were conducted, results of pilots were only limitedly disseminated, few networks were set-up. Possible explanation is that partner EAGC had limited resources, hence partnership shifted to Kilombero Agriculture Research Institute (KATRIN), who will validate the QMS manual in second half of 2016 and will try to institutionalize it. Besides this, validation process of QMS was delayed as priority was given to new Food Trade Market project commissioned by UKAID.

- VECO is underway to meet its targets regarding financial models and products, with 2 studies/analysis and more underway.
- Building partnerships and alliances for SCA requires that there is a common goals and vision among partners. Experiences of VECO in identifying the SSD SCA shows that we it matters what the partner core interest are. Flexibility in adjustments in the SCA agenda and activities is also important.
- It is better to work with just a few SCAs and allocate adequate resources and time, than work on many agenda that don't yield because the resources are too thinly spread.

Observed evidence (Source:CIR)

- 2015: Development of Rice Quality Management Manual
- 2015: Development of information database (for decision making on importations)
- 2016: Success of SRI makes it an addition to the SCA agenda (demonstrating how famers SRI can be adapted to the needs of smallholder farmers in different contexts)

Evidence from partners (Source: key informant interviews)

- KATRIN reported to have not worked with VECO on the QMS activities yet. In this regards, KATRIN was not in a position to evaluate VECO's ability, strength, and capacity for scaling out QMS. The ongoing partnership discussion is for KATRIN to support VECO East Africa in piloting quality management systems (QMS) in rice in 2017.
- Government support to scale up QMS; the KATRIN, Tanzania Bureau of Standards and the Agricultural Extension System have the mandates for QMS research, development and implementation. VECO therefore expects that once the QMS methodology has been refined with these partners, there will be budgets made available by the government and other donors for a larger scale roll out
- VECO's work did not influence the import ban which was introduced in May 2015. VECO's work had not progressed sufficiently to have any influence, but also the QMS and finance work was not directly related to the issues surrounding the import ban. However VECO was a member of the alliance of NGOs and private sector working in rice and contributed to proposing that a QMS system with a traceability methodology would have helped to prevent a ban as Tanzania would have been able to demonstrate that the rice being exported had been grown in Tanzania.
- The Food Trade Project (Linking Smallholder Staple Food Surpluses to Regional Markets) has as main objective the improvement of quality and aggregation of produce from smallholder farmers. Increases in volumes aggregated and improvement in quality will lead to enhanced access to better markets in the region that pay higher prices. The three outcomes of the project are:
    - Improved storage and aggregation
    - Improved supply chain information and coordination
    - Improved standard of produce offered by the farmers to the market

  The third outcome is directly related to the SCA agenda on QMS for rice. QMS enables the farmers to produce according the EAC standards. QMS also supports enhanced coordination with the supply chain actors as a traceability system supports generation of the information and records.
- The process of institutionalizing QMS will come only after the validation of the QMS. The process of validation will commence from December 2016. It was not possible to carry out robust validation of the QMS within the budget available under DGD, hence there was the need for Food Trade to complement and co-fund.
- Before the QMS is completely institutionalized, the scaling up strategy will follow the following steps:

- Piloting in different areas of the country. Expansion of the pilot areas, through buy in of key actors in the rice sector, especially those working in the main rice production areas in the southern parts of Tanzania
- Documentation of the process of validation and resultant improvement in the quality of and marketing of rice in the pilot areas
- Adoption by the critical number of stakeholders in the private and public sector, and the government

- VECO key strength is in carrying out the validation as it has the linkages with rice pilots, however on its own VECO cannot succeed. It has to work with the relevant institutions for capacity support, for legitimacy, and credibility. That is why the process of validation was delayed to enable tapping into the Food Trade budgets to enable engagement of strategic partners KATRIN and EAGC in the validation and the institutionalization processes.
- For SCA (1) there was severe delay in identifying the partner for SCA who would have carried out the value chain studies. Also the budget allocated to VECO support activities was too little to carry a significant study on the rice value chain. A study on the amount of rice produced and imported into Tanzania would have been a valuable study but not feasible within the VECO support budget. More evidence is needed on the quality as a barrier to trading Tanzania rice in Eastern Africa. The FO organisations in Lower Moshi scheme (LOMIA, Chawampu) had a complicated history and farmers did not trust them highly. This restricted the numbers of farmers that VECO could work with. However, VECO decided it was better anyway to pilot QMS with a smaller number of farmers as it was at the first stage of development. The target of 2500 could have been reached using this approach however the delays to the startup of the program meant there was no time to move to second stage of piloting i.e. QMS validation and expansion more farmers. As indicated the pilot is only at an early stage therefore learning have not yet been brought to a SCA level except discussions with EAGC and KATRIN on partnerships for the next stage.
- On strategy for scaling financial model, the following step will be followed by VECO.
    - Investments by Financial Institutions and development sector in adaptation of farmer savings and lending models that have worked in other regions /countries to the Tanzania situation
    - Development of the value chain which leads to higher rates of return for all actors in the value chain which can lead to higher interest in value chain financing
    - Financial institutions have a better understanding of the financing of the value chain actors in the rice sector particularly the smallholder farmers
- VECO feels that there is no government support for scaling, once the pilot strategy is validated due to lack of policy coherence in the government on the improving access to rural finance. As example is this incoherence is when in 2015, the government set up farmers' banks, that is supposed to address the problems of farmers in accessing credits, but which does not address the underlying reasons for farmers not accessing credit.
- The most successfully partnership was identified as that with Agriprofocus platform, and its agri-finance working groups. The platform rallied together key stakeholders working in agri-finance in the Northern Tanzania and also financial institutions for a joint action in pursuing the agenda. It also has a high capacity to convene and host important publicity events around agri-finance agenda.
- In order to achieve maximum scale and impact, VECO wants to cooperate more with partners in the future. Examples are the National Association of Financial Institutions and Banks and public sector investors, private investors or donors who can support adaptation, piloting and scaling out of models that show good promise in supporting access to rural finance.

- VECO does have enough power to influence partners at the local /regional level. However, VECO does not have the same potential to influence at the national level and this would require strategic partnerships with national agencies such as ANSAF and EAGC.
- For SCA (2), the SCAF objectives was very ambitious and VECO under-estimated the financial and technical resources required to achieve structural change. There have been some useful learning on different approaches, particularly facilitation methods for enabling dialogue between farmers and financial institutions. However it is only now with development of partnerships with other strategic partners (e.g. EAGC) that VECO can see a way of influencing this area. This is a target for the new programme. In order to crucially reach the SCA (2) objectives in future an ideal partnership should be with the government and financial policy makers on agri-finance. There is need to coherence and joint efforts and also bring about convergence among all development actors who are also pursuing this agenda. There are many fragmented initiatives working toward the same goal.